### 126

# THE IMPACT OF SUGAR FACTORIES ON THE RURAL ECONOMY A CASE STUDY

## THE IMPACT OF SUGAR FACTORIES ON THE RURAL ECONOMY A CASE STUDY

SUBMITTED TO
THE UNIVERSITY OF POONA

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (IN ECONOMICS)

BY

S, D. TUPÉ -

GOKHALE INSTITUTE OF POLITICS
AND ECONOMICS
PUNE 411004
OCTOBER 1980

#### ACKNOWLEDGEMENTS

Since the First Five Year Plan, the emphasis has been laid on the economic development of rural areas. The State in India announced its intention to pursue an active policy for the development of agriculture and ultimately for the development of rural areas. One viewpoint has been that the development of agro-based industries in these areas would accelerate their development. In Maharashtra the development of sugar industry in the rural areas, especially in the cooperative sector, was given importance. Now-a-days a cooperative sugar factory is being considered as the centre of rural economic development. So far no attempt has been made to assess the role of a sugar factory in the economic change in the rural areas, in Maharashtra State.

This study was undertaken in order to find out the impact of a sugar factory on the rural economy. The work on this research project was started in March 1974. In the process of completion of this work, many individuals and institutions have helped me directly and indirectly. I owe a debt to them.

The study was undertaken under the guidance of Prof. (Dr.) A.S. Nadkarni, Gokhale Institute of Politics and Economics, Pune-4. Without his constant encouragement and interest, the work would not have taken the present shape. His deep insight into the problem of rural development proved invaluable in the interpretation of the data. I express my deep sense of gratitude to him for sparing time out of his busy schedule for me.

I take this opportunity to express my gratitude to Prof. V.M. Dandekar, Director, Gokhale Institute of Politics and Economics, Pune, for awarding me Teacher Fellowship for one year which enabled me to pursue the work at the Institute.

I also express my thanks to the authorities of the Rayat Shikshan Sanstha, Satara for sanctioning me study leave of one year and for providing me some research facilities.

I am grateful to Dr. D.P.Apte, Registrar, Gokhale Institute, for his help and guidance during my stay at Pune. I thank Mr. Sardesai and other staff of the statistical department of the Institute for their promptness in processing of data of my thesis.

I owe a lot to Dr. Ashok Mitra, Dr. G.R.Mulla, Dr. R.G.Paithankar, Dr. J.F.Patil, Dr. N. Benjamin, Shri J.L.Gandhi and Shri Tapaskumar Sen for their advice on numerous occasions. I am thankful to the Library Staff of Gokhale Institute and of the Vaikuntha Mehta Institute of Cooperative Management.

I am grateful to Mr. Shankarrao Kolhe, Chairman of the Sanjivani Cooperative Sugar Factory and the Manager and the staff of the factory who have provided me with the required data. My thanks are also due to the authorities and staff of the Godavari Sugar Mills, Changdeo Sugar Mill, Kopargaon Cooperative Sugar Factory, Ganesh Cooperative Sugar Factory, Godavari Khore Milk Producers Sangh, Marketing Committee of Kopargaon Taluka and KOSANG Distillery for their help in the course of field investigation and data collection.

I am also grateful to the Tehasildar of Kopargaon taluka, Kamgar Talathies, Kamgar Patils, and Sarpanchas of the surveyed villages for their hospitality, kindness and sincere help.

23rd October 1980.

(S. D. Tupe)

#### <u>CONTENTS</u>

Chapter		Page
I	HISTORICAL BACKGROUND	1
	Earliest record of sugarcane and sugar in the world - position in India - Development of sugar industry in India - Growth of sugar industry in Maharashtra/in Ahmednagar district - Kopargaon taluka - Climate, general situation and sugar factories - A brief history of the sugar factories in the Kopargaon taluka - Brief history and working of the Sanjivani Cooperative sugar factory, Sahajanandnagar.	
II	REVIEW OF LITERATURE AND METHODOLOGY	31
	Review of literature - the possible back- ward and forward linkage effects of a sugar factory - Why is the Sanjivani Co- operative Sugar Factory selected for the study? Selection of villages for the survey - Methodology of the study - the difficulties experienced at the time of conducting survey - Data processing.	
III ·	PROBABLE IMPACT OF THE SUGAR FACTORIES ON AGRICULTURE	63
•	Change in the area under cultivation and irrigation - Change in the cropping pattern and the area under various crops - Change in the number of sugarcane cultivators and area under sugarcane. Change in the ownership of cattle. Use of modern methods of farming - Multiple cropping - Use of improved seeds - Use of fertilizers - Use of pesticides - Scientific method of irrigation - practice of mechanical farming - Change in the agencies of agricultural inputs and agricultural equipments.	
IA	IMPACT OF THE SUGAR FACTORIES ON AGRICULTURISTS	123
	Change in the sources of family income of farmers - Change in money income and real income change in the income level of farmers and their expenditure pattern.	

Change :					
farmers					
equipmen					
factory	recei	lved by	the f	armers.	

V IMPACT ON THE LIVES OF AGRICULTURAL LABOURERS

168

Classification of the labourers according to age groups. Educational qualifications. Reasons for the occupational change and geographical migration of the labourers - Landholdings of the agricultural labourers - their sources of family income. Change in the money income and real income of the labourers. Change in the standard of living - housing conditions - household equipments - consumption pattern - Change in the expenditure pattern of the labourers - Advantages of the sugar factory received by the labourers. Lack of Trade Union - problems of the agricultural labourers.

VI ECONOMIC CONDITIONS OF THE SUGAR FACTORY
WORKERS

203

Classification of the workers according to age groups and educational qualifications, land-holdings of the workers. Sources of family income and level of income of the workers. Benefits other than wages and salaries - Standard of living of the workers - Housing condition - Household equipments - Change in the consumption pattern - consumption of cloth - expenditure pattern of the workers. Reasons for the occupational shifts and geographical migration of the workers. Trade Union of the workers - Problems of the workers solved by the union - Some problems of the workers.

VII IMPACT OF THE SUGAR FACTORIES ON NON-AGRICULTURISTS

248

Impact on the business of the various nonagriculturists - Family income of the nonagriculturists. Change in the level of income - Change in the real income -

Chapter		Page
	Standard of living of the non-agriculturists - Housing condition - household equipments, Change in the expenditure pattern. Benefits of the sugar factory received by the non-agriculturists.	
VIII	SPREAD EFFECTS OF THE SUGAR FACTORY AND OVERALL ECONOMIC CHANGE IN THE RURAL AREA	
	Development allied industries - Distillery - Dairy - Artificial insemination of cows - Development of Transport - Development of irrigation - other activities of agricultural development - social services rendered by the sugar factory - Overall changes in the villages of the sugar factory area - Business Development - Institutional and other changes - Benefits of the sugar factory to the villages in its area of operation	278
IX	SUMMARY AND CONCLUSIONS	312
BIBLIOGRA APPENDIX	APHY	327
I		337
II	•••••	339
III	• • • • • • • • • • • • • • • • • • • •	340
IV		341
٧		348
VI	••••••	350
		354
VII		

#### LIST OF TABLES

Table No.		Page
1.1	Licensed and Established sugar factories in	
	the private, the public and the cooperative	
	sectors in various states as on 28-12-1973	. 6
1.2	Sugar Industry in India and Maharashtra	9
1.3	Sugar Factories in Maharashtra established	,
	and licensed (upto 1975)	12,13
1.4	The working capital, labours employed,	
	crushing capacity, output, etc. of the	
	sugar factories in Kopargaon Taluka	20,21
1.5	Share capital of the Sanjivani Cooperative	
	Sugar Factory, Ltd., Sahajanandanagar	24,25
1.6	The working of the Sanjivani Cooperative	
	Sugar Factory, Ltd., Sahajanandnagar	26,27
2.1	Total number of agriculturists, non-	
	agriculturists, agricultural labourers, and	
	shareholders in the selected villages	<i>P.</i> 7
	(1975-76)	48
2.2	Labourers employed in Sanjivani Cooperative	
	Sugar Factory in 1975-76	50
3.1	Irrigated and unirrigated land before and	
	after the establishment of the sugar factory.	66
3.2	Number of wells before and after the estab-	
	lishment of the sugar factory	. 68

Table No.		Page
3•3	Change in the area under various crops	
	before and after the establishment of the	
	sugar factory in the surveyed villages	71-75
3.4	Classification of cultivators according to	
	the area under sugarcane cultivation before	
	and after the establishment of the sugar	
	factory	86
3.5	Change in the number of families possessing	
	agricultural implements before and after	
	the establishment of the sugar factory	91
3.6	Composition of cattle ownership before and	
	after the establishment of the sugar factory	95,96
3.7	Classification of farmers according to the	
	use of modern methods of farming before and	
-	after the establishment of the sugar factory	
	(all size groups of holdings)	101
3.8	Classification of farmers according to the	
	use of Modern Methods of Farming before and	
	after the establishment of the sugar factory	
	(Marginal Farmers)	105
3.9	Classification of farmers according to the	
	use of Modern Methods of Farming before and	
	after the establishment of the sugar factory	
	(Small Farmers)	106

Table No.		Page
4.4	Change in the real income of farmer from	
	agriculture and income from all sources	
	after (1975-76) the establishment of sugar	
	factory	142
4.5	Classification of the families of cultivators	
	according to size group of holding and income	
	level before (1961-62) and after 1975-76) the	
	establishment of the sugar factory	145
4.6	Classification of cultivators - families	
	according to the use of surplus income	
4.7	Classification of cultivators families	
	according to the housing condition before	
	(1961-62) and after (1975-76) the establish-	
	ment of sugar factory	155
4.8	Classification of families of cultivators	
	according to their household equipment in	
•	the different size groups of holding before	
	(1961-62) and after (1975-76) the establish-	
	ment of sugar factory	158
4.9	Advantage of sugar factory received by	
	farmers in this region	162
5.1	Classification of agricultural labourers in	
	the surveyed villages	171
5.2	Classification of agricultural labourers	
	according to age-group	173

Table No.	·		Page
5.3	Classification of the labourers according	to	
	their educational qualifications	••••	173
5.4	Classification of reasons of the occupation	nal	
	change and geographical migration of the		
	families of agricultural labourers	• • • •	175
5.5	Distribution of agricultural labourers acc	ord-	
	ing to the location from which they are		
	migrated after the establishment of the		
	sugar factory	• • • •	179
5.6	Classification of the families of agricult	ural	
	labourers according to their holdings	••••	179
5•7 ·	Sources of additional income of the famili	.es	
	of agricultural labourers	••••	181
5.8	Wage rates and average working days of agr	i-	
	cultural labourers before (1961-62) and af	ter	
	(1975-76) the establishment of sugar facto	ry 1	82-183
5.9	Monthly family income of agricultural		
	labourers after the establishment of sugar	•	
	factory	• • • •	188
5.10	The consumption pattern of agricultural		
	labourers before (1961-62) and after (1975	-76)	
	the establishment of the sugar factory	• • • •	191
5.11	Distribution of the families of agricultur	al	
	labourers before (1961-62) after (1975-76)		
	•		

Table No•	•		Page
	the establishment of sugar factory accord	ing	
	to their consumption of cloth	••••	193
5.12	Distribution of the agricultural labourers	3	
	according to the household equipment before	re	
	(1961-62) and after (1975-76) the establish	sh-	
	ment of sugar factory	••••	
5.13	Classification of families of agricultural	L	
	labourers according to their expenditure		
	pattern at present	••••	196
5.14	Classification of the families of agricult	tural	
	labourers according to the advantages rece	eived	
	by them after the establishment of the sug	gar	
	factory	••••	198
5.15	Classification of families of agricultural	L	
	labourers according to their problems after	er	
	the establishment of the sugar factory		
	(1975-76)	••••	
6.1	Classification of surveyed sugar factory		
	workers according to their designation and	ì	
	category	••••	205
6.2	Distribution of the sugar factory workers		
	according to age group	••••	207
6+3	Classification of the factory workers acco	ording	
	to their educational qualification	•••	208

Table No.			Page
6.4	Classification of the sugar factory works	ers	
	according to their landholding	••••	210
6.5	Classification of the factory workers		
	according to their sources of income	• • • •	213
6.6	Classification of the factory workers		
	according to their monthly family income	••••	216
<b>6.7</b>	Classification of the sugar factory works	ers	
	according to the benefits received by the	)M• ••	219
6.8	Classification of the sugar factory works	ers	
	according to their housing condition	••••	222
6.9	Change in the household equipments of		
	workers after the establishment of sugar		
	factory	••••	225
6.10	Change in the consumption pattern of the		
	families of factory workers	••••	229
6.11	Classification of sugar factory workers		
	before (1961-62) and after (1975-76) the		
	establishment of sugar factory according		
	to their consumption of cloth	••••	231
6.12	Classification of factory workers accordi	ng	
	to utilization of surplus income	1	233
6.13	Classification of the sugar factory works	ers	
	according to the advantages of the sugar		
	factory received by them.	••••	235

Table No.			Page
6.14	Classification of the workers according to		
	their occupational migration	• • • •	237
6.15	Classification of sugar factory workers		
	according to the places from which they has	<b>7</b> e	
	migrated	• • • •	240
6.16	Classification of the sugar factory worker	3	
	according to reasons of their migration	• • • •	242
6.17	Classification of the workers according to	the	
	membership of trade union from Sanjivani		
	Cooperative sugar factory	• • • •	244
6.18	Problem of the sugar factory workers (total	L 87)	
	solved by their trade union	• • • •	246
7.1	Classification of families of non-agricult	urists	
	according to their occupations	• • • •	250
7.2	Classification of the families of non-agric	cul-	
	turists according to the kind of impact on		
	their businesses	• • • •	252
7.3	Annual average income per family before		
	(1961-62) and after (1975-76) the establish	1-	
	ment of the factory	• • • •	261
7.4	Change in the money income and real income		
	of the non-agriculturists in the different	•	
	income groups	• • • •	264
	• •		

·

Table No.	•		Page
7,5	Classification of the families of non-		
	agriculturists according to their income		
	in 1975-76	• • •	267
7.6	Classification of the families of non-		
	agriculturists by housing conditions and		
	income groups	• • •	269
7.7	House-hold equipment of the families of		
	non-agriculturists before and after the		
	establishment of the sugar factory	• • •	
7.8	Classification of the families of non-agricul	l-	
	turists according to utilization of income		
	for various purposes	• • •	273
7.9	Benefits of sugar factory received by the		
	families in different business	•••	276
8.1	Quantity of milk collected, price of milk		
·	actually paid and number of milk collection		
	centres working under the Sangh	•••	282
8.2	Expenditure on the construction of roads		
• '	and their repairs by the Sanjivani Cooperativ	<i>r</i> e	
	sugar factory Ltd. in its area of operation		
	during 1961-66 to 1975-76	• • •	285
8.3	Utilization of grants for construction of		
	roads by the Sanjivani Cooperative during		
	1972-73 to 1974-75	• • •	286

Table No.		Page
8.4	Expenditure incurred on the development of	
	irrigation facilities by the Sanjivani Sugar	
	Factory	289
8.5	Funds created and utilised for development and	
	social welfare activities in the region by	
	the Sanjivani Co-operative Sugar Factory, Ltd.	
	(1963-64 to 1975-76)	
8.6	Number of huts built by the Sanjivani Co-	
	operative Sugar Factory in various villages	301
8.7	Various businesses before (1961-62) and	
	after (1975-76) the establishment of sugar	•
	factory	
8.8	Number of various institutions before (1961-62)	
	and after (1975-76) the establishment of the	
	sugar factory	304
8.9	Benefits of sugar factory - received by the	
	villages which are in its area of operation	