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Food Consumption and Farm Decision-Making in Egypt

by

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Abstract

The Egyptian farmers, as small producers of limited resources in most cases, are expected to go on devoting most of their lands to production of traditional staple foods. Nevertheless, specifying the entire production of grain to human, rather than animal consumption and adoption of high grain yield varieties on expence of straw has become economically inefficient as relatively less profitable. The remedy for this calls for bidding up administrative prices of grain, and increasing low cost supplies of animal feeds.

Introduction:

A critical food crisis exists in Egypt and itensifies overtime. The major feature, and undesired implication as well, is presented by the drastic increase of food imports laying a heavy burden on the balance of payments, exhausting Egypt's resources, and hence hindering economic development. Even with the tremendous bulk of food imports under-and

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malnutrition exist for the vulnerable groups of population in particular. Increasing the domestic production seems to be the sole remedy for this dilemma. In this respect, farmers play the major role, and their decision-making concerning their adopted production patterns form the dominant factor of the whole issue. On the other hand farmers decision-making is not influenced only by their food consumption needs or that of the whole country (through governmental intervention), but other technical and socio-economic factors are influential as well.

The main objective of this study is to find out whether food consumption needs (both personal and national) are dominant considering farm decision making objective function, or that the latter affected by several other factors is strongly determining levels and patterns of food consumption in Egypt. And hence, what are the expected changes in production patterns and their nutritional impact according to the producers tendencies.

Influential factors for farm decision-making:

As previously mentioned, numerous factors are expected to influence and direct the producers decision making concerned with exploitation of their investments, skills, and farm assets. And the Egyptian farmer is by all means a constrained profit maximizer. His constraints are technical, social, and economic. And the latest type plays a great role since the largest part of the Egyptian farmers are small landholders of limited financial resources. Technical factors involve type of soil, climate, water sources, drainage facilities, operational techniques, availability of different production requisites including labor and machinery, etc .... Economic factors involve the sizes of farm assets, financial resources, prices of inputs and outputs, marketing facilities

and potentials, and farmers human and animal consumption needs which are incorporated in his objective function. Within the economic issue, governmental intervention operates; providing substantial aid to farmers conditioned by the production of some particular products either for export, domestic consumption, or both.

Technical Factors Impact:

Food production is fairly plausible in most parts of the valley. Rice is produced in northern parts where water is available for over flood irrigation. Maize is majority produced in Delta and Middle Egypt while Sorghum is more suitable for Upper-Egypt's conditions Vegetables and fruits are grown all over the valley, but highly concentrated in Mid-Delta and close to big cities. Cotton and berseem present major competition to food products, especially in Delta where land is more fertile. Pest and plant disease manifestation are limiting factors to successful production of vegetables and fruits, as well as being a threat to cotton and sometimes maize, especially when and where the suitable most effective kinds of pesticides are unavailable. Additionally, problems of drainage and salinity afflict plant production in general. On the other hand, animal production is not restricted to specific areas, nevertheless it oftenally faces severe disease outbreaks such as the most recent problem taking place in Upper-Egypt. Sterility and death represent the unpleasant outcomes of such problems in most cases.

Social Factors impact:

Egyptian farmers have long and well established experience in growing traditional crops which include major staple foods such as wheat, rice and corn. Most of the producers are reluctant to adoption of unfamiliar production techniques, or risk bearing in production of untraditional crops or even new varieties of traditional crops. Nevertheless, there exists a growing tendency among farmers to increase their production of cash crops especially vegetables, but in most cases interplanted with najor crops. Some grow short-term vegetables between seasons leading to either earlier harvest for the first season's crop, delay in cultivation of the second season's crop, or both. Considering food crops, these delays are widely observed for maize production after harvest of some short-term vegetables such as garlic, cucumber, eggplant. beans, or to have more cuts of berseem as the winter crop preceding maize. Such practices emphasize in general the attitudes of Egyptian farmers, of whom most are small landholders, considering avoidance of full risk bearing.

Economic Factors impact:

As previously mentioned, the Egyptian farmer principally aims at profit maximization under the prevailing constraints. Farmers are faced with relatively low prices for major food crops such as wheat, maize and rice, while crops of higher prices such as vegetables, fruits, and medical plants are also higher in production costs mostly due to intensive use of pesticides, chemical fertilizers and labor of increasing wage rates and growing scarcity. On the other hand, while prices of cereal grains are relatively low, prices of by-products (straw and hay) are increasing

since used in animal feeding.

Although farm produced foods still constitute a great part of the farmers consumption, especially for dairy products and rice, yet it is no longer an established fact that consumption needs represent a major motive for adopting certain cropping patterns. This is widely observed for wheat since purchasing wheat flour at subsidized prices has lately become a general practice in rural areas, and hence wheat is principally produced for its straw by-product to feed animals, and even an increasing portion of the grain production is devoted to this purpose. On the other hand, animal production is practiced for market, though it positively affects the farm households pattern and level of consumption, especially for dairy products, but as for poultry raising it might be safely stated that most (if not all) eggs output goes to the market.

As reffered to, the break-through for the state's policies bases on limitation of budgetary resources available for small producers who represent the majority. Accordnigly, food policies can still be carried out to a great extent through facilitation of the producers procurement of certified seeds, chemical fertilizers, pesticide, feeds, machinery services and monetary loans subject to production of specific food products. Nevertheless, even if the declared areas for such crops were actually fulfilled, which hardly happens, abolishing compulsory delivery might lead to direction of most of quantities produced to animal consumption, especially for grains as previously argued.

Domestic production and food supply:

Domestic production contribution to total food consumption is gradually diminishing. The one half of requirements provided by local production of

wheat during the period 1969-71 dropped to only 27% in 1979. Milk production share of consumption supplies fell from 96% during 1969-71 to 74% during 1976-77. This phenomenon is a result of an almost stagnated production and drastically increasing imports. As an example, imports of wheat and wheat flour (wheat equivalent) rose from 1719 thousand m.t. as an average for the period 1969-71 to 2609 thousand m.t. in 1974, and to 5150 thousand m.t. an average for period 1978-80, e.g. trippiling in one decade.

For a stagnated but not decreasing production one can argue that basic foods still stand the competition with cash-crops, but not to satisfy human consumption needs, not even of the producers themselves, who devote also a great part of their wheat flour purchases to animal feeding.

As for animal products, domestic production still provides for most of consumption needs, though its share is slightly decreasing due to drastic jumps for imports. As an example, imports of dairy products (milk equivalent) rose from 25 thousand m.t. in 1973 to 138 thousand m.t. the next year and to 623 thousand m.t. as an average for 1976, 1977. Animal production is fairly growing as a desirable pattern of production, but at rates much slower than those of imports due to financial limitations and feeds shortage at most.

The previous arguement was statistically substantiated through regression analysis using legged variables to assess the impact of consumption needs upon the size of the next year production. It was emphasized that human consumption of wheat is no longer the determinant of the size of production where the estimated determinant coefficient was only 24%. The opposite holds for maize since the determinant coefficient of previous consumption to production was about 87%. As for animal products, it was logically revealed that the size of production was determined by local conusmption

needs. In addition, changes in meat production were mostly responsible for the corresponding changes in consumption (the determinant coefficient reached 92%), while changes in dairy products imports were responsible for almost the entire changes in the consumption level (98%), statistically offsetting the production impact in multiple regression.

Summary and Conclusions:

The major critical outcome of the prevailling food problem in Egypt is featured by the drastic increase of food imports entailing a heavy burden on the balance of payments. On the other hand, Egyptian farmers have a stable pattern of growing basic foods for which they acquired great experience and inclinations. As small producers, they are reluctant to risk bearing, and hence, they are expected to go on devoting most of their lands to traditional crops; food crops in addition to berseem and cotton. Nevertheless, devoting their cereal production to human consumption is threatened by its relative low profitability. In this respect, if to encourage use of grain production for human consumption, prices of grains must be raised and incentives for growing high grain yield varieties (on expence of straw) must be established, especially as subsidization has been lately cut down for several production requisites, pesticides in particular. And the last problem must be treated if to encourage growth in vegetables and fruits production, and facing the growing threats to even some ceteals produces, especially maize.

Additionally, increasing supplies of animal feeds at more suitable prices may persuade producers to specify more of their grain production (and purchases) for human use beside growing high grain yield varieties.

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