Mechanization and the Division of Labor: A Study of Farm Families in the Beka’a Plain of Lebanon

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Introduction

The recent rises in income among the populations in developing countries and the governments’ encouragement to purchase productive items have stimulated investment in various types of machinery. In the agricultural sector the trend toward farm mechanization is progressing at a rapid pace. As an example, in 1964, Lebanon imported tractors for the total value of more than 7,000,000 Lebanese Pounds (U.S. $2,300,000) (Republique Libanaise: 766-772). The social effects of such rapid farm mechanization have been only briefly investigated.

One possible effect of the increasing use of farm machinery is the release of agricultural labor and the resulting movement to urban centers. Conflicting findings have been reported in this area. Tanyol indicates that mechanization increased the rate of rural-urban migration in Turkish villages (1959: 198-218). Both Johl (1971) in India, and Saab (1960) in Lebanon, however, indicate that in the long term mechanization increases the need for manpower in the rural areas through more intensive use of agricultural land and the creation of new occupational categories.

These findings may actually complement each other if a temporal distinction is made. In the short run a movement of population seems to occur away from the rural areas to the urban centers. But in the long run there may be a reverse movement of population due to increases in the intensity and diversity of the agricultural production process.

Morsink (1965) reported an increasing rate of rural-urban migration in Lebanon. He has further indicated the unpreparedness of the urban areas to provide employment, housing, and services to rural migrants. The potentially serious problem of the adequacy of adjustment of rural migrants to urban areas remains to be investigated.

The implications of technological change on the division of labor were studied early in the development of sociological theory. Durkheim postulated
that the adoption of technological innovations by members of a social group changes its patterns of division of labor. He further indicated that such rapid changes lead to a situation of anomie among group members (1966: 353–372). More recently, Simone de Beauvoir, in her analysis of the division of labor between the sexes, argued that while initially the division of labor was based on physical and physiological differences, it crystallized into traditional beliefs (1949: 12–42). Firth (1957: 82–83) and Mead (1962: 16) supported Beauvoir in attributing the establishment of a division of labor between the sexes to physical and physiological differences. Gross (1958: 327–328) added the influence of age as an intervening variable. Dube (1965: 168–174) provided a comprehensive set of variables including age, sex, caste, and social status as being related to the division of labor in Indian communities.

The purpose of this article is to assess the effects of farm mechanization on certain aspects of the division of labor among farm families on the Central Bekaa’s Plain of Lebanon.

Methodology

In order to study the association between farm mechanization and the division of labor, it was initially intended that two categories of farmers be studied: mechanized and non-mechanized. This attempt was unsuccessful since totally nonmechanized farmers, similar to mechanized farmers in their farming patterns, were difficult to find. Decision was thus made to study farmers at different levels of mechanization.

It was hypothesized that the higher the level of mechanization on the farm:

1. The less would be the amount and tiresomeness of work performed by the farmer, his wife and his children;
2. The more leisure time would be available to all members of the family;
3. The more technical and mechanical skills would be acquired by farmers and/or their sons;
4. The fewer would be the number of relatives living in the nuclear family or being supported by its income;
5. The higher would be the children’s attendance at school.

Measurement of Variables

The central variable considered by the study is the level of mechanization of the farmer. In order to measure this variable each farmer was asked about the crops he raised and the number of dunums1 of each. It was found that wheat, barley, onions, potatoes, and tomatoes were the major crops of the area. Wheat and potatoes showed considerable variation in mechanization level and were universally raised. They were thus selected for further examination. The farmers

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1 One Lebanese dunum equals 1,000 square meters or 0.1 hectare.