

## MAIN OBSTACLES TO A FASTER AGRICULTURAL ECONOMIC DEVELOPMENT IN THE A.R.E.

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**Introduction :** Since 1952, basic changes have taken place in the economic, social, and political structure of Egypt as a result of the mobilization of the country's human and material resources to raise economic and social standards of the population. It has been recognized that in order to raise the standard of living of the people, planning must be the method for achieving the target.

Current agricultural policies in Egypt are centering around three basic approaches : extensive, intensive, and distributive. In their turn, these approaches center around two main goals, namely ; maximizing the national agricultural income and optimizing the income distribution.

During 1952 - 66 due to both extensive and intensive agricultural measures, agricultural production has increased much more rapidly than in the years preceding 1952. In the race between the growth of population and agricultural production, the latter was drawing considerably ahead. From 1952 to 1966 total population increased by about 44% while the value of agricultural production, measured in current prices, increased by 88%<sup>(1)</sup>. It seems, therefore, that there has been a significant improvement in the supply of food and other agricultural products per head of total population. But considering the rate of increase in the value of agricultural production measured in real terms (at 1954 prices) it turns that as of the same period, this value

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(1) Presidency of the Republic, Central Agency for public Mobilization & Statistics, Statistical Pocket-Book of the UAR, 1952-1966, Memphis Printing House, Cairo, pp. 9 and 22.

increased by only 24%<sup>(2)</sup> which is much less than the increase in population. Even when measured in real terms, the increase of agricultural production is conspicuous. However, the rate of population growth outstripped the corresponding rate of agricultural production. The resulting rise of 24% in production was, therefore, hardly sufficient to alleviate the mounting pressure of population and was in any case not to last.

With this in mind, the main objective of this paper is to identify and explore the most important factors that have a bearing on agricultural development of the Egyptian economy; that is to trace out the major economic, social, and political barriers which stand against the achievement of a relatively higher rate of agricultural advancement.

**Capital accumulation:** In fact many factors impede development of the Egyptian economy and lead to its failure. Foremost among them is the rapid growth of population which necessitates the utilization of a large part of the capital for basic purposes which are non-productive, such as social services and housing and also calls for concentration on the production of food. At the same time, the increased demand of a growing population for consumption goods makes it difficult to achieve a given level of saving and capital accumulation.

Economic progress is largely dependent upon the rate of the formation of new capital. In the advanced countries the rate of capital formation averages about 10% of the national income, and surpasses this rate in some of these countries. On the other hand, in most of the developing countries the rate of capital formation does not exceed 5% of the national income. This rate hardly suffices for meeting the increase in population, and only a small portion is left for raising the standard of living of the people. Further, the problem of capital formation is accentuated in the economically backward countries by the fact that the supply of capital is restricted by the limited capacity and propensity of the people to save. The per capita disposable income is too low to allow for an appreciable rate of individual saving. At the same time this low per capita

(2) Presidency of the Republic, Central Agency for Public Mobilization & Statistics, Estimates of National Income from Agriculture, 1963, Ref. No. 01-112 : Cairo, 1963, p. 7.

income is occasioned by the low level of productivity which in turn, is a result of the deficiency in capital resulting from the reduced saving. On the demand side, the incentive for investment is poor on account of the low purchasing power of individuals as a result of their low real incomes.<sup>(2)</sup>

According to 1963 figures on land tenure in Egypt, the country has the total cultivated area of only 6.4 million feddans and 8.2 million holdings making an average of 2 feddans<sup>(\*)</sup> farm size for a family, of these over 90% have less than 5 feddans. Besides there is a large section of the agricultural population which own no land; i.e., landless labourers. Thus it signifies Egyptian agriculture to be of subsistence nature carried on in uneconomic holding. The average farmer is able to save little and hence the capital formation in this sector is very low. The problem becomes still worse when the cultivator runs into debt in time of bad crops or when for purposes of consumption and carrying on his normal occupation his expenditure unexpectedly expands. In view of these facts, the economic conditions of the farmers are so poor that the possibility of making an increased investment for agricultural development from farm income is scarce or hardly practicable.

**Scale of farming :** As mentioned earlier Egyptian agriculture is characterized by the predominance of under-sized farms. Most of all Egyptian farms, which amount to 1.641 million according to 1961 Agricultural Census, were classified as small size farms, that is, farms of less than 3 feddans each. There were about 1.107 millions of these farms with a total area of about 17.8% of all the cultivated area which amounted to about 6 million feddans (Table 1). Holders of such small farms are believed to supply most of its farm labour requirements in such a way that they really constitute a large segment of the actively employed agricultural population in Egypt. The second category of farms, namely farms with area between 3 and 10 feddans, were about 445 thousand farms with a total area of about 2.1 million feddans. However, farms with such a size cannot effec-

(2) Nurkse, Bagnar, *Problems of Capital Formation in Under-developed Countries*, Oxford: Basil Blackwell, 1963, p. 8.

(\*) 1 Feddan = 4200 sq. meters = 0.42 hectares.

tively utilize much of the modern technological, economical, and sociological agricultural inputs. The problems arising from the predominance of small-scale farming are made more acute by the excessive fragmentation of the units operated; these are often broken up into several plots, scattered in different areas of the same village or even among different villages; losses in production due to fragmentation have been estimated at 30% of gross production.<sup>(4)</sup> All these informations suggest that the size of holdings in Egypt is a drawback regarding its inability to use machines, arrange crop rotation, or to use the other agrotechniques and modern means of production. Naturally this situation affects the country's agricultural production by reducing the level of output and thus affecting the national income. Besides, it seems that because of the agrarian reforms this obstacle has increased during the last few years.

Not only that, but where the small-scale farming is to stay as a dominant characteristic of Egyptian agriculture, it might happen that agriculture in this country will assume a self-sufficient character. Self-sufficiency would stand as an obstacle to the faster development of other main sectors. Industrial, commercial, and foreign trade sectors may suffer failure as they rely heavily on cash crops, the production of which contrasts with the state of self-sufficiency.<sup>(5)</sup>

**Agricultural techniques :** In order for the economic welfare in the low-income countries to be increased substantially, an increase in the output of goods and services per capita is required. If output is to be increased, changes in inputs will be required. A large share of the differences in income levels among countries can be attributed to the extent of applying new inputs. Thus, the modern inputs as related to agriculture are specially important. Economic growth of the agricultural sector of a poor country depends predominantly upon the availability and prices of modern (non traditional) agricultural factors.

(4) Saah, Gabriel S., *The Egyptian Agrarian Reform 1932-1957*, Oxford University press: London, 1967, p. 10.

(5) Osman El-Kholi, "Economic policy Ende and Agricultural Economic Development in the UARs", Abstract from *L'Egypte Contemporaine*, *L'Année*, No. 224: Outo, 1968, pp. 53-54.

The suppliers of these factors in a real sense hold the key to such growth.<sup>(6)</sup>

However, most of the techniques, agrotechnology, and methods of production applied to Egyptian agriculture are crude and simple. Equipments mostly used on small farms are rather primitive and obsolete. These equipments rely heavily on the utilization of both human and animal efforts rather than on the power of modern machines and tools. The hand-plough that is used hardly scratches the soil, while harvesting and threshing are mainly done by hand. It is estimated that about 10% of the crop is lost through hand and animal harvesting and threshing. To this it must also be added another important fact relating to the farmer's more or less complete ignorance of the basic principles concerning agricultural operations such as fertilization, soil conservation, plant protection, weed control and other similar operations.<sup>(7)</sup> The efficiency of Egyptian agriculture, therefore, is normally impaired by the use of these old techniques in cultivation.

But, in deciding on the application of large modern machines to Egyptian farms one might face a situation offering choice between unwelcome alternatives. Machinery equipments are widely recognized as much more efficient in performance of agricultural operations, compared to human or animal work. However, Egypt is suffering from surplus labour, most of which is in the state of unemployment. The level of disguised unemployment in agriculture is very high. According to Nurkse<sup>(8)</sup>, the disguised unemployment in Egyptian agriculture is estimated at 40 to 50%. Whereas according to El-Zakki<sup>(9)</sup>, it is estimated at 2 millions, or about 30% of the total farm labour force in 1957<sup>(10)</sup>.

(6) Schultz, T.W., *Transforming Traditional Agriculture*, Yale University Press: New York, 1964, p. 145.

(7) *Op. Cit.*, 54.

(8) *Op. Cit.*, p. 35.

(9) El-Zakki, M.M., and Associates, *Farm and Non-Farm Unemployment in Egypt*. Department of Agricultural Economics, University of Alexandria, 1957.

(10) Worth mentioning in this regard that in a study by El-Imam, the coefficient of the labour term in a Cobb-Douglas production function of Egyptian agriculture during the period 1913-53 inclusive, turned out to be 0.306, and it was significantly different from zero. Using

TABLE 1. Main obstacles to a faster agricultural development in the ARE : Fragmentation of holdings by number of plots and by size of holdings (numbers and areas are in thousand muls).

Size class	Total number of holdings, plots	Number of holdings consisting of:							
		1 plot		2 plots		3 plots		4 plots	
		No.	Area	No.	Area	No.	Area	No.	Area
Less than 1 faddan	435	283	119	108.0	62	30.0	20	14	10
From 1 to less than 2 fed	886	877	124	148	172.0	13	5.0	104	81
" 2 "	287	803	54	117	79.0	175	86.0	199	66
" 3 "	175	548	28	89	39.0	125	51.0	165	58
" 4 "	100	343	15	63	20.0	85	23.5	100	41
" 5 "	170	668	25	153	31.0	197	32.0	201	82
" 10 "	57	275	8	93	9.0	118	8.5	112	31
" 20 "	23	145	3	95	3.0	81	3.0	87	14
" 50 to less than 100 fed	6	46	1	82	1.0	52	0.7	45	4
100 faddans and more	4	39	1	173	0.5	160	0.4	87	2
Total	1643	4395	542	1132	422.5	1168	312.1	1120	365
% of holdings within each plot 100			33		26		19		22

% of holdings computed from

ARE: The Fourth Agricultural Census, 1961, Co-operative Training Establishment - Cairo, 1961, p. 60.

Thus, if labour-using or capital-saving techniques are adopted more people can be put on the job than if the same work was done by employing the use of capital-intensive techniques. Thus, the advantage of the more labour-intensive techniques is that for a given amount of capital investment they create a larger volume of employment. Since most of the wage income is spent on consumption, there is therefore a higher level of present consumption. Since a larger volume of employment means that the available income is spread over a larger number of people, there is also a higher degree of economic equality.

«The densely populated countries in process of development do not need tools and machines of the same degree of capital intensity as those used in the advanced economies where labour is relatively scarce. Ideally, capital imported into undeveloped countries should be specially designed for the factor proportion prevailing in these countries.»<sup>(11)</sup>

An important factor linking the standard of farm mechanization to that of the general economic development is farm labour supply and the closely related question of farm wages. Historically, advances in farm mechanization have been made where a strong demand for labour in other non-agricultural industries has withdrawn workers from the land and forced wage rates up. Where this demand has not arisen, as is the case in Egypt, a high proportion of the population is generally composed of subsistence farmers or landless farm labourers, standards of skill and wages of farm labour remain low, and there is no economic incentive for introducing labour-saving machinery. All these points of view may explain the compara-

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1954 prices, he finds that the value of average production per labourer increased from L.E. 87 in 1937 to L.E. 106 in 1957. Consequently, the value of marginal product (at constant prices) has increased from 27 to 33, far from falling down to zero. Further, the author goes to suggest that the assumption of disguised unemployment in Egyptian agriculture has to be treated with caution, and even with a lot of doubts. M.M. El-Imam, *Some Remarks on The Labour-Force in The Egyptian Region*, Memo. No. 63, The Institute of National Planning, Cairo, 1961, pp. 9-11.

(11) Nurkse, Ragnar, op. cit. p. 43.

tively small extent to which tractors and other modern large machines are introduced into Egyptian agriculture.

The main argument in defence of labour-intensity as the basis of investment criterion deals with the assumption that such a choice would provide employment, disguised or otherwise, to the surplus labour in the Egyptian agricultural sector. However, the critics of this assumption reply that if such a policy is adopted, the solution for unemployment would be temporary, and in the long-run the problem of unemployment would continue to prevail.

«... in deciding on the utilization of capital-intensive versus labour-intensive techniques, the planning authority have to bear in mind that the abundance and cheapness of currently available labour may well be only a temporarily prevailing condition preceding the realization of any given stretch of the development programme.»<sup>1</sup>

Besides, the advantage of the more capital-intensive methods is, that for a given amount of capital investment, they yield a higher net output or surplus above the wage bill, this surplus can be made available for further investment. So although they yield a lower volume of present employment and consumption, they promise a higher rate of economic growth in the future, and therefore a higher potential level of employment and consumption in the future. There is, however, a greater degree of unequal distribution of income.

The Egyptian agriculture has the task of contributing a large amount of capital necessary to the advancement of the whole economy. Capital accumulation is possible when the rate of agricultural production is appreciably higher than the rate at which products are being consumed in the economy. Since the rate of population growth is one of the formidable problems in Egypt, it would be through the growth of capital-intensive techniques that the rate of agricultural production can exceed the rate of consumption at a reasonably greater margin.

«The more we value raising the present level of consumption and employment against future growth, the more

(12) Paron, Paul A., *Political Economy of Growth*, Monthly Review press, New York, 1957, pp. 287 - 288.

we should favour labour-intensive techniques. On the longer 'planning horizon', the more we value the future rate of growth over the present level of consumption and employment, the more we should favour capital-intensive methods which are capable of yielding a larger surplus of output over wage costs for a given capital outlay and so make possible a higher rate of reinvestment for the future.<sup>(13)</sup>

**Foreign trade:** Both exports and imports are emphasized as being essential for economic growth. Exports are still important since they provide the necessary foreign exchange to pay for imports. Imports are necessary and sometimes vital to the growth process. The availability of imported goods and equipments necessary for industrial development in Egypt, is not only a determinant of the rate of economic growth, but it is also one of the principal limiting factors. The ability of the country to obtain necessary imports to finance its development projects depends on foreign exchange earnings of exports.

The Egyptian economy is highly dependent on agricultural exports as means for obtaining foreign exchange to finance its industrial development plans. In 1967, the value of agricultural exports amounted to L.E. 213 million, or about 88% of the total value of Egyptian exports. The basic crops dominating the Egyptian agricultural exports are raw cotton, rice and onions. These three basics alone accounted for about 66% of the total foreign receipts secured by exportation, or nearly 77% of the total value of agricultural exports in 1967.

With this high degree of dependence on a few major export crops, the Egyptian economy is very vulnerable to the fluctuations in the world market prices of these exports. A United Nations report has estimated that, making allowance for trend, the year-to-year fluctuations in the export receipts of the underdeveloped countries during 1948-58 have averaged between 9% and 12%.<sup>(14)</sup> Not only that, but also the demand

(13) Myint H. *The Economies of the Developing Countries*, Frederick A. Praeger, publishers N w York, 1965, p. 142.

(14) United Nations, *International Compensations for Fluctuations in Commodity Trade*: New York, 1961, pp. 2-3.

for exports of the primary products of the developing countries has shown a much slower rate of growth as compared with that for manufactures. This can be seen from the fact that the share of primary products in world trade declined from 54% in 1953 to 41% in 1965. Since the participation of developing countries in world exports is quite limited (4.6% in 1965-66), this trend has not been to their advantage.<sup>(15)</sup>

In the short-run, this is clearly one of the serious problems facing Egypt as well as other developing countries. It not only introduces a serious instability into the consumption and living standards, but also creates formidable difficulties for maintaining a steady flow of investment for long-run economic development.

On the other hand, Egyptian agricultural imports, especially food bill, account for a significant portion of total foreign liabilities. In 1967, the value of main food products imported into the Egyptian economy constituted about 25% of the value of total Egyptian imports. Thus, though Egypt is a predominantly agricultural country, it is not self sufficient in food. It has been importing food since the early fifties and many of its hard earned foreign exchange had been drained away over the years. Such a situation might lead to increasing the danger of massive foreign indebtedness, and in turn retarding economic advancement of the country.

### CONCLUSION

The FAO Index numbers of Egyptian total and per capita food production and total and per capita agricultural production indicate that the level of both food and agricultural production in 1968 were respectively 52% and 48% greater than their counterparts in the period 1952-56. However, the per capita of both food and agricultural production has shown a slight change amounting to 13% and 9% respectively.<sup>(16)</sup> These data

(15) National Bank of Egypt, Economic Bulletin, Vol XXI - No. 1, 1968. The Arab Writer, publishers and printers, Cairo, 1968, pp. 22-23.

(16) FAO, Production Yearbook, 1967, vol. 31 : Rome, Italy, 1968, pp. 27-30.

reveal that some progress is being made, and there has been some increase in the national agricultural output in Egypt. However, such an increase in output is being easily matched by a rise in population, so that on per capita basis there has not been much improvement in the consumption level.

Raising the recent low Egyptian per capita agricultural production to achieve the maximization goal of the economic policy necessitates elimination of the obstacles that may be responsible for retarding the realization of a higher rate of agricultural advancement. Among such obstacles are the extremely restricted capital supply along with the poor incentive for investment, the predominance of under-sized farms, the rather old fashioned and obsolete techniques used on most of all Egyptian farms, the high degree of dependence on a few major export crops, the great shortage of skilled labourers and technicians, and the strong adherence of Egyptian farmers to their traditional social and cultural values and attitudes. This list, of course, does not include anything like all the obstacles to agricultural development of Egypt. It merely suggests some of the special problems which the country faces in its attempts to achieve rapid growth.

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