

**REGULATION AND CONTROL OF THE AGRICULTURAL  
PRICES IN THE DEVELOPING COUNTRIES  
WITH SPECIAL REFERENCE TO EGYPT**

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Some group of developing countries, though each of them has its own environments and problems, are more or less in common with regard to some features and problems : overpopulation and high rates of population growth, low-per-capita income and standard of living relatively to developed countries, high rate of increase in the demand for food — as a result of rising incomes, increasing population, growing urbanization and some other factors — relatively to the rate of increase of food production, a high per cent of the population derive their living from agriculture and agriculture still contributes the major sector of the national economy, agriculture is still in most case traditional, low productivity of factors of production, a shortage of capital, a lack of modern technique and the dependence, in the field of exports, to a large extent, on agricultural exports.

This makes tackling and treating certain problems in the developing countries in general with special reference to a certain country possible and reasonable

Most of the developing countries, having suffered a long from stunted growth and decay, have taken to planned economic and social development in some form or another as a means of take-off process, achieving rapid growth and raising the standard of living of the masses.

No one can deny that industrialization is a key to economic progress in the developing countries.

But this does not mean that the development of agriculture, which in most developing countries is still the dominant sector

of the economy, could be neglected. There is ample evidence from experience of the important contribution of increased agricultural output and productivity to economic growth. There should be a balance in the development of both these sectors. A balanced agricultural and industrial development would solve many problems that face development and ensure stable overall economic growth.

In Egypt in spite of the notable expansion in industrial sector and its concomitant impact on the economy — the industrial income increased from L.E. 127 million in the year 1952/53 to L.E. 477 million in the year 1966/67 and its share in the national income increased during the same period from 16% to 22% —, agriculture has continued to play a principal role in the country's economic life.

The agricultural income increased from L.E. 252 million in the year 1952/53 to L.E. 611 million in the year 1966/67 — at constant prices it increased during the same period to L.E. 360 million, i.e., by 43% with an average annual rate of growth about 3%. Still 28% of the national income is derived from this activity — the share of agricultural income in the national income has, due to the development of the other sectors, decreased since it was 31 percent in the year 1952/53. About 58% of the population derive their livelihood from agriculture. Agriculture is still a major source of foreign exchange generation. About 70 percent of the country's total exports are from agricultural origin : cotton, rice, onions, groundnuts, etc. About 28% of public total investments come from agriculture — in the year 1967/68 public total investments were about L.E. 379 million and the contribution of agriculture to these investments was about L.E. 106 million. It is worthwhile to mention that the state agricultural investments in that year were about L.E. 160 million, i.e., there is a net capital outflow from agriculture/.

Food production in Egypt has lagged behind the demand for food which has considerably risen as a result of the high rates of population growth and the increases in the people's cash incomes and other factors. An increasing imports of food have to compete with the importation of capital goods. Food imports constitute, in recent years, about 25% of total imports. How-

ever, it has been found that increasing home production of food and supplying domestic consumption with local food production rather than imports seem to be justified not only from social and political point of view but also from the economic point of view.

Agriculture plays a significant role in providing industry with raw materials; two main industries are wholly dependent in their activity upon agricultural raw materials; they are textile industry and food industry. In the year 1967 they represented about 58% of the total value of industrial production. Agriculture helps industrial development also by providing an expanding market for industrial products.

Agricultural plans aim mainly at the maximization of production — by means of increasing the area under cultivation through land reclamation as well as increasing the yield of the cultivated area—, influencing the structure of production in the direction socially desirable and the socialization of agriculture.

Price is an important instrument for influencing the expansion of agricultural production, but it is by no means the only or most important one. The aggregate agricultural production response to price, as a general, is low. It is even lower in a subsistence low income traditional agriculture than in a commercial high income modern agriculture. In order to “steer” the development of agriculture it is not enough to manipulate the prices; it is necessary to use the whole range of measures adequate prices, adequate investment programme, agricultural credit facilities, research into crops, pests, diseases, fertilizers, rotations, etc., technical progress, administrative measures, an agricultural education programme including agricultural extension staff and farm institutes which adult farmers may attend for short residential courses—the human development is essential for agricultural development in the developing countries—. In some countries, existing tenure systems cause a lack of interest in agricultural progress because farmers do not share fairly in the increased output. In such cases reforms towards improved tenure systems are essential for agricultural development.

A good price policy affects the production favourably only when objective conditions conducive for the growth of agricultural output are existing or may be created.

However to influence the development of agriculture by prices in the developing countries it is of a great importance, if not necessary, or indispensable, to regulate and control these prices by the state and not to leave them to be determined by the free market mechanism.

The purpose of this article is to examine and analyse the reasons behind this importance, the tasks of the agricultural price policy in the developing countries, the bases on which the agricultural prices have to be set or established in order to achieve and fulfil these tasks and the methods of controlling the agricultural prices in order to ensure that the set or established prices are in fact operative and in turn to achieve and fulfil the tasks of the agricultural price policy.

All these problems are studied and analysed with special reference to Egypt.

**First : The significance and the role of regulating and controlling the agricultural prices by the state in the developing countries.**

- 1 — A specific characteristic of agricultural prices under conditions of free market mechanism is that they are subject to different types of violent fluctuations. Such fluctuations have many bad effects on the farmers income. They create a situation of income instability. The view-point of some economists who believe that the fluctuations in prices mutually counterbalance the fluctuations in the harvest, thus providing agricultural economy with a certain degree of income stability is not fully true. It has been known by king's Law that the total returns to the farmer for the larger output/ a good harvest / are appreciably smaller than the returns from the poor harvest. This is because of the low elasticity of demand which results in a high flexibility of prices.
- 2 — The violent fluctuations in agricultural prices have, also, many bad effects on agricultural production. They render difficult the process of adopting a regular investment programme. They make difficult the adjustment of production to demand structure since they create a situation of uncer-

tainty and prevent a rational economic calculation and planning on the part of the farmers. The view-point that agricultural prices determined by free market automatism, i.e., without state market intervention, guide the allocation of resources, adjust production to demand structure and thereby attain market equilibrium is not correct. This is explained by the cobweb theorem.

- 3 — The relative stabilization of agricultural prices has many advantages. It ensures the farmers a certain degree of income stability. It eliminates uncertainty and makes a rational economic accounting and planning possible for the farmers. It helps in influencing agricultural production and adjusting it to demand structure. It is of importance to the consumers and to the branches of industry utilizing agricultural raw materials as much as to the farmers themselves and to the development of the agricultural production.
- 4 — In developing countries the need for stabilizing the prices of agricultural export products on international markets is not less than that on the national markets. The violent fluctuations in prices of these products on international markets result in fluctuations in the export earnings from these products. This checks development.
- 5 — Stabilizing agricultural prices does not mean that we can set rigid prices. Price stabilization in this sense is in contradiction with stabilization of incomes of farm population. Price stabilization should mean that the state in setting prices must, to a certain extent, reckon with the harvest and that price changes which result from the changes in costs of production and the adjustment of agricultural production to the structure of demand should be accentuated while price changes which do not bring about this consideration and are only factor of uncertainty in economic management should be eliminated. In this way we can strike a sort of compromise between the two contradictory claims which farmers habitually advance, namely, stabilization of prices and stabilization of incomes.
- 6 — Also, when thinking at what level national prices for export crops should be stabilized we must take their international

prices into consideration in order to adopt the production patterns to the profitability of world market prices—producing more when export prices are high and contracting producing for export when prices are low—.

- 7—Regulating and controlling food prices by the state is of a great importance in developing countries in order to avoid the sharp rise in these prices, as a result of large shift coefficient for demand relative to shift coefficient for supply which is of major economic significance in most developing countries, to increase the participation of the rural sector in capital formation and to avoid the inflationary pressure with its well-known unfavourable effects on the economy. Practice has proved that price regulation and control are helpful in avoiding the inflationary pressure.

**Second : The tasks of the agricultural prices policy in the developing countries.**

- a) Influencing production and obtaining the optimum benefit from production factors in agriculture.

1. *The general agricultural prices level and influencing production.*

The general agricultural price level has an important effect on the degree of intensification of agriculture. It is, however, necessary to reject the thesis that the intensification of agriculture can only take place under conditions of constantly rising agricultural prices since :

- i) the assumption that the problem of productive investments can only be solved by means of ensuring farmers high prices and that the farmers will themselves regulate the range and direction of investments in a satisfactory way must be considered deceptive, the view at the opposite extreme, namely, that the state should concentrate the total values of agricultural products surplus and undertake the investments in a centralized way is likewise incorrect. What is necessary is a suitable policy of strong "injections" influencing agricultural production by the combined stimuli of peasant and state investments.

- ii) It would be necessary to follow a course of stimulating production not by means of incessantly increasing prices but by gradually reducing production costs, i.e., by lowering prices of means of production. Such policy might be in many cases a more efficient way of stimulating production than rising agricultural prices.
- iii) If indeed credit rationing is a bottleneck to expanded agricultural production, credit programmes might be a more sufficient way of breaking the bottleneck than high agricultural prices.

## 2. *Price relations and influencing production.*

There are some price relations which exert a decisive influence on the structure and the direction of the development of agricultural production. The most important one of these price relations in the Egyptian agriculture is that of cotton and grain.

One of the major issues in the Egyptian agricultural policies has been that of cotton production vs. grain production/cotton and grain are competitor crops/or in other words how to allocate the agricultural land between cotton and grain in an optimal way taking into account not only economic preferences but also social and political ones. It has been found that expanding the area cultivated by cereals and supplying domestic consumption with local grain production rather than imports seem to be justified and that also justified is to increase export cotton in the form of manufactures rather than raw material. Price relations of cotton and grain have been used as instrument for implementing such policy and they play an important role in this field. But it should be stressed that price relations are not the only instrument. A method of physical control, i.e., area restrictions, has been also applied and they also play an important role in implementing such policy. This vital problem has been analysed and treated comprehensively in the thesis.

- b) Influencing the consumption of agricultural commodities and directing its structure.

It is an important task for the agricultural price policy in the developing countries to play an active role in slowing down the rapid growth of demand for food/this does not mean that the urgent food needs can be ignored/, increasing the substitution of other commodities/manufactures/for it, fulfilling equilibrium between food demand and supply and directing the consumption structure of agricultural commodities in the direction socially desirable. The demand for food in developing countries is more responsive to price movements, particularly downward movements, than in developed countries. This would suggest that price policy does play an effective role influencing consumption of agricultural commodities in developing countries and directing its structure.

Price is an important factor for influencing consumption and directing its structure but it is by no means the only one. To influence consumption more effectively we must apply certain additional non-price means of influencing consumption.

- c) Influencing in a determined way the distribution of the national income between agricultural and non-agricultural population as well as between different rural social groups.

The view-point of some economists saying that price policy should not be considered as a task related to the distribution of the national income and that it is necessary to limit oneself to the consideration of the agricultural price function in organizing production and consumption while transferring the task of income distribution to other policy means such as taxes and subsidies is not correct. In practice, the tax system cannot, in most cases, adequately solve the problem of national income distribution. In most developing countries, due to the limited administrative capacities, to adjust income distribution among agricultural and non-agricultural population as well as between accumulation and consumption in a satisfactory way through direct taxes and subsidies is very difficult, if not impossible from the administrative point of view. Of course, the price policy by itself is not in a position to solve this problem but it is however, and must be the essential element in the joint

determination of the national income distribution by several factors.

One often meets the opinion that there is a contradiction between the task of influencing the distribution of the national income and the other tasks enumerated before (regulating production and consumption). Harmonizing price policy with other forms of influencing agricultural production — taxation system, credits, rural production aid, organization of the market for agricultural produce, etc.— is necessary to reconcile such conflict or contradiction.

**Third : the bases of setting or establishing the agricultural prices.**

- 1 — Prices should cover costs of production and allow for appropriate net income for the farmers. The costs which must be covered by prices are the material costs and the costs of labour which are determined historically and in connection with the mode of production. Production costs should be derived from economically sound farms under normal conditions. Agricultural net income should increase at the same rate of growth of non-agricultural income — if not more.
- 2 — While it is true that prices should cover costs of production and allow for certain profit margin, it is equally true that price system which automatically adjusts itself to the level of actual costs cannot influence the direction of development of agricultural production.
- 3 — Production-redistribution formula—which constitutes an attempt at theoretical generalization of the practice of price setting for agricultural products in socialist countries—constitutes foundation for a rational or an expedient price policy in the purchase of agricultural products. It establishes a more flexible link between prices and production than the other methods, i.e., cost of production formula, parity price formula, farm income formula, multiple factor formula and ad hoc—non-formula—method.

The following hypothetical example shows how the level of agriculture prices should, according to this formula, be determined. Let us assume the following :

- 1—The national plan aims at increasing the agricultural production by a %
- 2—To fulfil this, total agricultural investments amount to I should be carried out;
- 3—From these total investments the state will carry out the amount of  $I_1$ , and the farmers themselves have to carry out the rest  $I - I_1 = I_2$ ;
- 4—The plan aims at increasing the consumption of the rural population /C/ by  $\Delta C$ .

Then, to realize these aims the net incomes of the farmers /D/ should be equal to  $C + \Delta C + I_2$ .

If we know that  $D = Q/\text{quantities of production}/x P/\text{prices}/-T/\text{costs of production}/$

Then the agricultural prices should be at the level of

$$\frac{D + T}{Q} = \frac{C + \Delta C + I_2 + T}{Q}$$

To link up this theoretical system of farm prices with the actual price system for farm products, it should be taken into consideration the process of transfer of income/ taxes levied from farmers and subsidies and credits to agriculture/and some other factors.

Given the general price level, the relations between the price of different agricultural products must be so shaped that they differ in favour of certain crops and induce changes in the structure of production to match as far as possible the changes in the structure of society's needs.

The application of production-redistribution formula as a base for setting agricultural prices in the developing countries may face serious difficulties. The accurate and continuous statistical data concerning production, prices, incomes, accumulation and consumption badly needed for the application of this formula are not available. Also, the role of the state in regulating and carrying out the agricultural investments is not significant in most developing countries. But in spite of this, the fact remains that some general ideas of the

concept on which this formula is based could be of some use in the developing countries, that is:

- a) the general level of agricultural prices should be set in close connection with the planned increase in agricultural production and the planned proportions of distributing the national income among different sectors of the economy/agriculture, industry, etc./
- b) in shaping agricultural prices, all the interconnected magnitudes : production, prices, incomes, accumulation and consumption should be taken into consideration;
- c) There must exist a close link between the level of agricultural prices and the various forms of carrying out agricultural investments. Suppose for example that in accordance with the general principles of economic policy the greater part of investments in agricultural is made by the state e.g. in the form of tractor stations. In that case the prices paid to the farmers should be lower than they would have to be if the farmers took care of their own investments. It follows that any changes in the system of finance must be accompanied by well defined changes in the general level of agricultural prices;
- d) in the field of agricultural price policy it is necessary to take into consideration the whole set of prices and not only the prices of some particular products;
- e) the empirical way to determine the correct relations between prices of different products may be of some use if the matter is only analysed in a correct way.

4 — In the field of agricultural price policy much scope is left to ad hoc decision. Each of the formulas most used in

setting or establishing the agricultural prices, indeed. contains a large element of ad hoc decision as we know from experience. This large element of ad hoc decision appears to have a considerable advantage in enabling allowance to be made for policy and other factors not really susceptible to statistical treatment and in preventing the formula over the course of years, from getting out of step with the changing requirements. Contrary to appearances no formula provides a hard-and-fast answer to the question of the desirable level of prices for different agricultural products.

5 — In the field of agricultural price policy, the prices should not be rigid, they have to deviate, within certain limits, from the base according to the harvest conditions. Decreed prices/prime prices/have to be set and announced as a rule before the farmers make production decisions, the purchase prices /secondary prices/ have to be more elastic/ move within a certain range/.

6 — In Egypt, in setting agricultural prices—as well as industrial prices—the government price policies have been mainly concerned with accomplishing certain income distribution; the possibility of affecting production does not seem to have played a great role. The idea of “normal” or “fair” profits plays a dominant role; prices high enough to cover costs of production and allow for a “fair” profit margin (the profit margin equals the rent of the land). In other words, the idea of cost-plus pricing where costs are average costs including depreciation and the profit plus is understood as “normal” or “fair” profits in some sense, is at work. Cost-plus pricing is generally not conducive to efficiency in resources allocation and production.

7 — Bauer and Paish formula seems to be expedient or adequate for setting or determining producer prices of export crops in the developing countries. It smoothes out the fluctuations in these prices and at the same time keeps them in touch with the world market trends. the formula is as follows :

$$S_t = \frac{P'_t}{X} + \frac{1}{n} \left\{ P_{t-1} Q_{t-1} + P_{t-2} Q_{t-2} + P_{t-n} Q_{t-n} \right\}$$

$$\frac{P'_{t-1} Q'_{t-1} + P'_{t-2} Q'_{t-2} + P'_{t-n} Q'_{t-n}}{x} \Bigg\} q_t$$

Where :

$S_t$  = producer price :

$P$  = market price/net proceeds per ton/

$P'$  = expected market price /net proceeds per ton/

$Q$  = volume of crop;

$Q'$  = expected volume of crop;

$\frac{1}{X}$  = fraction of expected proceeds of current year paid out, i.e., included in calculation of producer price;

$n$  = number of years over which proceeds are averaged for smoothing fluctuations.

The shortage of this formula is that it ties the domestic prices of export crops only with their international prices neglecting the domestic general prices level, price relations and the changes in costs of production. To avoid this the prices should be systematically revised.

#### Fourth : Control of the agricultural prices.

- 1— An efficient control of the agricultural prices requires a wide variety of complementary measures : organizing the agricultural marketing by the state, regulating agricultural finance, investments and production, adequate policy for exports and imports, proportionate development of industry and agriculture, proportionate distribution of national income, adequate wage policy and in some cases rationing of some commodities.
- 2— Organizing the agricultural marketing by the state necessitates strengthening and activating trading state organizations and cooperatives. These organizations could eliminate the middlemen and the speculators in the marketing of farm produce—who grab a large part of the sale proceeds of this produce and exploit both the producer and the consumer— and increase its efficiency. It is needless to

say that the transformation of this possibility into reality depends upon the efficiency of these organizations. Experience shows that the most important obstacle here is the lack of knowledge of the market, the lack of sufficient elasticity in the organization of marketing and a tendency to vested interests that sometimes appears in commercial policy. In the developing countries the agricultural cooperatives could play an active role in organizing the agricultural marketing. In Egypt the agricultural cooperatives have, since the year 1952, developed considerably and come to play an active role in purchasing agricultural products. We must warn here against administrative measures to eliminate the middlemen in the marketing of farm produce without replacing them with an active marketing apparatus—trading state organizations and cooperatives—. Such means should lead to unfavourable results.

- 3 — Beside controlling the prices, organizing the agricultural market by the state has many other aims. The most important one of these aims is mobilizing the agricultural marketed surplus badly needed for the development of industrialization in developing countries.
- 4 — Two fundamentally different situations should be considered when speaking of controlling agricultural prices :
  - a) the state is the only or main purchaser of agricultural products, e.g. industrial crops, and has at its disposal sufficient stocks allowing it to control the markets :
  - b) the state purchases a certain quantity of products but a substantial part of these products goes through the free market.

In the first case, i.e., the existence of formal or actual state monopoly the state can fix prices and those fixed state prices are actually decreed prices which the producer has to accept, whether he likes it or not/or else he can stop producing/. This means that the existence and maintenance of fixed state prices lie in the possibility of state regulation of supply and demand. Attempts to fix prices under conditions where the state does not control the markets do not usually yield positive results. They lead to reducing the sales on the legal market and their

expansion on the so-called black market. This does not mean, however, that all administrative means of struggle against speculation are ineffectual. Such means can help, to a certain extent, especially when the shortage of supply is not severe. They can help particularly in smoothing fluctuations of prices. In the second case, however the state can influence the prices only indirectly. The view that the state is entirely powerless because price equilibrium is determined by supply and demand is oversimplified. Trading state organizations and cooperatives can influence the prices indirectly through influencing supply, demand and prices simultaneously. This can be carried out through many policies. The most important ones are :

- a — providing farmers with market information;
- b — eliminating the middlemen and the speculators in the marketing of farm produce;
- c — purchasing and selling certain quantities of certain products at fixed prices;
- d — regulating and controlling the flow of commodities in time and space.

This means that controlling agricultural prices by the state consists of :

- a — the direct fixing of the prices of certain basic products, and
- b — influencing the market with the aim of maintaining prices within defined limits, i.e., influencing agricultural prices indirectly.

Controlling agricultural prices does not need fixing prices for all agricultural products. Besides being needless it is rather difficult or even impossible to fix prices for all agricultural products. Such attempts will encounter insurmountable difficulties.

- 5 — In Egypt price control has been effective to certain extent. It is true that food prices have risen rapidly but they would have risen even faster but for price control.

- 6 — Controlling the domestic prices of export primary products in the developing countries includes a wide variety of measures. It, however, requires the existence of some sorts of state monopoly in the field of foreign trade.

Since the nationalization of foreign trade and cotton trade in connection with the other nationalizations in the year 1961, Egypt has been able to control the domestic prices of cotton/which is still the dominant export commodity/ directly by fixing these prices. The usage of the other measures : area restrictions, buffer stock policies and export taxes/ in fact they are not imposed formally but they are the margin between Egyptian Cotton Commission fixed export and buying prices/ is confined to the aim of influencing the international cotton prices in a manner optimal to the country.

- 7 — The success in achieving stability of the prices of primary products on the international markets, which is not less needed in the developing countries than that on national markets, depends on cooperation not only among the exporters but also of the principal importing countries.

An international approach to the problem of instability has a great advantage to both exporting and importing countries.

Many attempts were undertaken to stabilize the international markets for primary commodities. The most important ones were undertaken by the United Nations Havana Conference of 1947/48 on Trade and Employment and by the United Nations Geneva Conference on Trade and Development in 1964. For the time being the problem is still to a large extent theoretical and far from being adequately solved. The attempts at stabilizing the international markets for primary products should be encouraged.

- 8 — The requirement for international action in the field of trade goes far beyond the problem of stabilization of primary commodity markets. Stabilization measures help to meet one set of the difficulties facing the developing countries with their heavy dependence on primary commodity trade. But problem of instability needs to be talked indirectly as well — through rising the prices of primary

commodities on world markets, improving the terms of trade of developing countries and the expansion of trade of these countries. In this sense, stabilization policies are part of the over all strategy of economic development.

- 9 — The relative stability of prices within the range established or set is not necessarily a measure of the “correctness” of the range in any absolute sense. It does, however, reflect its realism in relation to the means used for defending it. The correctness of the set or established prices should be measured through their influence on production and the market as well as on the real income of different social classes.