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SUMMARIES OF GROUP DISCUSSION

SUBJECT I

SUBSIDY AS AN INSTRUMENT FOR INCREASING AGRICULTURAL PRODUCTION AND INCOME

Rapporteur: Shreekant Sambrani*

The discussion was organized according to the seven main themes identified in the Synopsis circulated earlier while inviting papers and elaborated in the Rapporteur's Report.¹ This summary of discussion is also similarly ordered.

I

THE RATIONALE FOR SUBSIDIES

One argument put forward was that the cost of production of various agricultural commodities varied from one region to another. Yet the Agricultural Prices Commission (APC) determined a uniform, nation-wide support price for each commodity. Therefore, there was a justification for region-specific subsidies, which will permit farmers to receive cost-plus prices for selected commodities, and in turn would help enhance their production. It was, however, pointed out that the cost of production was only one among the many considerations determining the recommendation of prices by APC. Using subsidies to overcome regional imbalances and to arrive at a cost-plus price may not be a feasible task.

It was also argued that subsidies compensated for the poor risk-bearing ability of the smaller farmers and thus promoted greater use of innovative inputs and technology. Compensation for risk is, however, one of the many bases considered for subsidies. Other justifications would include the introduction of a new activity, a need for greater production of commodities which did not offer comparative advantages at current market prices, inducing individuals to undertake activities for which the social benefit far outweighed the private benefit, and finally, political considerations.

Further discussion emphasized the need to identify correctly the basic cause leading to the relatively slow acceptance of measures for which subsidy was advocated. For example, there could be a total ignorance regarding the specific activity, in which case extensive demonstrations would appear to be a better solution. The smaller cultivators may well face a resource constraint which could not be met from available sources. Capital scarcity could be

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1. This *Journal*, Vol. XXXVII, No. 3, July-September 1982, pp. 282-293.

tackled through other measures, if practicable, such as greater credit provision on easier terms. (There may, however, be a reluctance to become indebted beyond a certain limit.) Quite often, the expected results from a new technology or an input might show a wide variance around the mean. In such cases, the intended beneficiary might tend to be guided by the worst possible outcome, which may not be sufficiently attractive. The remedy then would be to undertake improvements of a technological nature either to reduce the variance or to raise the mean level sufficiently to make the innovation attractive.

The needs of the beneficiary population/region, the objectives of the contemplated activity, the risk involved and the prospects for stabilising and maintaining production all need to be considered in their totality. Subsidy then would become one of the many measures available for meeting the objective of increased production and incomes, rather than the only one or the foremost one. It may be further necessary to distinguish subsidies by individuals, classes, areas, and programmes for which they are meant. Such a segmentation of the rationale for subsidies may lead to a more appropriate design for the disbursement of subsidy.

In the final analysis, there would still be activities which could require subsidy. Among these could be those whose social benefits outweigh private considerations. Subsidies may be used to bring about a convergence between choices considered desirable on social and private grounds. Finally, 'infant industry' argument may warrant protection through subsidies for an activity until it reaches maturity, so as to withstand competitive pressures from alternatives.

II

THE FORMS OF SUBSIDY

An analysis of the rationale for subsidies would also lead to a determination of an appropriate form for its distribution. If, for example, the objective is to prevent the disincentive effects of poor prices, support prices may be contemplated. They should not be confused, however, with incentive for higher production. Support prices serve a purpose different from that of input subsidies. Further, the benefits from support prices accrue to only those who have surpluses to market. It would be necessary to take into account the trade-off between the incentive effects of subsidy and its cost before arriving at an appropriate form of subsidy.

Apart from explicit subsidies, there are implicit subsidies, such as those involved in the general provision of commodities at prices below what it costs to produce them. The supply of electricity and irrigation water to farmers are examples of such implicit subsidies. The provision of inputs to fertilizer industry at administered prices, lower rail tariffs on fertilizers and foodgrains, pricing imported fertilizers below their landed cost are all examples of such implicit subsidies.

A distinction between capital and interest subsidies was highlighted. Often, more than one form of subsidy was operational at the same time, involving various disbursing agencies. This has led to some avoidable confusion in implementing subsidy programmes.

Regardless of the form the subsidy takes, it is essential to identify it as such, so that a correct assessment of its impact and the cost of offering it can be made.

III

MECHANISMS OF SUBSIDY DISTRIBUTION

Cumbersome processes and copious paper work, delays in disbursing subsidies, leakages (in the form of funds being allotted to ineligible recipients or bribes to be paid for availing of subsidies) are among the problems associated with mechanisms of subsidy distribution. These may be caused by the involvement of too many agencies in various stages of subsidy distribution, in which case a streamlining of the procedures is indicated.

As an example of the desirable streamlining, the current involvement of the commercial banks in Integrated Rural Development Programme in aspects involving subsidies was cited. Advance deposit of subsidies to avoid delays, issue of an identity-cum-monitoring card to the intended beneficiaries, periodic trouble-shooting meetings among administrators, technical specialists and bankers, and exhaustive guidelines were mentioned as new measures to help overcome the problems.

A related concern was with the follow-up of activities started with subsidies. Since the subsidy recipients are adopting an innovation, they need to be helped in their pursuit of the new activity/technology/input. A scheme of 'supervised subsidies' along the lines of supervised credit may be considered desirable; there is, however, likely to be a manpower constraint inhibiting the spread of supervised subsidies. The experience of commodity- or activity-specific agencies (oilseeds co-operatives, small farmers' development agencies) in administering subsidies may be instructional in determining an appropriate implementation strategy.

It may well be impossible to design a perfect mechanism for disbursing subsidies, since questions of patronage and power relations are intricately involved with it. There is, nevertheless, considerable room to suggest improvements to the current system, based upon a careful analysis of its performance.

IV

TARGET GROUPS

Since subsidies are given, one way or the other, with an objective of improving the incomes of the poor, their impact, if effectively implemented,

will be to bring about changes in the income distribution patterns and the attendant consequences for power relations. A basic question is, therefore, whether the rural elite will permit an effective implementation of such schemes.

Instances of wilful collusion among legislators, administrators and local power wielders to expropriate subsidies away from the poor are numerous. There are also instances when vigilant administrators and leaders have attempted to prevent such abuses. What is needed is a set of *institutionalised*, rather than individual, measures.

A major reason for the diversion of the subsidies is that a large number of the intended beneficiaries are unaware of the provisions of subsidy, eligibility criteria and avenues of redress. Organizing the beneficiaries to exercise a watchdog function may be desirable, but is fraught with difficulties. The new volunteer corps to be organized by the National Bank for Agriculture and Rural Development (NABARD) and involving *gaon sabhas* in determining eligibility show promise of being the hoped-for institutionalised measures.

V

THE IMPACT OF SUBSIDIES

The main difficulty in assessing the impact of subsidies arises from problems of correctly identifying the consequences attributable to subsidies. A fresh or additional use of certain inputs undoubtedly leads to changes in production and income. It is not entirely clear, however, that the subsidies are uniquely responsible for the use of that particular input or its use at the specific level. Quite often, the offer of subsidy changes the resource availability and permits the farmer to undertake various expenditures, including those on the specified inputs. It is not entirely clear under such circumstances whether the entire expenditure on inputs and the consequences of the use of that particular input can be attributed to the institution of the subsidy. Unfortunately, the methodologies used for studying the impact of subsidies—mostly, modified farm management studies—do not raise such identification issues, leave alone attempt their resolution.

A direct and desired consequence of subsidies is an alteration of relative prices and resource availability. Therefore, the allocation of resources among various activities will be altered as a result of subsidies. There may well be a change in the preference function itself. In a tentative manner, the change may be conceptualised as under:

Without subsidy: $Q_I = f_I(P_I, R_I)$

With subsidy: $Q_{II} = f_{II}(P_{II}, R_{II})$

where Q is commodity purchased vector, P is the relative price vector and R is the resource availability vector. It is assumed that between states I and II, the only change is the availability of subsidy. A comparison of Q_{II} with Q_I should indicate the impact of subsidy.

Unfortunately, it is not easy to enumerate and measure all the components of the involved vectors, nor to maintain the *ceteris paribus* conditions. On the other hand, to attribute all the benefits actually materialised after the availing of subsidies to them is to commit a *post hoc, ergo propter hoc* fallacy.

The use of simple production function or cost-benefit analysis for the evaluation of the impact of subsidies is prevalent, but subject to the fallacy stated above. Given the great necessity to properly evaluate a programme of such massive proportions, it is essential to work towards more appropriate methodologies.

As a beginning, it may be useful to consider an analog of the double-bribe criterion. Two questions need to be simultaneously asked: what was the farmer enabled to do after availing of the subsidy and what he would have been prevented from doing in the absence of a subsidy.

In the case of several different forms of subsidies being offered simultaneously, an analysis of their interaction forms an integral part of the evaluation. Similarly, the spread effects directly attributable to the institution of a subsidy programme must also be reckoned with.

By whatever method the evaluation is achieved, there is no gainsaying its importance and the need to have it performed in a systematic manner and on a regular basis, quite apart from its operational monitoring. The involvement of external professional organisations in this task may be considered highly desirable.

VI

THE TIME HORIZON

By virtue of any of the justifications advanced for subsidies, they must be time-bound. A perpetuation of subsidy implied that the imbalances they sought to rectify have also continued despite their operation, hence subsidies are not the correct remedy.

Nevertheless, time limits on subsidies cannot be arbitrary, because such arbitrariness could cause even greater disequilibrium than their continuation. A gradual, phased withdrawal of subsidy in keeping with the rectification of the imbalance, as evidenced by an absence of a drop in the level of the subsidised activity, may be the most desirable way.

There may be a need to transfer subsidies from one activity to another, one region to another, or one group of beneficiaries to another in view of the emergent conditions. This is not to be confused with the perpetuation of a specific subsidy.

Continued subsidies could lead to adverse effects on the motivation of the recipient. There may also be an overall corrupting of the economic system in the sense of a growth in the 'invisible' or 'parallel' economy. These may be termed as disincentives of a continuation of subsidies.

VII

ALTERNATIVES TO SUBSIDY

In the long run, the Barker-Hayami prescription of improving the physical and institutional infrastructure to effect shifts in production functions may be considered desirable.

As partial steps towards this long-run desirable goal, technological improvements, easing credit restraints for the small holder-slow adopters, effective dissemination of knowledge are all worthy of consideration. In the ultimate analysis, the consideration of the most effective use of resources spent on subsidy (direct subsidies plus the cost of administering them) in meeting the specific objective for which the subsidy is being provided must govern the choice of the alternative.

SUBJECT II

EXPORTS OF AGRICULTURAL COMMODITIES

*Rapporteur: G. R. Saini**

The need for increasing exports both for augmenting foreign exchange resources and promoting overall economic growth of the country was well recognized. Opening the discussion, the Group emphasized the relatively inelastic nature of demand for primary products that considerably influences the export performance of these commodities.

The Group analysed the overall performance of different commodities and attempted to identify the existing bottlenecks and constraints on increasing agricultural exports.

The Group devoted considerable time to the discussion of individual commodities like tea, jute, cashewnuts, etc. As regards tea, it was observed that as a result of increase in population as well as per capita income, there was a growing domestic demand for tea. The proportion of tea production consumed in the domestic market has been on the increase. Consequently, the share of exports in the domestic output of tea has registered a decline. Relatively higher domestic prices also appear to have contributed to this phenomenon.

As regards jute, it was felt that the export performance of this commodity has been considerably affected by increasing competition from Bangladesh and availability of synthetic substitutes increasingly being used by the importing countries. The Group emphasized that the jute industry in India suffers from obsolescence. The Bangladesh jute industry is more modernized giving that country a comparative advantage of low unit cost. The Group felt that

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if India is to improve its performance, it is imperative to modernize the jute industry and improve the quality of jute and its manufactured products.

In the case of cashewnuts, it was observed that India has considerably slid down from her position of a monopoly supplier in the world market. This is largely due to the development of cashew processing industry in African countries which were the traditional suppliers of India's cashew imports. The Group felt that there is need to encourage cashew plantation with improved technical know-how with the twin objective of effecting an increase in productivity and reduction in unit cost to improve India's competitiveness in the world market. The entry of corporate sector in cashew cultivation and exports was recommended as a positive step in this direction.

Taking an overall view, the Group observed that exports of agricultural commodities from India are characterized by considerable year-to-year fluctuations. The Group emphasized the need for growth with stability. India must emerge as a dependable supplier of agricultural commodities. The need for timely honouring of export commitments and improving the quality of export goods was particularly underlined.

The Group also emphasized the need for diversification of our agricultural exports to a larger number of foreign countries. It was felt that rigorous efforts should be made to find new markets for our exports. The Group also felt that there exists a considerable scope for expansion of exports of non-wood forest products, medicinal plants, perishable and semi-perishable agricultural commodities and development of fisheries for export purposes. In the case of fisheries the Group felt that as far as possible the domestic demand should be met from inland fisheries and the country should exploit its marine wealth for export purposes. This would require considerable investment in fishing vessels and related resources and marketing infrastructure and deserved priority in the allocation of resources.

The Group underlined the urgency to launch in potential foreign markets an aggressive export promotion drive manned by professionals in the field of marketing. The Group felt that this job requires expertise beyond the routine bureaucratic level.

The Group made several other suggestions for increasing overall export of agricultural commodities. These are as follows: (i) Increasing domestic output of commodities with a view to increasing exportable surplus; (ii) Development of transport and related infrastructural facilities; (iii) Improvement in packaging of products; (iv) Strict quality control; (v) Credit liberalization for exports, review of export duties and incentives for increasing agricultural exports through liberal export subsidies; (vi) Development of agricultural processing industries with a view to exporting value added form of the commodities; (vii) Collective efforts on the part of developing nations with a view to eliminating wasteful competition.

The Group also felt that it would be desirable to undertake a benefit-cost analysis of commodities entering exports with a view to determining the areas of comparative advantage which may be profitably exploited to increase foreign exchange earnings.

The Group felt that an appropriate policy for encouraging well organized export-oriented contract farming may be explored. This will enable the transfer of technical know-how and resources from the contracting parties and generate employment and income for the farmers. For this purpose commodities and sources of contract will have to be identified. In the case of contract farming proposals from abroad, modalities for the fixation of prices of products, etc., will have to be carefully gone through.

The Group felt that commodity boards may be set up for all important commodities with a view to linking up production, marketing and exports. These boards may be open to co-operatives and private corporate sectors as well. The possibility of rationing of commodity production between exports and domestic consumption should be explored by our planners and policy makers.

The Group also felt that the policy of exporting commodities entering mass consumption should be reviewed with a view to increasing the domestic availability of these commodities.

The Group was of the view that the country did not have a well defined long-term general policy regarding export of agricultural commodities and that agricultural exports were guided by ad hoc decisions taken from time to time. The Group emphasized the need for a long-term strategy for export of agricultural commodities. One of the participants presented the case of agricultural exports from Nepal emphasizing the dependence of the economy of that country on that of India. He pleaded for a more liberal transit and other facilities from India to expand exports from Nepal.

The Group also briefly referred to the methodological issues for undertaking quantitative analysis relating to exports of agricultural commodities. The Group felt that the bilateral nature of exports may be particularly kept in mind while specifying the models.

SUBJECT III

SLOW GROWTH CROPS—PULSES, OILSEEDS AND COARSE GRAINS—TECHNOLOGICAL, ECONOMIC AND ENVIRONMENTAL CONSTRAINTS

Rapporteur: C. G. Ranade*

In the group discussions following issues were covered: (1) Implications for pulses with respect to increase in area under cereals due to spread of HYVs and increase in area under irrigation; (2) Feasibility of increasing area under pulses through specific price policies; (3) Technological development in pulse production; (4) Oilseeds: Problems and Prospects; (5) Coarse grains production: Problems and Prospects. Following is the summary of the discussions that took place on the above issues.

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I. IMPLICATIONS FOR PULSES WITH RESPECT TO INCREASE IN AREA UNDER CEREALS DUE TO SPREAD OF HYVS AND INCREASE IN AREA UNDER IRRIGATION

There was a consensus that due to the expansion in area under irrigation and spread of high-yielding varieties of wheat and paddy, the farmers have shifted away from pulses. However, there are regional variations in this shift. Since there are several varieties of pulses and many of them are region-specific, there is a need to do region-specific analysis of change in area and production of pulses. Most of the papers on pulses have fulfilled this need to a great extent.

The above finding was based upon the time-series data upto 1978-79. In recent years (1980-81 and 1981-82), the area under pulses, however, has increased.

Adoption of high-yielding varieties of cereals depended not only on yield but also on the cost of production and the output price. Due to increasing costs of chemical inputs, the total cost per unit of output has been increasing for wheat and rice. At the same time, the prices of pulses have been increasing. This may change the comparative advantage, and therefore it becomes difficult to make long-term forecasts for pulses production on the basis of past trends. For the last 20 years the area under pulses has been fluctuating between 18 to 22 million hectares without any noticeable trend.

One opinion was that pulse crops in unirrigated areas may have to be accorded a differential treatment. The issue was not discussed at length.

II. PRICE POLICIES FOR INCREASING AREA UNDER AND PRODUCTION OF PULSES

Questions were raised about the feasibility of price incentive as an instrument for encouraging farmers to shift area from wheat and rice to pulses, particularly in irrigated areas. The consensus was that increase in the prices of pulses would not help in increasing production of pulses. On the contrary, the high support price for pulses will adversely affect its demand. Moreover, this policy will be ineffective where pulses are grown mainly for home consumption. There are already examples of some other crops where price incentives have not been effective in increasing the area under those crops. For example, in Maharashtra, in spite of the Monopoly Procurement of cotton, in some places the area under cotton has shifted towards sugarcane due to high returns from the latter crop. It was argued, therefore, that the non-price factors are of great importance for increasing the area under and production of pulses. Some of these factors are highlighted below.

III. POSSIBILITIES FOR TECHNOLOGICAL CHANGE IN PULSES PRODUCTION

The scientists present during the group discussion informed that a great deal of research has been done on technological improvement in pulses since 1970. The focus has been mostly on evolving disease and insect resistant as well as short duration varieties. There has been a major breakthrough in

terms of early maturing variety for *arhar*. There are some new varieties which mature in about five months as against 10 months in the case of traditional varieties. Such varieties are particularly suitable for irrigated areas. Summer *moong* is another such example. It is important to study how such varieties can fit in the present crop rotation. Farmers have, however, not yet adopted these new varieties on a large scale, mainly because of non-availability of quality seeds in adequate quantities. There are bottlenecks in the delivery system which has not maintained the purity of seeds. It was argued that the seed distribution system considered pulses as low priority crops, and only the high-yielding varieties of wheat and rice got the top priority. There is an urgent need for streamlining the policies of State Seeds Corporations.

The Indian Council of Agricultural Research, through World Bank assistance, had started Agro-Economic Studies Units under the All India Co-ordinated Research Project for Dry Land Agriculture (AICRPDA). They worked at 16 centres. These centres were however closed in March 1982. Since these centres were serving useful purpose, they should be reopened in view of the urgent need for stepping up production of pulses which is a major crop in dryland areas.

In the case of wheat and rice it was relatively easy to evolve high-yielding varieties because of the long experience of the developed countries in breeding work. The same is not the case for pulses. India is a major pulse producing country in the world and various types of pulses are grown mostly in India. Given this situation, research work done by agricultural universities and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) deserves much greater attention from policy makers.

IV. OILSEEDS: PROBLEMS AND PROSPECTS

Oilseeds production occupies high priority due to deficit in production ranging from 0.3 million tonnes in good years to 1 million tonnes in bad years. The discussion focused mainly on groundnut which accounted for about 65 per cent of the total oilseeds.

There are constraints in increasing area under groundnut in unirrigated areas due to high risks involved in production. Even in irrigated areas groundnut farmers are shifting to sugarcane or paddy due to high returns from these crops. Continuous growing of paddy makes it difficult to grow groundnut in the same area since the upper soil becomes hard due to crust formation. In Punjab, even the light soils suitable for groundnut have come under paddy. This shift of groundnut area to paddy has taken place because there is higher yield certainty for paddy, vis-a-vis high uncertainty in groundnut production due to diseases and weather-related factors.

It was said that due to exploitative nature of trade practices, benefits accruable to groundnut growers were lost in the margins of traders. This calls for vertically integrated groundnut co-operatives. Questions were raised about the possibility of increasing production through these co-operatives. It was suggested that if backward linkages were strong in these co-operatives,

modern inputs of production such as bio-fertilizers, and effective cultural practices could be easily transferred on farms so that yield increase could be achieved.

Some participants expressed concern that without adequate increases in oilseeds production, creation of additional capacity through new co-operative processing societies, even if it is for the sake of modernization, will lead to wastages. Hence emphasis should be given on investment in research on technological improvements in oilseeds production.

The scientists present during the discussion informed that substantial potential exists for increasing groundnut production. There is a breakthrough in terms of disease resistant varieties of groundnut at ICRISAT. In Gujarat also high-yielding varieties of groundnut are developed. Summer groundnut in Gujarat has shown some promise for increasing groundnut production. However, not much acreage has come under new varieties due to the problems at seed production level. Similar to the case of pulses, there appears to be bottlenecks in the distribution of groundnut seeds.

Some researchers emphasized that plant protection plays a major role and unless the extension system plays an active role through early warning systems, the gap between the potential and actual yields cannot be narrowed. Some researchers suggested that the early warning system is not enough. What we need is integrated pest management. At the same time, there is urgent need for reducing fluctuations in yield.

V. COARSE GRAINS

A cross-section analysis of demand for coarse grains revealed that the income elasticity of demand is positive for low income groups in some States in India while in all States it is negative for high income groups. This analysis was questioned since it does not take into account the effect of relative price of coarse grains and the substitutes. If the price of coarse grains is higher than that of superior cereals even low income groups may not consume coarse grains. This however will not be valid where farmers have no choice but to grow coarse grains. Moreover, demand estimation for the coarse grains does not usually account for the portion used as cattle feed.

These crops often offer risk insurance, particularly in poor rainfall seasons. Efforts to enhance their productivity are therefore important. There is need for allocation of more funds for research. Once again, institutions such as agricultural universities and ICRISAT have a challenge as well as an opportunity at hand.