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9. ABSTRACT

Recent literature with respect to private trade in marketing has resulted in a radically improved view of the competitiveness, the efficiency, and the productivity of private trade. Nevertheless, a limited place for cooperatives, other quasi-governmental agencies, and the direct operation of the public sector itself still remains. However, new issues have arisen which keep the question of the appropriate balance among the various sectors in full view as an important policy issue. Discussed in this report, these include the effect of public policy and private agencies on the distribution of income; the effect on stability or instability of food supplies to urban areas and the relative stability of prices for that food; and the optimal use of scarce resources in allocation of institutional and personal resources at the command of governments. Finally, there is the question of to what extent private trade uses resources which could be put to more practical use. It was found that the capacity to build and implement public programs is the scarcest of development resources. The priorities for public resources for private trade thus must be weighed carefully with the use of more limited resources to regulate and to increase the efficiency of private trade, thereby freeing other resources for other purposes.

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**PERFORMANCE OF PRIVATE TRADE AND COOPERATIVES**

By

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Department of Agricultural Economics  
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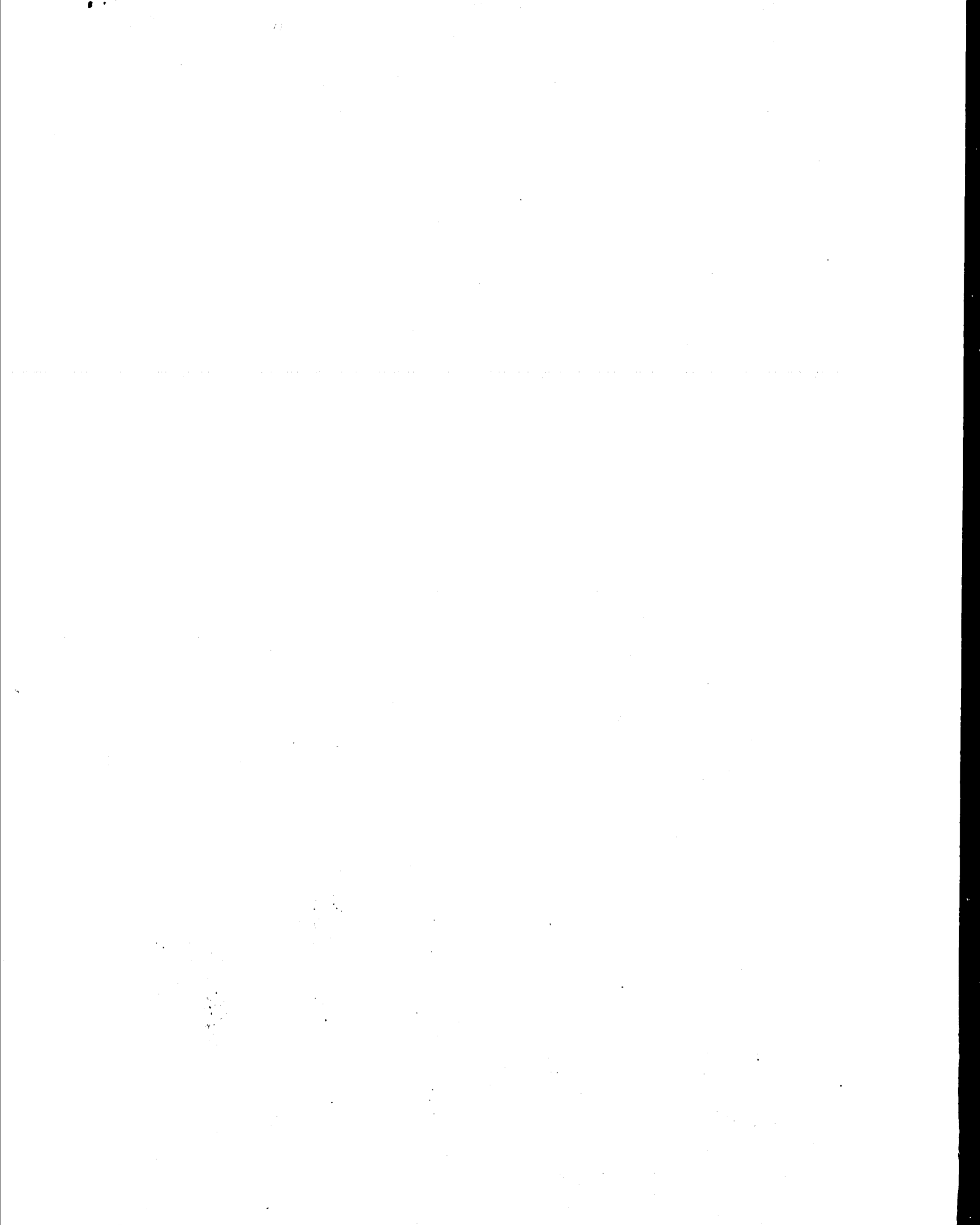
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### SUMMARY STATEMENT

Recent literature with respect to the private trade in marketing has resulted in a radically improved view of the competitiveness, the efficiency and the productivity of the private trade. Nevertheless, a limited place for cooperatives, other quasi-governmental agencies and the direct operation of the public sector itself still remains. However, new issues have arisen which keep the question of the appropriate balance among the various sectors in full view as an important policy issue. These include the effect of public policy and private agencies on the distribution of income; the effect on stability or instability of food supplies to urban areas and the relative stability of prices for that food; and the optimal use of scarce resources in allocation of institutional and personnel resources at the command of governments.

This paper is part of a larger series which includes papers from previous AID research contracts concerned with the role and function of agricultural prices in economic development, and growing from that, concern for the impact of new technology on rural employment and income distribution. A list of these publications may be obtained by writing to Cornell University-USAID Technological Change in Agriculture Project, Department of Agricultural Economics, Cornell University, Ithaca, New York 14853. Copies of the report summarized above may be obtained from the same source.



## PERFORMANCE OF PRIVATE TRADE AND COOPERATIVES

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### Introduction

The stereotype view of the private trade in marketing has been that of collusive behavior among traders with consequent wide marketing margins and substantial exploitation of consumers and producers, accompanied by inefficiency in rendering of services and low productivity in the use of capital, labor and other resources. An extraordinarily rich recent literature reporting careful empirically based research results has removed those stereotypes from the bulk of the policy arena even though they may survive in the popular view. A radically improved view of the competitiveness, the efficiency and the productivity of the private trade has however not left the field entirely free for operation of the private trade and hence has left at least a limited place for co-operatives, other quasi-governmental agencies and the direct operation of the public sector itself. Instead, new issues have arisen which keep the question of the appropriate balance among the various sectors in full view as an important policy issue.

The effect of public policy and private agencies on the distribution of income has become an issue of increasing importance in recent years and one of considerable relevance to the rule and performance of the private sector in marketing of agricultural commodities. In gauging the performance of the private sector attention needs to be given to the alternative effects of the private and public sectors upon employment, both directly and indirectly, through the manner of utilization of capital as well as upon more direct effects on income distribution through the level of profit and efficiency of production.

A second and perhaps most pressing issue with respect to market performance is that of the effect on stability or instability of food supplies to urban areas and the relative stability of prices for that food. This issue has assumed greater importance since the United States abrogated its traditional role as supplier of last resort and hence stabilizer of world grain supply and prices. There has been a growing concern with the economic and political affect of price stability on consumers and on producers along with concern for what actions governments might properly take to command annual supplies and to create and manage buffer stocks. These questions have, in turn, led to question as to the effect of the private sector on stability, and the extent to which the quasi-public sector and the public sector need to displace,

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\*Paper presented at the Asian Productivity Organization Symposium on Economics of Food Grain Distribution, September 30 - October 6, 1975, Tokyo.

complement or utilize the private sector for fulfilling the important stability objectives which society may state.

There is a third issue, reflected in an increasing concern with the efficient allocation of the scarce institutional and personnel resources at the command of governments. The question is being asked, not just if performance of a function can be improved by intrusion of quasi-governmental agencies, but will such use of public resources give higher returns than alternative uses. Put simply, we must ask the question, can scarce government personnel be more efficiently used in organizing alternative marketing systems, for example, through co-operatives or by improving the national farmers' extension service or even the research programs so necessary to new technology.

Thus, the question of performance in the food grain distribution system is not simply one of the degree of competitiveness, efficiency and productivity of the various alternative channels, but also one of the effect on distribution of income on meeting of political and economic objectives for reliability of supply and price and on optimal use of scarce governmental resources.

#### Efficiency and Competitiveness of Private Trade

The private trade in general operates quite competitively and at a relatively high degree of economic efficiency even though resource productivity may be relatively low.

This position is being substantiated by a growing series of empirical studies based on detailed and carefully collected data covering a wider and wider range of conditions and for a larger and larger set of commodities. 1/

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1/ See for example: Uma J. Lele, Food Grain Marketing in India: Private Performance and Public Policy, Cornell University Press, Ithaca, 1971; M. O. Farruk, The Structure and Performance of the Rice Marketing System in East Pakistan, Cornell International Agricultural Development Bulletin No. 23, Cornell University, Ithaca, N. Y., June, 1970; Ray W. Nightingale, The Modernization Decision in Indian Urban Fluid-Milk Markets, Cornell International Agricultural Development Bulletin No. 15, Cornell University, Ithaca, N. Y., August, 1969; Winfried Manig, "Marketing of Selected Agricultural Commodities in the Baco Area, Ethiopia", Occasional Paper No. 66, Department of Agricultural Economics, Cornell University-USAID Employment and Income Distribution Project, December, 1973; Ralph Cummings, Jr., Pricing Efficiency in the Indian Wheat Market, New Delhi: Impex, 1967; A. P. Kulkarni, "The Behavior of Prices of Groundnut Pods in Some Regulated Markets in Maharashtra", Ph.D. dissertation, University of Poona, 1962; V. S. Satyapriya, "Marketing of Arecanut in Mysore State", Ph.D. dissertation, Gokhale Institute of Politics and Economics, University of Poona, 1973; P. G. Gadgil, "Marketing of Turmeric in Sangli District", Ph.D. dissertation, University of Poona, 1975.

### Intermarket Integration

The now widely tested approach of comparing prices for similar grades and similar points in time in different markets and then comparing those price differentials with transportation costs between markets as well as regressing the prices of one market on another to see whether they tend to move in unison consistently shows very high correlation between prices of one market on another and a close relationship between the maximum gaps in those prices and the cost of transport. The studies also show that the more expensive and the less reliable the transportation and communication systems the lesser will be the correlation of prices among markets and the greater the overall fluctuations within any given market. <sup>2/</sup> It follows from this that markets in low income countries tend to be highly integrated and hence that at the same time that the opportunities for collusion within most markets is low because of the substantial number of traders operating in those markets, the scope for collusion is further reduced because of the high degree of integration of markets and hence the essentially impossible to achieve necessity that successful collusion encompass a very large number of traders throughout the country and not just those in a single market. Thus one corroborates a relatively competitive situation operating reasonably efficiently, with exceptions to the generalization related largely to infrastructure development.

### Interseasonal Integration

Similarly, studies of seasonal fluctuations in prices relate prices in one season to those in another season, examine the extent to which prices in different seasons are correlated and measure the extent to which the differentials in pricing from one season to another are related to storage costs. In these analyses too, the finding in general is that the average change in price from one season to another is closely related to storage cost and again reflects a competitive and efficient system. <sup>3/</sup> However, it is also normally found that the year-to-year changes in the pattern of seasonal fluctuations are very large indeed and that while on the average they reflect storage costs, in any one year they may depart very greatly from storage costs. Thus, on the average, the situation appears competitive without monopoly profits, but in any given year there may be very substantial albeit largely

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<sup>2/</sup> See for example, Lele's finding of greater market integration by these measures in Punjab than West Bengal, op. cit.; see also the lesser degree of integration among markets in transportation poor Ethiopia, Manig, op. cit.

<sup>3/</sup> E.g. see for India: Lele, op. cit.; for Bangladesh: M. O. Farruk, op. cit.; for Ethiopia: W. Manig, op. cit.



balancing, windfall profits and losses. This situation of great instability in the seasonal pattern does of course reflect a source of considerable inefficiency both with respect to consumers and producers. However such imperfection clearly arises from imperfections in market information. These imperfections might be reduced by investment in market reporting and news dissemination systems. However such fluctuations cannot be entirely eliminated as long as agriculture is highly dependent on the vagaries of the weather. It is these problems related to instability in supply and in prices to which we will return in a later section of the paper.

#### Interproduct Efficiency

There also appears to be relatively high efficiency and lack of monopoly profit in the transformation of food grains from one form into another through agricultural processing. Again, numerous studies which relate the prices of commodities in one form with that in another show these prices to be closely correlated. For example, in comparing unhulled rice with hulled rice, the two sets of prices seem to be highly correlated in general and the differences in the prices tends to reflect the cost of processing. <sup>4/</sup> That is of course not to deny the scope for increasing the productivity of rice milling through improved technology - a potential which public assistance in research, education and credit can be helpful in realizing.

#### Improving Market Efficiency and Productivity

One may readily conclude for recent empirical analysis that if concern is with efficiency in use of marketing resources and in transmitting readily changes in supply and demand conditions to producers and consumers through price, then the private marketing system has considerable scope for fulfilling that function effectively. It further follows, in this context, that the logical public policy mechanisms would lie with further improving the performance of a generally effective private sector rather than displacing that sector with quasi-governmental or governmental bodies.

Such improvement might occur in transportation through investment in improved transportation and communication facilities and perhaps most important, major investment in a rapid and flexible system of road transport - particularly including the village level. With respect to interseasonal price differentials, investment might be made in the building of institutions and physical capacity for insuring ample storage and for quickly discovering the changing prospects for supply, demand and storage of food grain commodities. With respect to processing, investment might be made in the institutions for bringing about

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<sup>4/</sup> See Lele, op. cit.

productivity increasing technological change. In all of these processes the cooperative sector, or even the public sector directly may play a useful role in illustrating effective techniques, serving as a yardstick for judging the private sector, and perhaps most important, as a conduit of information from the trade to the governmental bodies. Needless to say, if the cooperative sector is to play this role in the context of a generally efficient and competitive private sector it too must be efficiently managed and have ready access to the sources of new technological knowledge.

#### Income Distributional Effects

In the past few years there has been a rapidly growing concern for the distribution of income and even a willingness to sacrifice efficiency and total product for greater equality of distribution. 5/

There are three somewhat separable aspects to the income distributional effects of performance of the private trade. One may ask on the one hand, what is the level of profits and to what extent does that level contribute to the skewing of income distribution and societal power relationships away from the lower income groups; and on the other hand, what is the relative performance with respect to choice of production technique and what are the implications of that choice to the distribution of output amongst factors of production, and particularly to labor. More simply, does the private sector, compared to other sectors use more or less labor intensive techniques. In addition the question arises: what is the potential for the private sector if food is to be rationed and its price subsidized to the poor.

#### The Effect of Profits

Analysis of the efficiency and competitiveness of the private trade indicates that in general factors of production are being paid roughly their competitively determined share and hence that collusive behavior is not contributing to the skewing of income distribution. 6/ There also seems to be only relatively limited situations in which major economies of scale in operation and hence concentration occur. 7/ Concentration does, of course, often occur in the major wholesale markets and to some extent in processing. The profit margins in those endeavors, although small relative to other aspects of cost, may provide

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5/ E.g., see President Robert S. McNamara, Address to the Board of Governors, International Bank for Reconstruction and Development, Nairobi, Kenya, September 24, 1973.

6/ Lele, op. cit.

7/ Farruk, op. cit.

individual large incomes, which may in turn provide undue power to those individuals. Private concentration in marketing functions must therefore also be looked at in a broader context of social attitudes towards concentration of wealth and powers.

#### Choice of Technique and Factor Shares

Even more complex to judge is the question of relative performance with respect to choice of technique and distribution of output and income among factors of production. This issue has been analyzed empirically in the context of modernization of rice milling by Lele. <sup>8/</sup> Lele concludes that the private sector tends to operate with relatively small units, with a relatively large proportion of entrepreneurial input as compared to the quasi-public sector and hence tends to be willing to turn to relatively more labor intensive techniques and a wider range of combinations of techniques in the production process. Thus, for rice milling, the point is made that relatively large scale cooperative and public sector units tend to be much more capital intensive and less labor intensive than is typical of private units.

The result of these tendencies with respect to choice of technique is that as compared to the public sector the private sector exhibits a larger relative distribution of income towards labor and a lesser distribution towards capital.

In this day of considerable concern for income distribution, and particularly for employment as a means of broadening income distribution, it is important that the issue of factor shares and choice of technique be considered in judging performance. The issues are relatively clear. First, what are the relative entrepreneurial requirements of handling the relatively large labor forces involved in more labor intensive techniques? Second, what other entrepreneurial techniques are needed if the technology of the more labor intensive types is used rather than that of the more capital intensive types? And finally, what are the costs of improvement of the public sector in these areas relative to the cost of improvement of the private sector operation in other policy areas in which it may be deficient.

#### Rationing and Subsidy

The free market system allocates food among income classes in relation to income. The resultant distribution of food may be unacceptable on grounds of equity with a resultant effort by government to circumvent market forces by rationing and consumer subsidies. These

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<sup>8/</sup> Lele, op. cit.; Uma Lele, "A Case Study in Agricultural Marketing: The Modern Rice Mill in India", Occasional Paper No. 49, Department of Agricultural Economics, Cornell University-USAID Employment and Income Distribution Project, December 1971; Uma Lele, "Modernization of the Rice Milling Industry, Lessons from Past Performance", Economic and Political Weekly, Vol. V, No. 28, July 11, 1970.

efforts may be accompanied by attempts to shift some of the costs to farmers through compulsory procurement of grain at less than market equilibrium prices. The private trade may be utilized in such circumstances, but the complex system of subsidies and taxes may in practice be operated so as to reduce competition and argue for a complete takeover of trading operations. The decision to do so should be taken in full cognizance of the total costs on the alternatives available.

### Supply and Price Instability

One of the major areas of performance for the food grain distribution system is that of offering a stable supply at stable prices. Particularly with withdrawal of United States from the role of last resort supplier, and hence provider of stabilization at the international level in supply and prices, instability of consumer supplies and prices of those supplies has greatly increased. Specifically, the opportunity for any individual country to stabilize its supply and price through international trade has diminished and hence interest has increased in other approaches to stabilization. The problem involves consideration of the affect of price instability on producers, the affect of supply and price instability on consumers and the relative cost of alternative means of reducing or compensating for instability.

### The Effect of Price Instability on Producers

Although in the past there has been a widespread belief that price instability serves as a deterrent to production, there is now increasing doubt as to whether that is the case. While the more certain expectations accompanying price stability may encourage investment; it may equally be argued that periods of unusually high prices may relax capital constraints and give a surge to innovation that is consolidated in low price periods.

Perhaps more important, price instability and income instability are not coterminous. Indeed, there is substantial evidence that in low income countries, and particularly with the lower income small farmers, that a reduction of price instability will in fact increase income instability. <sup>9/</sup>

A farmer's income is a function not only of price but of quantity produced as well. These two factors normally move in opposite directions. The extent to which they balance each other is a function of

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<sup>9/</sup> See for example: John W. Mellor, "The Functions of Agricultural Prices in Economic Development", Indian Journal of Agricultural Economics, Vol. XXIII, No. 1, January-March, 1968; Michael G. G. Schluter, "The Interaction of Credit and Uncertainty in Determining Resource Allocation and Incomes on Small Farms, Surat District, India", Occasional Paper No. 68, Department of Agricultural Economics, Cornell University-USAID Employment and Income Distribution Project, February 1974; John W. Mellor, "Agricultural Price Policy and Income Distribution in Low Income Nations", World Bank forthcoming working paper, 1975.

the proportion of output which is marketed and the price elasticities of demand. The configuration of these forces is such that in a low income country, low income producers marketing a modest proportion of their total production will find price stabilization schemes destabilizing to their incomes. Note, in the actual case of an area in Surat district, Gujarat, India, that in four of six cases, postulating price stabilization actually increased the coefficients of variation (Table 1). Of course, it should be clearly borne in mind that this relationship between price and income stability is importantly influenced by the proportion of output marketed and income elasticities. Thus, price stabilization will more effectively stabilize producers' incomes as producers become more commercialized and as price elasticities of demand decline. Similarly price stabilization programs benefit larger producers more than smaller producers.

#### The Effect of Price Instability on Consumers

Even for the case of consumers there is some debate as to the desirability of reducing price instability. On the one hand it has been demonstrated by Johnson that the effect of unstable prices is to reduce total utility of consumers. On the other hand, Waugh has also demonstrated that unstable prices also increase consumer surplus. <sup>10/</sup> Having stated the straight-forward economics of the question however, one must recognize that politicians essentially without exception find major movements in agricultural prices most destabilizing to the political situation and we can clearly expect governments to take considerable interest in trying to decrease the extent of price instability.

The reasons for the political importance of fluctuation in food grain prices and supply arise from the high proportion of consumer expenditures allocated to these commodities and the consequently large effect on real incomes. This effect is much greater for lower income than high income consumers and thus the broadening of the base of political participation further increases the importance of food grain price and supply instability.

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<sup>10/</sup> This matter has been discussed recently by K. L. Robinson, "Unstable Farm Prices: Economic Consequences and Policy Options", Invited address, annual meeting of the American Agricultural Economics Association, The Ohio State University, August 11, 1975; see also, D. G. Johnson, Forward Prices for Agriculture, Chicago: University of Chicago Press, 1947; F. V. Waugh, "Does the Consumer Benefit from Price Instability", Quarterly Journal of Economics, 58 (1944), 602-614.

Table 1. Coefficients of Variation for Yields, Prices and Revenues Under Alternative Price Stabilization Policies for Major Unirrigated Crops, Surat District, 1966/67-1971/72

Factor/crop	Rice		Jowar	Cotton		Ground-nuts
	Low Fert.	High Fert.		Low Fert.	High Fert.	
Yield	0.40	0.42	0.39	0.42	0.51	0.37
Price	0.09	0.09	0.13	0.24	0.24	0.26
Revenue: a) No price stabilization	0.36	0.36	0.43	0.30	0.43	0.42
b) Prices partially stabilized*	0.39	0.39	0.40	0.36	0.47	0.34
c) Prices completely stabilized**	0.40	0.42	0.39	0.42	0.51	0.37

\*Gross returns with price deviations from the mean reduced by 50% in each year.

\*\*Gross returns with prices fixed at the mean levels.

Source: See Michael G. G. Schluter, "Interaction of Credit and Uncertainty in Determining Resource Allocation and Incomes on Small Farms, Surat District, India", Occasional Paper No. 68, Department of Agricultural Economics, Cornell University-USAID Employment and Income Distribution Project, February, 1974. (Chapter VII, Table 30, p. 44).

Note that change in food grain prices causes a larger percentage change in the real incomes of low income consumers, but a larger absolute change in the real incomes of high income consumers. The absolute effect on income of high income consumers may have secondary effects on the poor through changes in consumption of other goods and services and consequent change in employment in their production.

With these important caveats in mind, Tables 2, 3 and 4 are of interest in suggesting the distributive impact of a ten percent decline in the supply of food grains, using the elasticities implicit in the preceding analysis, and assuming no compensating decline in employment. Thus the lowest two deciles in the income distribution of consumers suffer 36.6 percent decline in real income compared to a decline of 7.9 percent for the top five percent in the income distribution (Table 2). Similarly, the lowest income deciles experience a 30.5 percent decline in food grain consumption, compared to 1.3 percent for the top income group (Table 4). The large reduction in consumption of non-food grain commodities shows clearly that there would be large secondary effects on employment, greatly reducing the food grain price increases (Tables 3 and 4). Thus price changes of the magnitude implicit in this analysis are unlikely to occur. But that is only because the placement of the burden on the poor is in practice shared between less employment and higher prices - in any case the reduction in food consumption is concentrated on low income consumers through real income phenomena operating through market processes.

From this analysis it is apparent that an important policy issue is the extent to which the private marketing system affects the stability of supply and prices and the extent to which the government can play a stabilizing role.

Table 2. The Effect on Real Income (Expenditure) of a 10% Decline in Supply of Food Grains, by Income Class, India, 1964-65

	Bottom 2 deciles	3rd decile	4th, 5th decile	6th, 7th & 8th decile	9th decile	Lower ½ of 10th decile	Upper ½ of 10th decile	Mean for all Classes
Initial monthly expenditure <u>a/</u>	8.93	13.14	17.8	24.13	30.71	41.89	85.84	24.43
Decline in real expenditure <u>b/</u>	3.27	4.17	4.67	4.90	5.27	5.28	6.77	4.89
New real expenditure <u>c/</u>	5.66	8.97	13.13	19.33	25.44	36.51	79.07	19.34
Percent decline in real income (expenditure) <u>d/</u>	36.6	31.7	26.7	20.30	17.20	12.8	7.9	20

a/ Initial monthly per capita consumption expenditure (Rs.) by income classes on food grains as well as non-food grains.

b/ Decline in monthly per capita consumption expenditure (Rs.) by income classes on food grains as well as non-food grains as a result of the income effect of price increase consequent to a 10% decline in the supply of food grains.

c/ New reduced monthly per capita consumption expenditure (Rs.) by income class, on food grains as well as non-food grains after the effect of the 10% decline in the supply is deducted from initial expenditure.

d/ Percentage decline in monthly per capita expenditure by income class as a result of the 10% decline in the supply of food grains.

Source: John W. Mellor, "Agricultural Price Policy and Income Distribution in Low Income Nations", World Bank forthcoming working paper, 1975; Appendix Table 5, for which the data source was National Council of Applied Economic Research, All India Consumer Expenditure Survey, Vol. II, New Delhi, 1967.



Table 3. Decline in Consumer Expenditure in Different Income Classes  
as a Result of Ten Percent Decline in Supply of Food Grains,  
by Income Class, India, 1964-65

	Bottom 2 deciles	3rd decile	4th, 5th decile	6th, 7th & 8th deciles	9th decile	Lower ½ of 10th decile	Upper ½ of 10th decile	Mean for all Classes
(Rs.)								
Per capita monthly consumer expenditure	8.93	13.14	17.8	24.13	30.71	41.89	85.84	24.43
Expenditure on:								
1. Food grains	1.909	1.744	1.396	1.025	0.773	0.455	0.166	0.968
2. Milk & milk products	0.196	0.497	0.700	0.836	0.884	0.888	0.755	0.828
3. Meat, eggs & fish	0.085	0.140	0.176	0.201	0.209	0.213	0.202	0.198
4. Other foods	0.026	0.248	0.408	0.568	0.698	0.876	1.412	0.567
5. Tobacco	0.051	0.065	0.075	0.077	0.079	0.079	0.070	0.078
6. Vanaspati	0.020	0.052	0.086	0.134	0.144	0.145	0.100	0.129
7. Other oils	0.136	0.220	0.247	0.230	0.200	0.152	0.070	0.226
8. Sweeteners	0.147	0.227	0.256	0.252	0.227	0.190	0.109	0.228
9. Cotton textiles	0.286	0.383	0.415	0.418	0.400	0.366	0.279	0.413
10. Woolen textiles	-	0.011	0.026	0.039	0.056	0.075	0.141	0.038
11. Other textiles	-	0.004	0.005	0.011	0.112	0.043	0.220	0.011
12. Footwear	-	0.040	0.050	0.054	0.109	0.058	0.050	0.056
13. Durables & semi-durables	0.026	0.050	0.079	0.113	0.157	0.213	0.451	0.116
14. Conveyance	0.030	0.065	0.104	0.116	0.230	0.351	0.412	0.161
15. Consumer services	0.060	0.010	0.142	0.193	0.232	0.295	0.479	0.188
16. Education	0.031	0.060	0.100	0.165	0.237	0.360	0.922	0.163
17. Fuel & light	0.266	0.326	0.344	0.343	0.333	0.306	0.245	0.336
18. House rent	-	0.032	0.059	0.128	0.193	0.310	0.679	0.124
Total decline in real income in each class	3.27	4.17	4.67	4.90	5.27	5.38	6.77	4.89
New real expenditure	5.66	8.97	13.13	19.23	25.44	36.51	79.07	19.95

Source: John W. Mellor, "Agricultural Price Policy and Income Distribution in Low Income Nations", World Bank forthcoming working paper, 1975; App. Table 6, for which the data source was National Council of Applied Economic Research, All India Consumer Expenditure Survey, Vol. II, New Delhi, 1967.

Table 4. Percent Decline in Consumption Expenditure, by Income Classes as a Result of a 10% Decline in Supply, by Income Class, India, 1964-65

	Bottom 2 Deciles	3rd decile	4th, 5th deciles	6th, 7th & 8th deciles	9th decile	Lower ½ of 10th decile	Upper ½ of 10th decile	Mean for all classes
	Percent							
1. Food grains	39.5	25.5	16.8	10.7	7.4	4.0	1.3	10.0
2. Milk & milk products	120.9	85.7	62.0	43.1	31.7	21.4	8.8	41.8
3. Meat, eggs & fish	84.7	63.8	48.8	35.9	27.5	19.7	9.2	34.8
4. Other foods	2.1	18.5	24.9	26.3	25.1	22.0	13.9	25.9
5. Tobacco	26.8	25.8	23.3	19.8	16.9	13.4	7.4	19.4
6. Vanaspati	195.7	131.0	78.1	58.2	40.1	24.6	8.0	55.9
7. Other oils	96.9	64.8	44.1	28.4	19.5	11.9	3.8	24.5
8. Sweeteners	91.9	63.0	44.1	29.7	21.0	13.6	5.0	28.7
9. Cotton textiles	60.8	45.6	34.6	25.5	19.6	13.9	6.4	24.9
10. Woolen textiles	142.6	110.4	86.3	64.9	50.6	37.3	17.8	63.0
11. Other textiles		35.9	51.3	55.7	53.5	47.2	33.4	54.9
12. Footwear	89.7	66.2	49.8	35.9	27.3	19.2	8.6	35.0
13. Durables & semi-durables	36.9	45.6	46.3	41.8	37.8	31.3	18.4	41.5
14. Conveyance	74.5	71.8	64.9	55.2	46.9	37.3	10.0	53.8
15. Consumer services	54.3	52.3	47.2	40.2	34.1	27.1	15.0	39.2
16. Education	76.7	73.8	66.7	56.8	48.3	38.3	21.3	54.4
17. Fuel & light	46.7	36.6	28.9	22.0	17.6	12.9	6.4	21.4
18. House rent	214.9	157.9	118.1	85.0	64.3	44.9	20.1	82.3

Source: John W. Mellor, "Agricultural Price Policy and Income Distribution in Low Income Nations", World Bank forthcoming working paper, 1975; App. Table 7; for which the data source was National Council of Applied Economic Research, All India Consumer Expenditure Survey, Vol. II, New Delhi, 1967.

Note: Price elasticities of various commodities were calculated on the basis of the NCAER data, and are reported in Mellor, op. cit., App. Table 4a. Using these price elasticities the percentage rise in prices of food grains due to a 10% decline in supply is calculated and then the adjustment made by other commodities due to the rise in price of food grains is shown. (i) Rise in price of food grains =  $[(dQ/Q)100]/\text{Price elasticity in mean class of food grains} = 67\%$ , (ii) this 67% rise in price of food grains price is reflected in the percentage decline in the consumption expenditure over non-food grains e.g. the percentage decline in consumption expenditure on 'other foods' is equal to price elasticity of other foods x 67 (0.032 x 67) which comes to 2.14%. From the percentage decline in non-food grains the absolute decline has been calculated and added for expenditure classes. (Table 3)

### Performance of the Market System With Respect to Price Stability

Performance of the private sector with respect to price stability raises questions which divide basically into four areas.

First, to what extent is private activity destabilizing of prices and of supplies because of unpredictable change in private stock positions based on speculative appraisals. Of course in this context one must add the question of the extent to which government policy or governmental operation may move in a more predictable way - an assumption easy to make, but not necessarily so easy to sustain. 11/

Unfortunately, we know little about private sector speculative activity, except that in a situation of very limited knowledge as to crop prospects and public and private stocks it would not be surprising if speculative forces accentuated consumer supply and price fluctuations. The measures to meet this problem lie with both increased knowledge through reporting and predictive services and through stocking by the government.

Second, to what extent is some type of stocking policy desirable to pursue even though it may be unprofitable from the point of view of the unfettered private trade. Stocking here may refer to both buffer stocking across crop years as well as attempting to manage stocking with respect to interseasonal supply and demand.

The extent to which governments engage in such stocking depends on the infrastructure for distribution, the commitment to supplying particular income classes or other segments of the population, the extent of financial resources and the magnitude of underlying forces creating instability. Once such public policies are undertaken they strongly influence the operation of the private trade.

Third, we must note that there will be strong interaction between the objectives and actions of any individual government with respect to price and supply stabilization programs with those of other countries in the international arena. The greater the size and flexibility of international buffer stocks the less necessary it is for public sector stocks in individual countries.

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11/ Robinson, op. cit., brings out that in the 1960's governmental intrusion into the dairy price situation in the United States served to destabilize prices rather than to stabilize them, essentially because of the substantial vacillation and unpredictable nature of government policy.

For those countries within which it is recognized that private trade operates competitively and efficiently, the important policy question is what type of interaction can profitably occur between the public sector and the private sector in meeting those public objectives which are not coterminous with the private ones. The inherent risk of any public policy in this context is that it will in effect serve to displace the private sector with potential deleterious effects on efficiency in resource use, on productivity in resource use, in distribution of income and on efficiency of use of public sector resources themselves. In attempting to develop effective public policy in these circumstances it must never be forgotten that given the generally high level of efficiency of the private sector in other respects, it would probably meet public objectives with respect to stability also if the utility schedules were such as to make it profitable to do so. Thus, the political system tends to demand services for which the components of that system are not willing to pay in full.

Allocation of Scarce Public Sector Personnel  
and Institutional Resources

The final, and perhaps most vexing question with respect to the private trade is that of the extent to which its displacement may use resources which could contribute much more to societal objectives in other uses. Formally trained personnel of the type employed by governments are a particularly scarce resource in all low income countries. The capacity to build effective institutions for implementing public programs are surely the scarcest of development resources - and the demands for those resources are not only immense, but growing rapidly as well. One must therefore ask the priorities for public resources in displacement of private trade compared to use of more limited resources to regulate and increase its efficiency, thereby freeing resources for other development purposes.