POPULATION PROBLEMS IN THE AGRICULTURAL SECTOR OF THE ARAB REPUBLIC OF EGYPT

By

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INTRODUCTION

The economy of the Arab Republic of Egypt still depends heavily on its agricultural sector. The majority of the Egyptian population, directly or indirectly, depends on agriculture as their basic source of support, and agricultural exports constitute more than 80 % of the Egyptian export earnings (El-Feel, 1970).

The basic objective of this investigation is to analyze and measure the effect of population pressure in the agricultural sector, on the degree of under employment in Egyptian agriculture. Other objectives include : (1) measuring the effect of expanding the cultivated area upon reducing agricultural unemployment. (2) evaluating the preferability of agricultural economic development programs in combating agricultural unemployment compared with nonagricultural development programs.

The order of the discussion is as follows : First, the implications of the wide divergence between human and agricultural land resources in the Egyptian Economy, then a ganeral discussion of employment and unemployment aspects in the Egyptian Economy. This is followed by a discussion of unemployment in Egyptian agriculture and the factors which lead to the spread of disguised and seasonal unemployment in it. The final section discusses the effects of agricultural economic development programs upon the possibilities of eliminating the surplus Egyptian agricultural labor force and on appraisal of agricultural versus nonagricultural economic development programs as tools to achieve the same objective.

THEORETICAL FRAMEWORK

Maximizing profits in agricultural production requires that factors of production must be combined such that the «Equi-marginal returns principle» holds. Symbolically this principle can be stated as follows :

$$\frac{MP_1}{P_1} = \frac{MP_2}{P_2} = \ldots = \frac{MP_n}{P_n}$$

Where MP_i = The marginal product of factor (i).

$i = 1,2,3,\ldots, n.$

P_i = Price per unit of factor (i).

Thus when agricultural labor is abundant relative to other factors of production as in Egyptian Agriculture, the marginal product of agricultural labor is expected to decline continually with any further additions to the agricultural labor force on the relatively fixed area under cultivation (this phenomena may be also interpreted on the basis of the *law of diminishing returns*) - Table 1. This implies that the release of this surplus agricultural labor out of the existing area under cultivation is not expected to significantly affect the level of agricultural production. This surplus portion of the agricultural labor force constitutes the major type of agricultural unemployment in developing economies, such as the A.R.E., which almost all agricultural economists call disguised unemployment. However, several questions have been raised about the theoretical foundation of disguised unemployment : First, if labor is unemployed or otherwise wasted, why are techniques not introduced which use less land and capital relative to labor ? *Eukaus* argues that even the most labor-intensive agricultural process requires some minimum amount of capital per unit of labor ; there is a minimum ratio of capital to lapor, but many underdeveloped countries have less capital than is required to utilize their whole lobor force. Hence a portion of the available labor supply is unused. *Second,* with given technology (fixed capital-land-labor ratios), why is labor used to the point where no returns are forthcoming ? Why employers of hired labor pay a wage to labor whose product is zero or negligible and hence lose money ? *Lewis* suggests that workers, rural and urban, do not receive their marginal product, but a higher traditional wage which is determined by the average product per worker in agriculture. Labor employed in the capitalist sector will also be paid the traditional wage as long as

there is a surpuls of labor in the subsistence sector. The low and constant wage permit large profits for potential reinvestment in the capitalist sector. The economy grows at a faster rate, because profits grow relative to the size of the capitalist sector and an increasing proportion of national income is reinvested. Georgescu Rogen, provides an alternative explanation of zero marginal product of agricultural labor. *Georgescu* contends that neither capitalism nor socialism is an efficient form of organizing agriculture in an overpopulated country. Under capitalism, labor will not be employed beyond the point where its marginal product equals the wage rate and, as a result, a portion of the labor force will remain idle and the total agricultural output will not be maximized. Feudalism provided such an institutional framework because the family maximized employment beyond the point where its marginal product equaled wages. Today feudalism has been replaced by individual peasant holdings and the total agricultural output is still maximized because the employment of the peasant family is governed by maximizing total family output rather than by the principle of marginal productivity. Hence,marginal product is zero when the total output of the family farm is maximized.

Another explanation for greater than zero wage rate is provided by *Leibenstein*. When labor is unemployed and the labor market is competitive, wages would be bid down to very low levels. He explains the phenomenon of greater than zero wages through an interaction between labor productivity and wage rates. Since out-put per man increases due to improved nutrition when wage rates increase, landlords find it profitable to hire all available labor to prevent wage rates being bid down, poor nutrition, and the resulting small output per man. Although net reveaue would be higher if only a portion of the labor force were utilized, wages would fall, causing productivity to decline.

Other such as *Nurkse* still give an alternative explanation. Labor is used until no more output is forthcoming, because family labor is not paid. He assumes a freeholding peasant agriculture in which food is shared among all family members. Nurkse does not believe that significant savings of labor can be made through the reduction of leisure time or through the exertion of greater effort by the remaining workers, but must be obtained through better use of labor time. Owing to poor organization, much time is spent on essentially inefficient tasks, such as walking from place to place, transporting materials and products, and organizing and supervising other workers.

Disguised unemployment is not confined to agriculture. In many developing countries it is also to be found in varying degrees in towns and in non-agricultural occupations such as petty trading, service industries of all sorts including domestic service, and in small scale and cottage industries. Here it is caused by over crowding on a limited supply of capital resources.

EMPIRICAL RESULTS

1.—*Economic and Social Implications of the Wide Divergence between Egyptian Human and Agricultural Land Resources :*

The disparity between the rate of population growth and the rate of increase in the amount of cultivated lands, as demonstrated by table (1), lead to the evergrowing gap between production and consumption capacities of various food commodities and the ever decreasing standards of living of those gainfully employed in Egyptian agriculture. With an uninterrupted increase in the Egyption labor force, practically all sectors of the economy have become so overburdened with a large surplus in this force. This surplus naturally constitutes the various forms of agricultural and non-agricultural unemployment ; especially the disguized. The present investigation is mainly concerned with agricultural unemployment in its relation to agricultural economic development.

2.—*The Egyptian Manpower and Labor Force :*

According to the 1971 employment and unemployment figures made available by the Agency of Public Mobilization and Statistics *in Nov.* 1972. Egyptian manpower[1] has been calculated at about 26.52 million persons, or about 79% of the total number of population to about 33.6 million persons. While the Egyptian labor force[2] amounts to about 9.05 million persons, or about 34.1 % of the total manpower, the persons not in the labor force are about 17.47 millions, constituting the remaining 65.9%. By classifying the labor force into agricultural and nonagricultural, it was found that the agricultural

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(1) Manpower includes this segment of the population which can be used in economic activities. It includes all the population except children less than 6 years old, persons 65 years old or more who are not gainfully employed, and the handicaped persons for various reasons.

(2) The civilian labor force includes all persons which are 6 years old or more which contribute to the gross national product through their physical or mental efforts and also those persons who can do the same contribution and are seeking employment opportunities in the labor market.

Table 1 : Changes in agricultural labor force and in per capita cultivated and cropped acreage in 1907--1972.

Year	Agricultural labor force	Cultivated Area			Cropped Area		
		Total	Per capita		Total	Per capita	
	thousand persons	thousand feddans	feddan	Index	thousand feddans	feddan	Index
1907	1856	5403	2.91	100.0	7662	4.13	100.0
1917	2097	5269	2.51	86.3	7686	3.66	88.6
1927	2338	5544	2.37	81.4	8661	3.70	89.6
1937	2620	5281	2.01	69.1	8358	3.19	77.2
1947	3128	5761	1.84	63.2	9166	2.93	70.9
1957	3929	5785	1.47	50.5	10099	2.57	62.2
1960	4220	5844	1.38	47.4	10370	2.46	59.6
1961	4262	5976	1.40	48.1	9974	2.34	56.6
1962	4304	5991	1.39	47.8	10366	2.41	58.4
1963	4346	—	—	—	10358	2.38	57.6
1964	4388	6044	1.38	47.4	10377	2.36	57.1
1965	4430	5989	1.35	46.4	10261	2.32	56.2
1966	4472	5899	1.32	45.3	10488	2.34	56.6
1967	5414	—	—	—	10462	2.32	56.2
1968	4556	—	—	—	10740	2.36	57.1
1969	4598	—	—	—	10732	2.33	56.5
1970	4640	—	—	—	10747	2.32	56.2
1971	4682	5836	1.25	42.9	10743	2.29	55.4

Source : Complied and computed from :
(1) Ministry of Agriculture, *Agricultural Economics*, Periodical Bulletin Issued By The Dept. Of Agric. Econ. and Stat, Cairo, Egypt, (Several Issues).
(2) Department Of Public Mobilization and Statistics, Sampling Estimates Of Employment in The Arab Republic of Egypt, in May, 1971, Reference No. 05—222, Cairo, Nov. 1972.

labor force amounts to 4.681 million persons,[1] or about 51.7%. The non-agricultural labor force amounts to about 4.372 million persons or about 48.3%.

3.—*Unemployment in Egyptian Agriculture :*

The most common forms of unemployment in Egyptian agriculture are disguised and seasonal unemployment. Disguised agricultural unemployment in developing countries (as A. R. E.), is represented by the surplus in the agricultural labor force which exceeds the labor requirements for agricultural production operations at a certain time period in a certain economy. This surplus can be released from the agricultural operations without significantly reducing the agricultural output. The surplus Egyptian agricultural labor force, according to 1971 figures ; was estimated by 1.68 million persons or 35.9 % or approximately one third of the agricultural labor force. This figure represents the difference between the labor requirements of the presently cultivatd ara which amounts to 3.0 million persons[2] (i.e. 0.5 person per feddan[3] of the cultivated area) and the estimate of the agricultural labor force in 1971.

4.—*Factors Leading to Disguised Unemployment in Egyptian Agriculture :*

The main factors leading to disguised *uncmployment in Egyptian* agriculture may be summarized in :

1. The increase in agricultural human resources, at rate amounting to about *ten* times that of the cultivated acreage.

2. The incessant fragmentation of holdings characteristic of Egyptian agriculture. According to 1965 figures farms of 1--5 feddans amounted to 90 % of the total number of Egyptian farms, (El-Feel, *et al.*, 1973).

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(1) Includes the proportion of gainfuly employed persons between 6--12 years old and 65 years old or more which amounts to 7.72% of the labor force (or 335526 persons).

(2) This estimate was made on the basis of the labor requirements which were needed in 1937 when the index of agricultural production per feddan reached its maximum, provided the lack of any significant changes in the state of technology in Egyptian agriculture during this period. The cultivated area amounted to 5. 3 million feddans and the agricultural labor force was estimated at about 2. 6 million persons according to 1937 figures.

(3) Feddan = 1.038 acre.

5.—*Socio-Economic Ills Caused by Disguised Unemployment in Egyptian Agriculture :*

The socio-economic disturbances caused mainly by disguized unemployment in addition to illiteracy and disease in Egyptian Agriculture are reflected in the low and even diminishing monetary and real per capita net agricultural incomes and in the almost below subsistence plans of living of the greatest majority of the agricultural population (table 2). Moreover, because of the widely changing labor requirements and the inelastic supply of agricultural labor, the existing low wages fluctuate sharply from season to season.

6.—*Agricultural Seasonal Unemployment :*

As is well known agriculture is industry characterized by the seasonality of its farm operations and production. Unlike most of the other major industries, the growing of plants and the rasing of livestock is, to a much larger extent, controlled by the season rather than by man. In terms of the 1971 figures made available by the Ministry of Agriculture, the annual seasonal unemployment among men in the agricultural human labor force amounts approximately to 193 million man-labour days. This amount of seasonal labor requirements is equivalent to the work of 0.897 million fully employed men ; i.e. men working 215 days throughout the year.

Seasonal unemployment among the other category of the agricultural human labor force, which includes boys, girls, and women, is estimated for 1971 at about 278 million labor-days annualy. This amount of seasonal labor requirements is equivalent to the work of about 1.1 million fully employed boys, girls, and women ; i.e. boys, girls, and women working 252 days throughout the year.

However, this seasonal agricultural labor force is inevitably needed for covering the amount of labor required during the perriods and in the places when and where agricultural employment is approaching or reaching its peak. It is for this reason that this seasonal labor force cannot be relased ; that is, withdrawn from the present agricultural labor force. Only in the newly reclaimed areas could this seasonal labor force be more fully utilised by employing it during the slack seasons, in various nonagricultural industries and other activities which should always be part and parcel of the resettlement projects planned for those areas. Illustrative of such industries are dairying, various other plant and animal food industries, construction and building industries, hatching, packing, and even spinning and weaving industries.

Table (2) Real Per capita Incomes of the Agricultural Labor Force In the A. R. E. (1952–53 to 69–70).

Years	National Agricultural Income		Per capita Income of Agricultural Labor Force		
	Money Value (mill. pounds)	Real* Value (mill. pound)	Money Terms (pounds)	Real Terms (pound) Annually	Monthly
1952	269.9	78.7	76.7	21.9	1.82
1953	275.6	77.9	75.0	21.2	1.77
1954	308.9	90.3	82.3	24.1	2.01
1955	313.8	89.4	81.9	23.3	1.94
1956	385.1	86.3	91.6	22.1	1.84
1957	366.5	87.5	91.9	21.9	1.83
1958	369.2	89.4	90.8	22.0	1.83
1959	390.4	93.4	94.0	22.5	1.87
1960	417.6	99.9	98.9	23.7	1.97
1961	352.9	83.0	82.8	19.5	1.62
1962	427.2	101.7	99.3	23.6	1.96
1963	480.5	113.1	110.5	26.0	2.17
1964	535.6	118.2	122.1	26.9	2.24
1965	614.6	125.4	138.7	28.3	2.36
1966	679.6	129.2	151.9	28.9	2.41
1967	690.2	129.5	152.9	28.7	2.39
1968	708.0	129.2	155.4	28.4	2.37
1969	769.7	140.7	167.4	30.6	2.55
1970	827.6	148.3	178.3	31.9	2.66

* The real value has been compued according to the wholesale price index in the A. R. E. (1939 = 100).

Source : Compiled and computed from :

(1) Department of Public Mobilization and Statistics, Estimates of Agricultural National Income, Year 1970, Reference 05 412, Cairo, July 1972.

(2) Data in table (1).

7.—*Vertical Versus Horizontal Agricultural Development as a Measure of Curbing Unemployment in Egyptian Agriculture :*

Contrary to what has for so long been commonly believed, vertical agricultural economic development is neither faster nor less costly when compared with horizontal agricultural economic development (El-Feel *et al.* 1973) Moreover, it does not increase the amount of the present cultivated area whose scarcity is the crux of the world known Egyptian agricultural dilemma caused by the exceedingly low cultivated land-man ratio and its concomitant agricultural disguised and otherwise unemployment, low incomes and planes of living among the small land owners, tenants, and especially the landless. Therefore, and unless the cultivated area is increased, all agrarian reform measures involving the redistribution of land ownership and tenancy will not contribute much to the various attempts at minimizing the very complicated and intricate problem of unemployment, inadequate incomes, and widespread misery among the agricultural and rural population of Egypt. The amount of the cultivated area could only be increased by horizontal economic development projects, a goal which could never be achieved by any projects that vertical development might entail.

8.—*Reclamied Acreage and Reclamation Investment Required for Liquidating the Surplus Human Labor Force :*

A ten years reclamation plan for eliminating or at least minimizing the surplus in the agricultural labor force amounting, according to 1971 figures, to about 1.68 million persons out of the total agricultural labor force amounting to 4.682 millions, calls for reclaiming new lands amounting to about 3.36 million feddans with an annual rate of reclamation amounting to about 336 thousand feddans. This figure has been computed on the ground that, in the presently cultivated area the per feddan requirements of agricultural labor amounts to 0.5 person of the agricultural labor force. Facing the increase in the agricultural labor estimated at about 42 thousand persons (between 1960—1971), likewise, calls for reclaming an additional 84 thousand feddans annualy. This means that a ten years land reclamation plan aiming at employing both the surplus agricultural labor force and its annual increase calls for an annual reclamation of an area amounting to about 420 thousand feddans.

9.—*Amount of Agricultural and Non-Agricultural Investment Required for Creating a Job for an Unemployed Person.*

According to the figures of the Egyptian five year plan for socio-economic development the average amount of investment needed to

create a job for an unemployed person is estimated at L. E. 706 in the agricultural sector, L. E. 2700 in the manufacturing sector, and L. E. 2370 in all the remaining economic and social sectors combined. This means that the average amount of agricultural investment needed to create a job for an unemployed person amounts to only about 25 % of that for the manufacturing sector and about only 30 % of investment in the agricultural development projects contributes more that for the other economic and social sectors. It also means that investment in the agricultural development project contributes more to the national economic and social welfare. This is due to the fact that, as has already been indicated, agricultural development is more capable of employing all the unemployed and of attracting to the labor market a much larger number of persons not in the labor force. It can also be said that, combating disguised agricultural unemployment and creating jobs for most of the agricultural females not in the agricultural labor force who could be attracted to the agricultural labor market by investment in agricultural development projects, only requires about one quarter of the investment needed for employing them by further investment in Egyptian manufacturing projects. This fact alone is of great significance as regards Egyptian economic and social development plans in genral. This is so because the funds required for financing the various development projects, being relatively so enormous, constitute the most important limiting factor to any such development.

CONCLUSIONS

Agricultural unemployment particularly the disguised is no doubt the most serious problem in the agricultural sector of the Arab Republic of Egypt. However the agricultural labor force not distributed proportionatly with the amount of cultivated area in various Egyptian governorates. Thus it is expected that while some governorates are so over burdened with disguised agricultural unemployment such as El-monofia & Kaluobia Governorates. Others such as El-Behera & Kafr-El-Sheak facing shortages in the supply of agricultural labor especially in the peak seasons. The apropriations for horizontal agricultural development in the first and second five year plans were not adequate to eliminate or at least minimize the surplus agricultural labor force. The average reclamation rate during the last decade was less than 100 thousand feddan per year while at least 420 thousand feddans are needed annually to eliminate the surplus agricultural labor force in a ten year plan and employ its annual increase amounting to 42 thousand

persons. This vigorous plan for horizontal agricultural development means more Nile, artesian, underground and perhaps in due time desalinated irrigation water resources and facilities that are necessary to expand the cultivated area.

With respect to the seasonal agricultural labor force, it seems that expanding rural manufacturing industries such as dairying, various other plant and aninal food industries, raising of poultry, packing, spinning and weaving, etc., in addition to giving the rural sector its fair share of the other manufacturing industries (60% of the manufacturing plants are located in Cairo and Alexandria) can be effective means to fully utilize the Egyptian agricultural labor force around the year to minimize the food and population problems in the Egyptian cities such as Cairo and Alexandria.

Further research is called upon :

1. to estimate the distribution of the disguised unemployment on various Egyptian Governorates.

2. to estimate disguised unemployment through statistical estimation of national and regional agricultural production functions and evaluate the results of both the current and suggested procedure.

REFERENCES

1. AGARWALA A. N. and SINGH, S. P. : Editors) : *The Economics of Under development :* Oxford Univ. Press, 1958

2. BARCLAY, G. W., : *Techniques of Population Analysis,* John Wiley and Sons, Inc., New York 1958.

3. BAUER, P. T. and YAMEY, B. S., *The Economics of Underdeveloped* Countries, The University of Chicago Press, Chicago, 1957.

4. BLACK, J. D., : *Introduction to Economics for Agriculture,* The McMillan Company, New York 1953.

5. BRADFORD, L. A. and JOHNSON, G. L., : *Farm Management Economics,* John Wiley and Sons, Inc., New York 1953.

6. CASE, H. C. and JOHNSTON, P. E., : *Princnples of Farm Management,* Lippincott Company, New York 1953.

7. COLE, G. D. H., : *The Means to Full Employment,* Victor Gollancz Ltd., London 1943.

8. Charles, H. C. Kao, Kurt R. Anschel, & Carl K. Eicher, Disguised Unemployment in Agricultura : A survey ; *Agriculture in Economic Development,* Edited by Eicherfi, C., & Witt, L., McGraw-Hill Book Company, New York 1964.

9. Dillard, Dudley, *The Economics of John Maynard Keynes*, Prentice-Hall, Inc., New York 1949.

10. Department of Public Mobilization and Statistics, Sampling Estimates of Employment in The Arab Republic of Egypt In May 1971, Reference No. 05—222, Cairo, Nov. 1972 (Arabic Text).

11. Department of Public Mobilization and Statistics, Estimates of Agricultural National Income for the 1970, Reference No. 05—412, Cairo July, 1972.

12. DUCOFF, L. J. & HAGOOD, M. J., *Labor Force Definition and Measurement*, Social Science Research Council, New York, 1947.

13. DUCOFF, L. U. & HAGOOD, M. J., The Meaning and Measurement of Partial and Disguised Unemployment, *The measurement and Behavior of Unemployment*, A Conference of the Universities National Bureau Committee for Economic Research Princeton 1957.

14. ECKAUS, R. S. ; «Factor Proportions in Underdeveloped Countries», American Economic Review, Vol. 45, Sept. 1955.

15. EL-FEEL, A. ; *The Functional Relationship between Egyptian* Horizontal Agricultural Economic Development and Combating Egyptian Agricultural Unemployment; (M. Sc. Thesis), Dept. of Agricultural Economics, Univ. of Alex. Alexandria, Egypt, July 1962, (Arabic Text 400 p.).

16. EL-FEEL, A. M. T., Principles and Techniques Agricultural Marketing Dar El-Matboat El-Gedela, Alexandria, Egypt, 1970 (Arabic Text).

17. EL-FEEL, A. M. T., ABU-EL-WAFA, E., and KALIFA, A. Y., The Drop of The Relative Importance of Cotton in Egyptian Agriculture *Rose El-Youssef* Second Cotton Symposium, Alexandria, 1973.

18. MYINT, HLA, *The Economics of the Developing Countries ;* F. A. Praeger ; Inc., New York 1965.

19. FLANAGAN, R. J.; Disguised Unemployment and the Structural Hypothesis, *Publication No. 269 ; Institute of Industrial Relations,* Univ. of California, Berkely, 1966.

20. Galenson, Walter, *Labor and Economic Development,* John Wiley & Sons ; Inc., New York 1959.

21. GORDON, R. A.; Full Employment as a Policy Goal, *Publication No. 271, Institute of Industrial Relations,* Univ. of California, Berkeley, 1966.

22. HABBELLAH M., *«The Pattern of Agricultural Unemployment», A Case Study of an East Pakistan Village,* Bureau of Economic Research, Dacca Univ., Dacca ; Pakistan, 1962.

23. HAMOUDA, KHALIEL, A. G., *Economic Aspects of the Application of Cooperative Farming in Egypt,* (Ph. D. Thesis), Univc. of Minnesota, June 1955.

24. HARBISON, FREDERICK & IBRAHIM, I. A., *Human Resources for Egyptian Enterprise,* McGraw-Hill Book Company, New York 1958.

25. HEADY, E. O., *Economics of Agricultural Production* and Resource Use, Prentice-Hall, Inc., New York 1952.

26. HOWARD, L. E., *Labour in Agriculture : An International Survey, Oxford* University Press, H. Milford : London 1953.

27. I. L. O., *Action Against Unemployment,* Geneva 1950.

28. Issawi, Charles, *Egypt at Mid-Century*, Royal Institute of International Affairs, Oxford 1953.

29. KEYNES, J. M.; *General Theory of Employment, Interest and Money*, Harcourt Brace and Co., Inc., New York 1936.

30. JAFFE, A. J. & STEWART, C. D., *Manpower Resources and Unilization*, John Wiley & Sons, Inc., New York 1951.

31. LEIBENSTEIN, HARVEY : «The Theory of Underemployment in Back-Ward Economics»; *Journal of Political Economy*, Vol. 65, April 1957.

32. LEWIS, W. ARTHUR : «Economic Development with Unlimited Supplies of Labor», Machester School of Economic and Social Studies, May 1954.

33. LEITER, R. D., Labor Economics and Industrial Relations, Barnes, & Noble, Inc New York 1959.

34. LERNER, A. P., Economics of Employment, McGraw-Hill Book Company, Inc., New York, 1951.

35. LESTER, R. A., Economics of Labor, The Macmillan Company, New York 1949.

36. MELLOR, J. W., «The Use and Productivity of Farm Family Labor in Early Stages of Agricultural Development», J. F. E., Vol. 45, Aug. 1963.

37. Myrdal, Gunnar, Development and Under-Development, National Bank of Egypt, Fiftieth Anniversary Commenoration Lectures, Cairo 1956.

38. MYINT, HLA : The Economics of the Developing Countries, Frederick A. Praeger, New York 1965 ; p. 89.

39. NURKSE, RAGNAR : Problems of Capital Formation in Underdeveloped Countries, Basil Blackwell, Oxford, 1953.

40. Nurse, Ragnar, Problems of Capital Formation in Underdeveloped Countries, Oxford University Pres, Fair Lawn, N. J., 1953.

41. Nurkse, Ragnar, Some Aspects of Capital Accumulation in Underdeveloped Countries, National Bank of Egypt, Fiftieth Anniversary Commemoration Lectures, Cairo, 1952.

42. OMER, HUSSEIN, Economics of Development, Renaissence Book-shop, Cairo 1955.

43. PARTHASARTHY G., Agricultural Unemployment in India, (Ph. D. Thesis), University of Wisconsin, Madison, 1957.

44. PHELPS, O. W., Introduction to Labor Economics, McGraw-Hill Book Company, Inc., New York 1950.

45. RAJ, K. N., Employment Aspects of Planning in Underdeveloped Countries, National Bank of Egypt, Fiftieth Anniversary Commemoration Lectures, Cairo, 1957.

46. RAO, V. K. R. V., Full Employment and Economic Development, Indian Economic Review Vol. I., No. 2 August 1952.

47. ROBINSON, Mrs. JOAN, Essays in the Theory of Employment, 2nd Edition, Oxford, Blackwell, 1947.

48. ROSENSTEIN-RODAN, P. N. : «Disguised Unemployment and Under-employment in Agriculture», Monthly Bulletin of Agricultural Economics and Statistics, Vol. 6, FAO, Rome 1957.

49. THOMPSON, W. S., Population Problems, Third Edition, McGraw Hill Book Company, Inc., New York 1942.

50. WARRINER, DOREEN, Land Reform and Economics Development, National Bank of Egypt, Fiftieth Anniversary Commemoration Lectures, Cairo, 1955.

51. WARRINER, DOREEN, Land and Poverty in the Middle East, Royal Institute of International Affairs, Oxford University Press, London 1948.

52. YODER, DALE, Manpower-Economics and Labor Problems, McGraw-Hill Book Company, Inc., New York 1950.