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Land Tenure Structure in Egyptian Agriculture: Its Changes and Impacts

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Summary. This chapter discusses the changes in Egypt's agricultural land tenure structure, with special reference to the period 1961–81 and to their major economic impacts. During this period, the number of holdings increased from 1,642 thousands in 1961 to 2,468 thousands in 1981–82, i.e. by 50.3% approximately. The total area of agricultural land increased from 6,223 thousand feddans to 6,632 thousand feddans over the two decades, with an estimated increase of 6.6%. It is showed that the changes in the land tenure structure favoured small holdings, especially those between one feddan and less than three feddans, at the expense of medium and large ones. Although this situation implied equal distribution, it caused further fragmentation of land holdings. In addition, the tenant–landlord relationship has gone under several changes which favoured private holdings at the expense of rented ones.

With regard to the relevant social variables of land tenure structure, emphasis was laid upon the social characteristics of holders (e.g., the number of household members and their age/sex distribution). The economic variables were the cropping pattern, animal holdings, machinery, family labour and/or hired labour. The analysis of such relationships indicates that the size of the holding has a direct influence on these variables but with varying degrees. This is due to the fact that small holdings are mainly cultivated with field crops. However, there is a negative relationship between the degree of crop intensification and the size of the land holding. As for animal holdings, their distribution is characterized by a greater degree of equity as compared to land tenure which would partly make up for the unequal distribution of land holdings.

In view of the fact that the tenant–landlord relationship constitutes a major foundation for the stability of Egyptian agriculture, Law 96 of 1992 has been issued, whereby certain provisions of Law 178 of 1952 (Agrarian Reform Act) have been amended. Crucial changes have been introduced concerning the shares of both landlords and tenants and the contracting format in accordance with the economic reform policies of Egyptian agriculture.

Keywords. Land/animal holdings – Ownership – Cash rent – Rental in kind – Fragmentation – Crop intensification and farm assets – Distribution pattern.

Résumé. Ce chapitre présente les changements dans la structure des exploitations agricoles en Egypte, en se référant à la période 1961–1981.

Au cours de cette période le nombre d'exploitations a augmenté : il est passé de 1 642 000 en 1961 à 2 468 000 en 1981–1982. Le taux d'augmentation est estimé à 50,3%. La surface totale agricole est passée de 6 223 000 feddans à 6 632 000 feddans au cours des deux décennies, ce qui signifie un taux d'augmentation de 6,6%. L'analyse montre que le changement dans la structure des exploitations a été en faveur des petites exploitations, surtout celles entre 2 et 3 feddans.

Cette situation a augmenté la fragmentation des exploitations. La relation entre le propriétaire de la terre et l'exploitant a connu plusieurs changements en faveur de celui qui exploite directement la terre.

L'accent a été mis dans ce chapitre sur les caractéristiques des exploitants, les familles des exploitants et la distribution des membres de ces familles selon l'âge et le sexe.

Les variables économiques utilisées dans l'analyse sont : le système de culture, la mécanisation, la propriété des animaux, le travail familial ou salarial. L'analyse montre que la taille de l'exploitation a une influence directe sur ces variables à des degrés divers. Cela est dû au fait que les petites exploitations produisent les cultures traditionnelles. Il y a une relation négative entre le degré d'intensification et la taille de l'exploitation. Par ailleurs, la relation entre le propriétaire et l'exploitant constitue une base importante pour la stabilité de l'activité agricole en Egypte. La loi 96 de 1992 a été décrétée pour modifier la loi 178 de 1952 (loi de la Réforme Agraire). La nouvelle loi comporte des changements importants en ce qui concerne cette relation et les contrats de location de la terre, et ceci dans le cadre des politiques de réforme économique en Egypte.

I – Introduction

The agricultural land tenure is a form of land use for producing crops. It bears various types of relationships among farmers and different weights as determined by the laws that regulate transfer of ownership

titles and tenancy rights. Thus, land holding plays a significant economic and social role in determining the form of land use and the holder's decision-making in the field of production and subsequently of the distribution of the agricultural income.

Land holding in agriculture is defined as any area of land, regardless of its size, used totally or partially for plant, animal or fish production. Therefore, all lands managed by one holder that fall within the same district, regardless of location, are considered as one farm (*The Agricultural Census* 1961).

A holder is defined as any natural or legal person who uses a farming land, whether by means of ownership, rent or both; and is administratively, financially and technically responsible for the farm. However, the person who possesses livestock, poultry or beehives is considered a holder even if he or she does not hold agricultural land (*The Agricultural Census* 1981–82).

Due to lack of a new agricultural census, this chapter is mainly based on publications of the *Agricultural Census* until 1981–82. The latest data are based on assessment and are too global to reflect the changes in the Egyptian land holding structure.

II – Changes in the Egyptian Agricultural Land holding Structure from 1961 to 1982

Egypt's land holding pattern underwent a remarkable change in 1952. The period before such a turning point was characterized by an unequal distribution of holdings. Whereas small holders, who constituted 94% of the total number of holders, were in possession of 35% of the agricultural land, only 6% of holders were in possession of the remaining 65% (El-Tobgy 1976).

The Agrarian Reform laws were enacted and enforced to achieve equity through redistribution of holdings in order to increase the income of small holders and improve their economic and social standards. The first Law (no. 178) was issued in 1952. It stated that an area of 200 feddans was stipulated to be the maximum holding for the individual ownership of agricultural land.

In 1961, another Law (no. 127) was enforced limiting individual ownership to 100 feddans. In 1969, Law no. 50 was issued as an amendment to the Second Agrarian Reform law. It limited individual ownership of land holdings up to 50 feddans and family ownership to 100 feddans in all (including the husband's, the wife's and the young children's ownership).

1. Changes in the Number and Area of Holdings

Table 1 shows the changes in the number and area of land holdings over the period 1961–82. The following conclusions are drawn:

A. While the number of holdings changed from 1,642 thousands in 1961 to 2,468 thousands in 1982 (representing a 50.3% increase), the area of agricultural land increased slightly from 6,223 thousand feddans to 6,632 thousand feddans during the same period (representing a 6.6% increase). As a result, the general average of land tenure was reduced from 3.8 feddans in 1961 to 2.7 feddans in 1982.

B. The increase in the number and the area of holdings was mainly applied to the category of less than five feddans. The percentage increase of this category changed from 84% to 90.1% in 1981. Similarly, the total area of the same category increased from 37.7% in 1961 to 52.2% in 1982. The average area was relatively constant in each category. Most of the increase was allocated to the category of less than three feddans as its area increased by 750 thousand feddans.

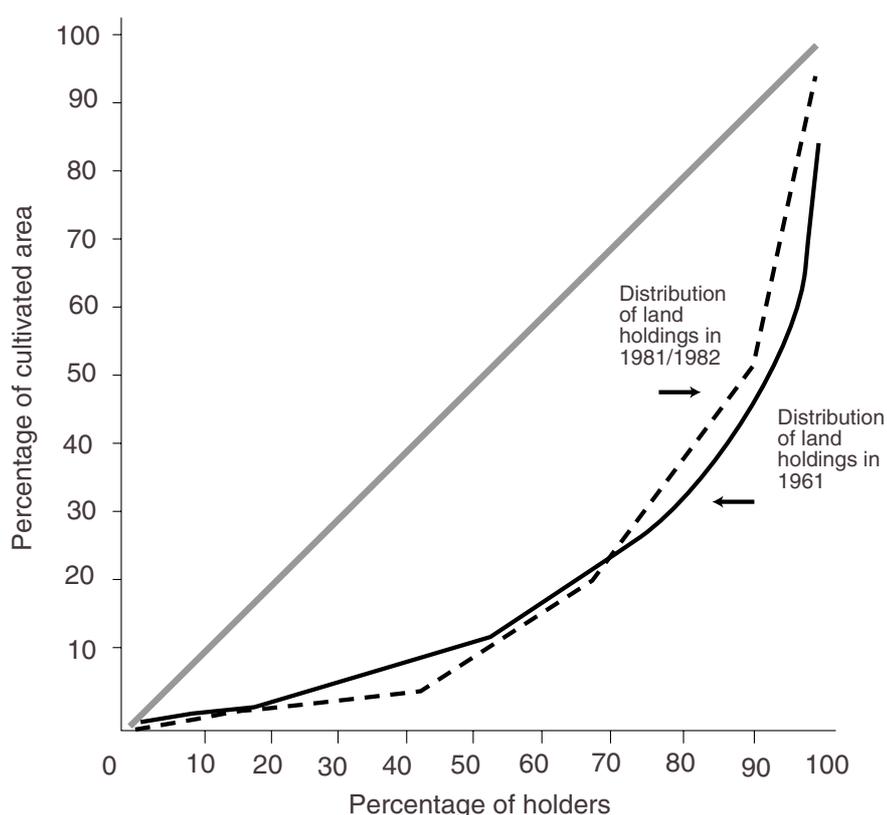
C. A relative constancy was recorded in the category of less than 10 feddans either in the number or the area of holdings.

D. The number and the area of holdings were reduced in the category of more than ten feddans. The area of this category was reduced by 717 thousand feddans in 1982 as compared with the figures of 1961, and its average area decreased from 30.4 feddans in 1961 to 28.5 feddans in 1982.

It follows that the changes in the land holding structure during 1961–82 favoured small holdings at the expense of medium and large ones, either in number or in area. To elucidate the discrepancy and the degree of concentration in the distribution of Egypt's agricultural land holdings, the Lorenz Curve and the Gini Coefficient were used.

In *Figure 1*, the Lorenz Curve for 1982 deviates completely from both the equality line and the Lorenz Curve for 1961. Then, it intersects at its upper part and approaches equality line. This means that land ownership was more concentrated in small holdings in 1981 than in 1961. The Gini Coefficient¹ declined from 0.614 in 1961 to 0.612, denoting a slight improvement in the distribution of land holdings in 1982.

Figure 1. Lorenz Curve for Farms Distribution, 1961 and 1981–82



2. Changes in the Agricultural Land Tenure Structure

Land tenure in Egypt takes three forms:

- Ownership:** wherein the holder and the owner are the same person.
- Rent:** wherein the holder is not the same person as the owner. Therefore, the right of possession lies with a person (the landlord) and the right of utilization lies with another person (the tenant).
- Mixed holding:** wherein the holder is the owner of one part of the land holding and the tenant the other part, i.e., both of them has the ownership as well as the utilization rights for one part of it but only the utilization right for its other part.

The Egyptian agricultural lands can be rented according to two different modes:

- Cash rental:** It is the most commonest mode of land rent. The landlord and the tenant, being the two parties of a contract, agree that the second party pays the first party at a fixed time a certain amount of money as a rental for the area of land for which the contract has been issued.
- In-kind rent:** The landlord agrees with the tenant to pay a fixed portion or a percentage of the crop (or crops) after it reaches maturity.

A. Crop Sharing

This pattern has been regulated by the Agrarian Reform laws. The landlord provides the land and the buildings. He also pays half of the costs of seeds, fertilizers, irrigation, pest management, harvesting and land tax. The tenant bears the cost of manpower, maintenance of irrigation and drainage canals and half of the other expenses. After the harvest, the yield is equally divided between the landlord and the tenant. The Agrarian Reform Law stipulates that the landlord's share should not, in any case, exceed one half of the yield, after deduction of the expenses.

B. Predetermined Crop Share

A specified quantity of the yield is given to the landlord as rent for his land. The condition for this type of land rent, according to the Agrarian Reform Law, is that the total value of the landlord's share(s) should not exceed seven times the value of the land tax (Rizque 1973).

The land holding structure in 1981 differs from that of 1961. The percentage of land ownership changed from 60.3% in 1961 to 72.8% in 1982. Subsequently, the percentage of rented area declined from 39.7% in 1961 to 27.2% in 1982 as shown in *Table 2*. The table also indicates a considerable reduction in cash-rented holdings, accompanied by an increase in holdings rented by crop sharing or other forms. This is largely attributed to the relative equity attained through the crop sharing pattern of land rent, since both the landlord and the tenant equally share profit and loss in production. In addition, the low yields and the subsequent disputes between landlords and tenants have discouraged a large number of landlords from renting their agricultural lands.

3. Fragmentation and Dispersal of Land Holdings

Fragmentation of the agricultural land is a major characteristic of Egyptian agriculture. It indicates a small size of the unit of production. One and the same holding is divided into a number of plots, separated either by another holder's land, an irrigation or a drainage canal. 'Dispersal' means the distribution of a holding into scattered plots within the same village or in other villages within the same district.

Fragmentation and dispersal of land holdings are attributed to the following factors:

- Overpopulation with a relatively constant area of the agricultural land, denotes an increasing demand for land given a relatively constant land supply.
- The system of inheritance which leads to a sequential partition of land legacy among heirs.
- The consecutive Agrarian Reform laws which led to a remarkable drop in large holdings and a subsequent increase in small holdings. The laws prohibited rescinding lease contracts and made them renewable and inheritable thus leading to further disintegration of the land over time.

Fragmentation and dispersal of the agricultural land holding have always had a negative impact on the rate of growth in the agricultural sector. This is evidenced by:

- The difficulty in implementing modern agricultural techniques. For instance, mechanization experiments showed that the mechanical ploughing of one feddan takes 165 minutes for small areas and 112 minutes for large areas which means that an average of 38 mn/feddan is wasted (Farah 1967).
- The loss in the cultivable land due to the fact that a part of it is used for building, irrigation, and drainage purposes, and for passages around and inside small holdings.
- The high cost of agronomic practices, the low efficiency of agricultural labour and the inefficient use of the rural household work force that characterizes small holdings.
- The waste of time and effort caused by moving the machinery and animals from one area to another on the farm.
- The inefficient use of irrigation water, due to disintegration and dispersal, resulting in a loss of 20% (Farah 1967).

Table 3 shows that the rate of fragmentation has decreased in 1982 compared to 1961. Holdings up to three plots constituted 87.8% of the total number of holdings in 1981–82 and 77.6% in 1961. The total area of these holdings constituted 70.8% of the total area of holdings compared to 54.9% in 1961.

Holdings of four plots and even more (up to ten) have undergone major changes. The total number declined from 22.4% in 1961 to 12.2% in 1982. Similarly, their percentage to the total area retreated from 45.1% in 1961 to 29.2% in 1981–82.

A more important increase in the less fragmented holdings than in the fragmented ones represents a positive development that contributes to the growth of the agricultural sector. The Egyptian legislator intervened to safeguard Egypt's cultivable land against fragmentation.

The Agrarian Reform Law 178 of 1952 states, in Article 23, that "If the cultivable land is to be fragmented into areas of less than five feddans as a result of selling, barter, inheritance, will or gift, or the like, as means of acquisition, the concerned person must agree on to whom the title deed of property will be conferred". Article 24 of the same law states that "the concerned court issues a verdict giving the title deed of the indivisible land to a person, from among the litigators, for whom agriculture is a profession. If it so appears to the court that they are equal in this determinant characteristic, preference is to be given to the husband, then the son. If sons were more than one, then lot-casting is applied among them".

However, there were some difficulties in enforcing these two articles in view of the socioeconomic conditions prevailing in the Egyptian rural areas.

III – Impact of Land Holding Pattern on Socioeconomic Variables

The holding pattern has, no doubt, a direct influence on the economic and social standard of the holder's family.

1. Age and Sex

A. Age

The study of the various age groups of landholders within each area, as shown in *Table 4*, reveals the following:

- The largest category of holders was mainly in the age group of 50 years. There is a positive relation between this age group and the increasing size of the holding. Holders of less than one feddan accounted for 37% and holders of more than ten feddans for 54%.
- The second largest group of landholders are of age 40–49 years. However, there is negative relation between this age group and the increasing size of holding. Holders of less than one feddan accounted for 36% and holders of more than 10 feddans for 29%.
- The third group concerns the group of landholders between 30–39 years. Similarly, there is a negative relation between this age group and the increasing size of holding.

The total number of landholders in the previous age group exceeds 95%. The remaining number of landholders are classified in the age group of less than 30 years.

It follows that there is a positive relation between the age of male or female landholders and the increasing size of the holding. This may be attributed to the fact that large areas are likely to be fragmented through the inheritance system. Therefore, new landholders of the younger age groups are thus included in smaller area categories.

B. Sex

Male holders constitute 86% of the total number of holders while female holders constitute only 14%. This is mainly due to the fact that the Egyptian decision-makers ensure women's rights with respect to ownership and financial independence from men.

The largest portion of female holders falls within the category of less than one feddan (12%). The percentage takes a downward trend as the area occupied by the holding increases. Female holders constitute 6% of the total number of holders in the category of 10 feddans, contrary to male holders whose percentage increases within each area category simultaneously with the area of the holding.

2. Impact of the Pattern of the Holding on Education

The Egyptian countryside suffers from a high level of illiteracy. The educational levels vary according to the size of the holdings, as shown in *Table 5*.

- ❑ Illiterates constitute a large portion of the landholders in each area category. Illiteracy reaches more than 60% among holders of less than one feddan (dwarf holdings). Illiteracy rate is negatively related to the area. It reaches 32.4% among landholders of more than 10 feddans.
- ❑ The share of holders of intermediate education (Senior Secondary) certificates exceeds the share of university graduates with regard to the category of less than 5 feddans. Conversely, the share of university graduates exceeds that of holders of tertiary educational certificates with regard to the category of more than 5 feddans.

Generally speaking, the percentage of illiterate or semi-literate holders of agricultural land is greater than 95%. This has a negative impact on the rate of growth of agriculture since these holders are not in a position to appreciate the concept of technology transfer in their crop land.

3. Impact of the Pattern of the Holding on the Number of Household Members

From *Table 6* it appears that the share of holders with large families, composed of seven or more members, prevails throughout the various area categories. This type of families constituted 33% in the less-than-five feddan category, while it constituted 57% in the category of 5 to less than 20 feddans. In the remaining categories, it constituted almost 50% of the holders in each category.

On the whole, the individual household constituted the least percentage throughout the various categories. The percentage gradually increases as the household members increase in number.

The general trend is that holders tend to have a large family due to the predominance of the familial pattern in Egyptian agriculture. The household depends mainly on its labour. If all the members of the household work outside, its income will increase. In addition, large families enjoy a special status in the rural society.

4. The Holding Structure and the Cropping Pattern

It is well known that the cropping pattern of Egyptian agriculture is dominated by traditional field crops and is characterized by a high degree of intensification. *Table 7* indicates that the total area of field crops (summer, winter and *nil*) is 10.2 m. feddans, representing 88% of the total crop land. This figure includes only 28.6 thousand feddans for medicinal and aromatic plants, most of which is cultivated in the winter season. The area for vegetable crops, during the year, is 142.7 thousand feddans, representing 8.1% of the total crop area. *Table 7* shows that the degree of cropping intensification is about 1.75.

The accurate analysis of the relationship between the structure of the holding and the cropping pattern can detect that the direct link between the category of the holding and various degrees of intensification depends on the farm size which is related to the previous relationship. The table provides clues to the fact that small farms are mainly cultivated with field crops while large farms are dominated by vegetable and horticultural crops. In the category of less-than-one feddan, field crops constitute 92.2% of the crop land while vegetable and horticultural crops occupy the remaining 7.8%. Moving upward in the holding category leads eventually to a gradual decrease in the area of field crops in favour of vegetable and horticultural crops, until the percentage of both in the holding category of 10 feddans or more is 78.7% and 21.3% respectively.

Cropping intensification reaches its peak (1.97) in holdings of less than one feddan. By moving upward in the structure of the holding, the degree of intensification gradually decreases until it reaches 1.34 in the holding belonging to the 10-feddans category.

To explain the positive relationship between farm size and vegetable crops and the negative relationship with field crops, it can be fairly said that on large farms farmers are likely to be more capable of cultivating vegetable and horticultural crops requiring intensive spending and greater marketing potentialities than small farmers. This accounts for small holders' resort to planting field crops, since production costs fall within their financial resources and their marketing requires no special facilities. As to the negative relationship between the holding category and cropping intensification, it may seem contradictory to the above mentioned relationship because of the high degree of intensification in large farms planted with vegetables which reach full maturity in shorter time than field crops. Such contradiction is attributed to the fact that a number of large-scale vegetable producers are not keen to use the land continuously throughout the year so as not to exhaust it, and to be able to manage effectively their marketing operations. On the contrary, small-scale vegetable producers prefer to use the land throughout the three seasons, making full use of the household labour. Moreover, within the same category of small holdings, the horticultural area is largely predominant, thus allowing a very little degree of intensification.

5. Land Holding Structure and Animal Holdings

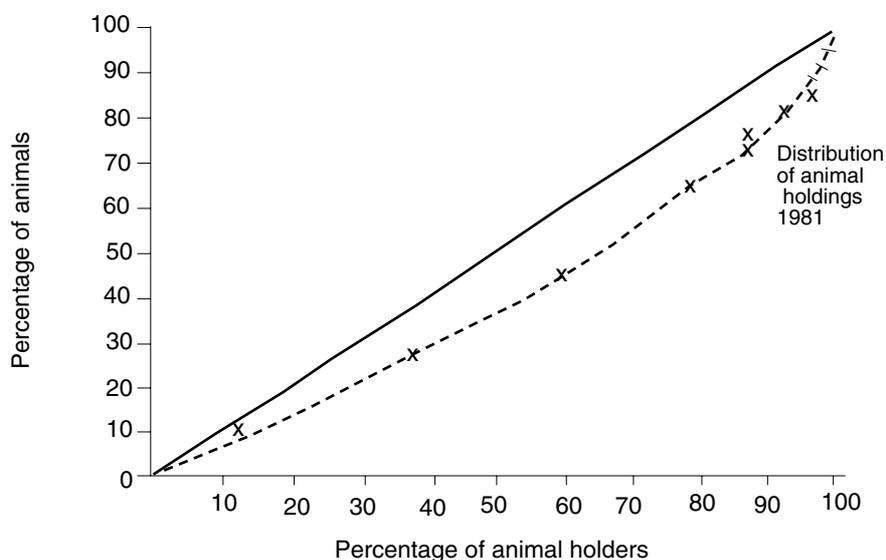
According to the 1982 *Agricultural Census*, the total animal holdings were estimated at 2.1 million holdings representing the number of rural households. Animal units are directed with 2.91 million cows and 2.38 million buffaloes. The number of rural households with animal holdings, but without land holding, is 261 thousand households, representing 12.4% of the total households that possess an animal holding, as illustrated in *Table 8*. However, a part of the households may be holding agricultural land through unofficial rent (not registered in the records of village cooperatives).

With regard to the specific intensification of animal holdings, *Table 8* shows that cows constituted 27.3% of the total animal holdings, buffaloes 33.7%, while mixed animal holdings constituted 39.1%.

It appears from the distribution of animal holdings that 12.4% of the households possess 10.4% of total farm animals (cows and buffaloes) and that 19% of animal holders (mainly holders of less than one feddan) are in possession of 15.8% of the total number of animals.

Generally, about 73% of animal holders (mainly landholders of less than 3 feddans) are in possession of 75% of the total farm animals. This indicates that the distribution of animal holdings is more equitable than that of land holdings and that this state of affairs would help reforming the distortion in the distribution of the agricultural land holding structure (*Figure 2*).

Figure 2. Lorenz Curve for the Distribution of Animal Holdings, 1981/1982



With regard to the ratio of animal holders to land holdings, it appears that three-thirds of the landholders are in possession of animal holdings (cows and buffaloes)².

This percentage increases if other animals such as sheep, goats, donkeys and camels³ are to be included. There is a clear discrepancy in the percentage of animal holdings to land holdings within the different area categories. It reaches the lowest level (62.8%) in the first area category (less than one feddan) and rises to 79.8% in the following area-category (one to less-than-three feddans). Then, it decreases slightly to 82.6% in the fourth category of 5 to less-than-10 feddans and sharply to the level of 19.6% in the fifth category (10 feddans or more). This means that there is a positive relationship between the farm size and the animal holding size in the first three farm size categories and a negative relationship as the farm size exceeds 10 feddans.

The other meaningful indicator is the animal/land load which varies with farm size. There is a negative relationship between the land holding category and the animal holding size per feddan. In the first area category, land/animal load reaches its highest level (2.09 animal/feddan); and decreases gradually with the increase in farm size until it reaches its lowest level (0.23 animal unit/feddan) in the larger land holding category (10 feddans or more).

6. The Holding Structure and Mechanization

This part deals with the relationship between the land holding structure and the level of mechanization of agricultural practices. The objective is to provide indicators that account for the discrepancy in the levels of mechanization among various farm sizes.

However, it must be clearly stated that the holding of farming machinery is not similar to mechanized farming practices but it reflects the availability of mechanical power. *Table 9* shows that the prevailing 435.7 thousand mechanical holdings are not greater than the number of agricultural machinery (1)⁴ available to 17.7% of the agricultural land holdings.

This percentage ranges from 4.3% in the first agricultural land holding category (what is the lowest level) to 125.8% in the last holding category where the producer is a holder of more than one farming machine.

With regard to tractors and irrigation machinery, the same table proves that irrigation machinery is mainly concentrated in the three medium holding categories; while tractors are concentrated in the last holding category within which holders are financially capable of procuring one that fits the requirements of their large holdings.

Irrigation machinery, on the contrary, is becoming a common practice in small areas in *lieu* of animal labour.

This may account for the greater similarity of the percentage of irrigation facilities and the actual share of each land holding category in the total area of the agricultural land. Normally, a tractor can serve an area of 108 feddans. With the exception of the first category (including the landless and small holders of less than one feddan), a tractor serves a large area in the small holding categories. The serviced area decreases with the increase in the holding category. The situation differs totally with regard to the individual irrigation machine which, in the holding category of less than 10 feddans, can serve from 18 to 20 feddans, while in the holding category of more than ten feddans, the serviced area rises to 38 feddans. This may be attributed to the easy access of mobile irrigation machinery for small holders and their tendency to acquire them even if their full capacity is greater than what is needed.

7. The Holding Structure, the Household and Paid Labour

It is self-evident that small farms depend mainly on the household labour in the production process. That this might be the major advantage of family farms in their competition with large farms is evident from the results of the *Agricultural Census* of the Crop Year 1981/1982 as given in *Table 10*. Small householders tend to count more on household labour whether permanent or temporary in addition to paid labour.

In the first land holding category, the share of area unit (feddan) in the permanent and paid household labour is estimated at 3.8 and 0.02 labourers, respectively, as compared to 0.1 and 0.04 labourer in the last holding category (10 feddans or more). The salient feature of these results is that there is an intensi-

ve use of household labour in the pygmy holdings category of less than one feddan; such a situation reflects the existence of disguised unemployment.

On the other hand, the downward trend in the rate of human labour use (household or paid) in large holdings is attributed to the increased use of mechanical labour in the agronomic practices.

IV – Current Problems of the Existing Land Holding Structure

Undoubtedly, the present holding structure implies serious problems affecting the overall performance of the agricultural sector. It is well known that the distortions in the holding structure of Egyptian agriculture constitute a major obstacle to agricultural development. These distortions are further aggravated by the elapse of time, leading to more fragmentation in the agricultural holding structure.

In this part, we will look into two major problems that relate to the existing land holding system, namely:

- the relationship between landlords, tenants and transformations to come;
- fragmentation and the enlargement of small holders category.

1. Relationship Between Landlords and Tenants and Transformations to Come

In view of the current economic liberalization policies adopted by the Government, with direct bearing on the Egyptian agriculture, it was crucial to review the relationship between landlords and tenants as being an important variable in the agricultural policy measures in order to be more compatible with the new socioeconomic and political environment.

Since the enforcement of the Agrarian Reform Law 178 of 1952, this relationship remained stagnant. This law estimated the rental value per feddan to be seven times the land tax. Recently, this law was amended by Law 96 of 1992 to cope with the current trend: a liberal market-oriented economy based on free enterprise and minimization of government controls in the economy.

According to law 178, the average rental value per feddan was estimated at L.E. 154 (as the average land tax was about L.E. 22). This value represented about 20% of production costs and about 10% of the net revenues per feddan in recent years. During the early stage of enforcing Law 178 of 1952, the tenancy relationship was rather balanced but the increase in the per feddan net revenues made the fixed rental value more likely to be in favour of the tenant, let alone the landlord's inability to end the rental contract by force of the law.

Law 96 of 1992 was issued to remedy the distortion in the tenancy relationship regulated by Law 178 of 1952. The new law, which has become in practice since June 28, 1992, states that:

- The rental value of the agricultural land is estimated to be 22 times the current land tax on the present cash or crop-sharing contracts eventually terminated at the end of the crop year 1996–97 unless the parties to the contract decide otherwise. This implies that the amended rental value, the average of which reaches L.E. 484, will continue at the above level until 1996–97.
- The provisions of the civil code apply to the rental contracts of the agricultural land to be concluded as from the date of enforcing the new Law. Accordingly, the conditions of these contracts are supposed to be mutually accepted by the two parties and will generally reflect the prevailing circumstances of supply and demand. This would be the common practice throughout the various patterns of land rent as from the crop year 1996–97.
- With regard to cash rental contracts having validity on the date of enforcing the new Law, if the landlord decides to dispense his land before the end of the transition period (from 1992–93 to 1996–97), the tenant is entitled to choose between purchasing it at an agreed price or leaving the land in return to a suitable compensation for the remaining period of the contract; such a compensation is estimated to be 40 times the land tax for each complete crop year. A third choice is to continue as a tenant until the transition period eventually ends.

These amendments attempt at reforming the distortion in the rental value which is to triplicate during the transition period ending by the Crop Year 1996/1997 after which the civil code shall apply to all agricul-

tural land rental in cash or by crop-sharing as it will apply to lands rented after June 28, 1992, the date of enforcing the new law. These measures imply the gradual removal of controls that restrict the tenancy relationship. Moreover, the new law has led to socioeconomic implications and consequences that need to be studied in detail.

2. Fragmentation and the Enlargement of the Small Holders Category

No doubt, the Agrarian Reform laws of the fifties and sixties have contributed to the alleviation of the effects of concentrating land ownership in the hands of a minority, which was a conspicuous characteristic of the agricultural land holding structure. However the base of small holders had greatly enlarged as a result of the redistribution of land and of the fact that land tenants are unable to have full control over their tenureships. Overpopulation and the system of inheritance have also played their role in enlarging the base of small farms. However, there existed other factors that worked in the opposite direction, i.e., towards the concentration of land tenure, such as the high profitability of certain agricultural activities and the increasing income from agricultural and non-agricultural activities or from external financial transfers. While the present large-scale farmers can produce highly profitable products that would maximize their incomes and subsequently help enlarge the area of their holdings, small farmers are capable of enlarging their farms through incomes gained from agricultural and non-agricultural labour opportunities or from financial transfers of expatriates.

However, a fair comparison of the agricultural land tenure structure between 1961 and 1981 indicates that the factors leading to fragmentation overrun those leading to consolidation of the agricultural land. This leaves a negative impact on the agricultural development process. The smallness of the farm size, assuming that other factors remain constant, leads to a series of negative effects that may put small farmers into "the vicious circle of poverty" which implies low farm income, reduced farm savings and low capital accumulation. Small farms tend to produce for livelihood more than for marketing.

This particular point may constitute an impediment in the way of liberalizing the agricultural sector of the Egyptian economy. As the success of these policies depends on giving the farmers ample incentives for producing for the domestic and/or world markets, the vast majority of Egyptian farmers, whose holdings are less than three feddans, lack the resources and the financial capabilities necessary for a prompt response to market changes; let alone the fact that their agricultural output is too inadequate to gain any market privileges, which is not the case with large-scale producers who are capable of taking advantages of mass production, whether in the production or marketing fields.

Notes

1. It is commonly used in social sciences. Its value ranges from 0 to 1. The zero represents a theoretical state of complete equality in distribution while the whole one represents a theoretical state of inequality. The more it gets closer to 1, the more it denotes the trend towards increased inequality.
2. These animal holdings are either exclusively cow holdings, buffalo holdings or mixed holdings.
3. These types of animals appeared in the *Agricultural Census* in the form of total numbers (not distributed according to the land holding categories).
4. MOALR, *Agricultural Census of 1981-82*, Table 45A.

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Table 1. Changes in Number and Area of Holdings by Categories over the Period 1961-1982

Category Area	(thousands of feddans)							
	1961				1981-82			
	No. of holdings	%	Area of holdings	%	No. of holdings	%	Area of holdings	%
Less than one	434	26.4	211	3.4	796	32.3	399	6.5
One to less-than-three	673	40.9	1153	18.5	1 097	44.5	1 903	28.7
Three to less-than-five	274	16.7	990	15.9	330	13.3	1 181	17.8
Five to less-than-ten	170	10.3	1 101	17.7	173	7.5	1 098	16.6
Ten and more	91	5.7	2 768	44.5	72	2.9	2 051	30.9
Total	1 642	100	6 223	100	2 468	100	6 632	100

Sources: 4th Agricultural Census, 1961, Table 5; Results of the Agricultural Census for the Crop Year 1981/1982, Table (1-A).

Table 2. Changes in the Agricultural Land Holding Patterns between 1961 and 1982

Land Holding Pattern	1961		1981	
	Area (thousands fed.)	%	Area (thousands fed.)	%
Total area of owned holdings	3 752	60	4 826	73
Total area of rented holdings	2 471	40	1 806	27
Cash rent	2 169	35	1 358	21
Crop-sharing and other forms	292	5	488	7
Total holdings	6 223	100	6 632	100

Source: Agricultural Census 1950, Table (1-B); 1981, Table (7-A).

Table 3. Development in the Number and Area of Holdings According to the Number of Plots in Each Holding, 1961-1982

Number of Plots	Agricultural Census 1961				Agricultural Census 1981/1982			
	No. of Holdings	Area of holdings		No. of Holdings	Area of holdings			
		%	(thous. fed.)		%	(thous. fed.)	%	
Undivided holdings	524	33	1 133	18.2	982	39.8	1 449	21.8
Two-plot holdings	422	25.7	1 166	18.7	700	28.4	1 628	25.4
Three-plot holdings	311	18.9	1 120	18	484	19.6	1 526	13.6
Four and more-than-four-plot holdings	367	22.4	2 804	45.1	302	12.2	1 939	29.2
Total	1 642	100	6 223	100	2 488	100	6 632	100

Source: Collected and calculated from Agricultural Census, 1961, Table 1; 1981/1982, Table (2-A).

Table 4. Number of Holders and Classification by Sex and Age

Area Categories	Sex	Total Number (in thousands)	Percentage of Holders in Each Age Category						Unidentified	Total
			Less than 12-19 yrs	20 - 29 yrs	30 - 39 yrs	40 - 49 yrs	Over 50 yrs			
Less than one feddan	M.	1 049.8	0.5	5.1	22.7	35.7	36	-	100	
	Fem.	139.8	0.2	2.4	15.9	36.5	45	-	100	
	Total	1 189.6	0.4	4.8	21.9	35.8	37.1	-	100	
One to less than three	M.	948.5	0.3	3.9	17.2	33.5	45	0.1	100	
	Fem.	112.3	0.1	1.7	12.7	36.1	49.3	0.1	100	
	Total	1 096.8	0.3	3.6	16.8	33.7	45.5	0.1	100	
Three to less than five	M.	308	0.3	3.4	15.4	31.3	49.5	0.1	100	
	Fem.	22.6	-	1.8	12.4	35.8	50	-	100	
	Total	330.6	0.2	3.3	15.2	31.6	49.6	0.1	100	
Five to less than ten	M.	163.3	0.2	3	14.1	29.6	35	0.1	100	
	Fem.	9.6	-	2	12.4	35.1	50.5	-	100	
	Total	173	0.2	2.9	14.1	29.9	52.8	0.1	100	
10 feddans & more	M.	662	0.2	3.2	13.8	28.2	54.4	0.2	100	
	Fem.	4.4	-	2.3	13.6	36.4	47.7	-	100	
	Total	70.6	0.2	3.1	13.8	28.8	53.9	0.2	100	
Grand Total	M.	2 571.8	0.4	4.3	18.9	33.7	42.6	0.1	100	
	Fem.	388.8	0.2	2.1	14.2	36.2	47.2	0.1	100	
	Total	2 860.6	0.3	4.1	18.5	33.9	43.1	0.1	100	

Source: Agricultural Census, 1981/1982, Table (6-A) and Table (6-B).

Table 5. Natural Holders by Educational Level and Area Categories and their Percentage in Each Educational Level to the Total Number of Holders in Each Area Category

Area Category	Illiterate	Able to read or Read/Write	Junior Secondary	Senior Secondary	Post-Secondary (Technical-Diploma)	University Graduate	Unidentified	Total
Less than one feddan	720	417	9	21	8	9	6	1 190
	%	605	35	0.8	1.7	0.7	0.8	0.5
Less than three	63	422	6	17	6	9	6	1 096
	%	57.5	38.5	0.5	1.6	0.5	0.8	0.5
Less than five	180	135	2	6	2	4	2	331
	%	45.5	40.8	0.6	1.8	0.6	1.2	0.6
Less than ten	84	77	1	4	1	5	1	173
	%	48.6	44.5	0.6	2.3	0.6	2.8	0.6
Ten feddans and more	23	36	1	2	1	8	-	71
	%	23.4	50.7	1.4	2.8	1.4	11.3	-
Total	1 637	1 087	19	50	18	35	15	2 861
	%	57.2	38	0.7	1.8	0.6	1.2	0.5

Source: Agricultural Census, 1981/1982, Table 4.

Table 6. Number of Natural Holders by Size of Household and Area Category

(thousands of individuals)

Area Category	Number of household members (the holder's)							
	One person	Two	Three	Four	Five	Six	(Seven & more)	Total
Less than 5 feddans	42.2	117.0	223.6	404.9	585.7	480.0	863.0	2 616.8
%	1.6	4.5	8.5	15.5	18.6	18.3	33.0	100.0
Less than 20	2.1	5.0	9.6	18.6	26.5	32.7	125.2	219.8
%	0.9	2.3	4.4	8.5	12.0	14.9	57.0	100.0
20 to less 50	0.4	0.8	1.3	2.3	2.8	2.8	100.0	20.4
%	2.0	3.9	6.4	11.3	13.7	13.7	49.0	100.0
More than 50	0.1	0.1	0.2	0.3	0.5	0.5	109.0	3.6
%	2.8	2.8	5.5	8.3	13.9	13.9	52.8	100.0
General Total	44.8	123.3	234.7		515.5	516.0	1 000.1	2 860.6
%	1.6	4.3	8.2		18.0	18.0	35.0	100.0

Source: Agricultural Census, 1981-82, Table 5.

Table 7. Cropping Pattern and Intensification by Holding Categories in 1981-82

Holding Category	Total holdings		Cropland Areas							
	Number	Area (thous. fed.)	Total	Intens.* Degree	Field Crops** (thous. fed.)	%	Veg. Crops (thous. fed.)	%	Horticultural Crops (thous. fed.)	% total
Less than one feddan	796.4	399.4	788.8	1.97	747.5	92.2	46.3	5.9	1.5	1.9
1 to less than 2	1 096.8	1 903.2	3 718.9	1.95	2 429.5	93.3	231.2	6.2	58.2	1.6
2 to less than 5	330.6	1 181.0	2 279.9	1.93	2 06.2	90.4	175.5	7.7	42.4	1.9
5 to less than 10	173.2	1 098.2	2 046.7	1.86	1 810.2	88.4	173.2	8.5	63.3	3.1
10 and more	71.3	2 050.7	27 481.0	1.34	2 163.5	78.7	316.5	11.5	268.1	9.8
Total	2 468.3	6 633.5	11 582.4	1.75	10 192.7	88.0	942.7	8.1	447.0	3.9

* Cropping intensification degree is the resultant of dividing the total crop area by the total land area of holdin

** Including medicinal and aromatic plants.

Source: Agricultural Census, 1981-82, Tables from (14-A).

Table 8. Distribution of Animal Holdings According to Land Holding Category in 1981-82

Land Holding Category	No. of Animal Holdings (1)	No. of Animals	Animal Hold./ Land Hold. (2)	Animal/Land Load (3)	Average Size of Animal holdings (4)
	(thousands)	(thousands)		(Animal/fed.)	
Less than 1 feddan	500.4	835.0	62.8	2.09	1.67
1 to less than 3	874.9	1 997.3	79.8	1.05	3.28
3 to less than 5	281.8	869.1	85.2	0.74	3.08
5 to less than 10	143.1	568.3	82.6	0.52	3.97
10 and more	46.8	470.1	65.6	2.23	10.04
Total	1 847.0	4 439.8	74.8	0.71	2.57
Landless	260.9	548.2	-	-	2.10
Grand Total	2 107.9	5 288.0	74.8	0.71	2.51

(1) Including cows, buffaloes and mixed animal holdings exclusively.

(2) The number of animal holdings divided by the number of land holdings (from the previous table).

(3) Calculated by dividing the table number of animals in each category by the total area of that category (previous table)

(4) Calculated by dividing the total number of animals in each category by the total number of animal holdings

Sources: MOALR; Agricultural Census, 1981/1982.

Table 9. Distribution of Machinery Holdings by Land Holding Categories in 1981/1982

Land Holding Category	No. of Machinery Holdings (thousands)	% of Machinery Holdings to Land Holdings **	No. of Tractors ***	%	Area served by 1 tractor ****	No. of Irrigation Machines	%	Area Served by 1 Irrigation Machine**** (feddan/unit)
Less than 1 feddan	34.5	4.3	4 567	7.5	87	21 334	7.6	19
1 to less than three	126.9	11.6	11 351	18.5	168	96 163	34.3	20
3 to less than five	91.4	27.6	10 265	16.8	115	65 526	23.3	18
5 to less than ten	93.2	53.8	14 588	23.8	75	58 043	20.7	19
10 and more	89.7	125.8	20 437	33.4	100	39 638	14.1	52
Total	435.7	17.7	61 198	100	108	280 704	100	24

* Including the landless and holders of less than one feddan.

** By dividing the number of machinery holdings by the number of land holdings in each category in Table 7.

*** Including small tractors (less than 25 HP) and big ones (more than 25 HP).

**** Total Agricultural land in Table 7 in each holding category, divided by the number of tractors and irrigation machines respectively.

***** Including fixed and mobile irrigation machines.

Table 10. Distribution of Household and Paid Labour in the Various Land Holding Categories

Holding Category	Number of Labourers		Number of Permanent Paid Labour	Area Unit's Share of Labour*		
	Permanent	Temporary		Permanent Household Labour	Temporary Household Labour	Permanent Paid labour
Landless	579.0	27.6	9.9	-	-	-
Less than 1 fed.	1 515.3	280.7	8.8	3.8	0.7	0.02
1 to less than three	2 645.3	596.0	20.7	1.4	0.2	0.01
3 to less than five	962.4	219.9	14.6	0.8	0.2	0.01
5 to less than ten	551.1	126.6	23.2	0.5	0.1	0.02
10 and more	210.5	50.3	89.0	0.1	0.02	0.04
Total	6 472.6	1 301.1	166.2	1	0.2	0.03

* Calculated by dividing the number of household and paid labourers in the first three items by the total area of each holding category.
Source: Agricultural Census, 1981/1982, Table (42-A).