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**TRANSFER OF MANPOWER FROM AGRICULTURE**

**IN HUNGARY: 1949-1963**

by

**Paul S. Fischer**

A dissertation submitted to the Graduate  
Faculty in Economics in partial fulfillment  
of the requirements for the degree of Doctor of  
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**PLEASE NOTE:**

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## CHAPTER I

### Introduction

The objective of our study is to examine the determinants of the volume and the rate of transfer of manpower from agriculture to nonagricultural activities in Hungary in the period 1949-1963.

In a matter of a decade and a half, the proportion of the workers actively engaged in agriculture fell from 54% to 32% of the total labor force. In the same period, about 30% of the farm work force quit agriculture.

We seek to study the reallocation mechanisms and policies that brought about this rapid change, that is, the roles of employment opportunities in the nonfarm sector, collectivization, income differentials and capital accumulation. A particularly interesting feature of our study is the fact that during 1954-1956, out-migration ceased; a "back to the farm" movement took place.

Our main objective then is to explain, and account for, this phenomenon and the over-all rapid rate of transfer of manpower from agriculture to nonagricultural activities.

### Theoretical Framework

It is convenient to begin our inquiry with the empirical observation that in Hungary, in 1949, 54% of the labor

force was actively engaged in agriculture (Table I-VI). This represents a considerable proportion of that nation's manpower potential. One may ask, why did Hungary have such a large share of her labor force employed in agriculture?

In broad conceptual terms and on an a priori reasoning, we can suggest two alternative explanations, assuming a closed economy:

- 1) The manpower was necessary to feed the population
- 2) The farm labor force had no employment opportunities elsewhere.

#### Employment Requirements

The first hypothesis claims, in fact, that all of the workers, at the time, were tied to agriculture because they were necessary to support the population. It required such a high proportion of the labor force, essentially, because the workers had very low productivities. To give an example, in the U.S. a farm worker supports 40 persons with a good and healthy diet, while in Hungary he supports only 6 persons with a far less rich diet. It is because of their relatively low productivity that so many workers had to be in agriculture. Hence, the general argument is that "until output per worker is increased, most of these countries cannot divert many resources into other occupations. Food comes first."<sup>1</sup>

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<sup>1</sup>Stephen Enke, Economics for Development (New York: Prentice-Hall, Inc., 1963), p. 24.

Since our primary concern is with the release of manpower from the subsistence sector, and its transfer to the industrial sector, we ought to ask what this hypothesis implies in this respect.

In most general terms, the transfer of manpower from one sector of the economy to another depends on:

- 1) the ability of the first sector (i.e., agriculture) to release it
- and 2) the ability of the second sector (i.e., industrial) to absorb it.

These are, essentially, two different aspects of the same problem. The first emphasizes the rate at which the outward shift might take place--the "supply" or releasing side of the transfer. The second emphasizes the rate at which it does take place--the "demand" or the absorptive side of the transfer.

Consider the "release" side of the picture first. Assuming that there was no surplus labor in agriculture, an increase in agricultural productivity would have been a necessary precondition for the release of the workers without any loss in farm output. It is, of course, clear that agriculture could have freed labor with a loss of output, and the consequent lowering of feeding standards.

The hypothesis has nothing to offer on the "demand" side of the picture. For the moment, it is sufficient to restate that for the transfer to take place there must be demand for labor by the nonagricultural sector.

Suppose now that the conditions in Hungary were similar to the ones we postulated above; we would then expect:

- 1) that the authorities should have stressed increases in farm productivity so that labor could be freed to meet the requirements of industrialization (e.g., considerable investments in agriculture)
- 2) to find some evidence that industrialization has been halted from time to time because of lack of manpower
- 3) agricultural wages were high relative to industrial wages because of the general scarcity of food.

### Employment Opportunities

Turning to the second hypothesis, we could argue, in principle, that a considerable proportion of the labor force was engaged in agriculture, primarily because there were no employment opportunities available for the peasants in other sectors of the economy at wage rates above those prevailing in agriculture. This, of course, implies that some of the workers on the farms may not have been fully employed.

What are the implications of this hypothesis with respect to labor transfer?

On the release side, we can distinguish between two cases. Suppose that there was redundant labor in agriculture

(i.e., a situation where the marginal product of labor is zero), then the transfer of it would have depended basically on the rate of expansion of nonfarm employment opportunities. The persistence of redundant labor could have been directly linked with lack of nonfarm jobs, since those workers were not necessary to feed the population.

If, however, we suppose that the situation was one of underemployment (i.e., a situation where the marginal product of the worker is below his real wage), then withdrawal of labor would have meant some loss in agricultural output. Productivity of agriculture would have to rise to permit the withdrawal of labor without a loss of farm output.

On the "demand" side, it will be recalled, the transfer of labor depends on the ability of the nonfarm sector to absorb it. The existence of surplus labor and/or improvements in agriculture provide only some of the necessary conditions for outward mobility. For transfer to take place there must be attractive nonfarm jobs available. Expansion in nonfarm jobs is a must in order to provide outlets for the displaced workers. In sum, the existence of underemployment and/or increased agricultural efficiency are necessary but insufficient conditions for the transference of labor.

A comment on the difference between the two hypotheses is called for. The fundamental distinction concerns the

"release" side of the transfer. The first case deals with what may be called a case of "full employment"; the second with a case of "underemployment." While there may be differences on the "demand" side of the transfer as well, they are less pronounced, and would depend ultimately on the same set of variables, e.g., rate of capital accumulation, the behavior of real wage rates, and governmental policies.

### Hypothesis Selection

Hungary, along with most East European states, has been characterized as a country possessing a vast reservoir of surplus labor in agriculture. Doreen Warriner, in her classic work on the economics of peasant farming in Eastern Europe, was the first known economist to make this claim.<sup>1</sup> A few years later P. N. Rosenstein-Rodan wrote his celebrated article on the "Problems of Industrialization of Eastern and South-Eastern Europe" in which he flatly states that

there exists an 'agrarian excess population' in Eastern and South-Eastern Europe amounting to 20-25 million people out of a total population of 100-110 million, i.e., that about 25% of the population is either totally or partially ("disguised unemployment") unemployed.<sup>2</sup>

This claim has been generally shared by other scholars as well. One of Professor W. E. Moore's estimates put the

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<sup>1</sup>Doreen Warriner, Economics of Peasant Farming (London: Oxford University Press, 1964), Introduction.

<sup>2</sup>Paul N. Rosenstein-Rodan, "Problems of Industrialization of Eastern and South-Eastern Europe," Economic Journal (June-September, 1943), p. 202.

Hungarian pre-World War II rural overpopulation at 22.4% of the farm population, or about one-half million working peasants.<sup>1</sup> A corroborating estimate, based on 1930 figures that considered only male labor, found the actual labor utilization as 76% of the potential.<sup>2</sup>

The Communist planners, after the war, basically accepted the idea that Hungarian agriculture had a substantial rural overpopulation. A leading manpower expert, Dr. Janos Timar, who was (or still is) the Chief of Manpower Planning in the Department of National Planning Office, noted in his book that

in the last fifteen years the Hungarian economy was developing rather rapidly. One of the major sources of our progress has been the considerable increase in employment. The required manpower was readily available. . . . However, the era of unlimited manpower is passing.<sup>3</sup>

The former Chairman of the National Planning Office, the late Professor Imre Vajda, also noted:

Industry, trade, transport and public services are creating great numbers of jobs; the traditional latent unemployment in agriculture--which exists partly because of its seasonal character--constitutes a great reservoir of new workers in our country as everywhere else.<sup>4</sup>

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<sup>1</sup>Wilbert E. Moore, Economic Demography of Eastern and Southern Europe (Geneva: League of Nations, 1945), pp. 63-65.

<sup>2</sup>Colin Clark and Margaret Haswell, The Economics of Subsistence Agriculture (New York: St. Martin's Press, 1966), p. 128.

<sup>3</sup>Janos Timar, Planning the Labor Force in Hungary (International Arts and Science Press, 1966), p. 9.

<sup>4</sup>Imre Vajda, The Second Five-Year Plan in Hungary (Budapest: Pannoria Press, 1962), p. 60.

There is also a study by Dr. I. Meszaros dealing with this question of surplus labor in agriculture.<sup>1</sup> Based on his analysis, the author concluded that the available manpower exceeded significantly manpower requirements. He suggested that the farm work force could be reduced by at least 20% without any loss in output, if the peasants were to join collective farms.

In short, it has been widely claimed and believed<sup>2</sup> that prior to World War II and during the early 1950s, there was surplus labor in agriculture. In light of these claims, we propose to work with our latter hypothesis and summarize its implications, in a series of four propositions before proceeding with the empirical work.

### The Model

1. Surplus labor is defined as a condition where the supply of labor is more than required, given the existing techniques of production and the non-labor inputs so that labor can be transferred without reducing farm output. To put it differently, surplus labor in agriculture is said to exist when there are too many peasants relatively to land, and each one is working less than his full employment capacity.

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<sup>1</sup>Istvan Meszaros, "Mezogazdasagi Termeles Munkaeroszukseglete," Statisztikai Szemle, April 1952.

<sup>2</sup>See also, United Nations, Economic Commission for Europe, Economic Survey of Europe in 1957 (Geneva: 1958), Chapter VII, p. 24.

2. The supply of unskilled labor is infinitely elastic at the prevailing industrial real wage rate. This means that manpower can be drawn from agriculture at a constant real wage rate. This wage rate will be higher than the average product of workers in agriculture.
3. The actual rate of transfer depends on developments in the industrial sector. When employment opportunities are abundant, it will accelerate; and when they are scarce, it slows down. A key factor influencing the ability of the nonfarm sector to expand employment is capital accumulation and its rate of growth.
4. The transfer of labor requires that along with the outflow of labor there should be an outflow of food. Various incentive schemes, positive and/or negative, have to be adopted in order to facilitate the transfer of the farm surplus to the towns.

#### Elaborations on the Model

Three aspects of the model are especially noteworthy. First, the twin concepts of surplus labor and labor shortage. Broadly speaking, it is useful to distinguish between labor shortage (or labor surplus) in terms of people and labor shortage (or labor surplus) in terms of labor time. It is well recognized that agricultural employment is subject to

seasonal variation--it is generally high during the summer and low during the winter. Let us take the case of the summer peak first. It is possible that during this season of the year there is a shortage of labor in terms of people, but this need not mean shortage in terms of labor time. For example, given the manpower needs, it might be possible to bring urban workers to the farms for those critical weeks. To the extent that it is possible, from both an institutional and a technical point of view, there is, in fact, no labor shortage.

Turning to the slack season, farm labor is substantially underutilized. In Hungary, for example, in 1958, one third of the year (from November through February) about 50% of the available farm labor was underemployed (Table IV-2). Once again, it is possible to transfer manhours and act in one of two ways: either move the peasants to the urban centers, or introduce workshops in to the rural areas. These possibilities will be examined in a subsequent chapter in the context of the Hungarian economy.

Second, the criterion for outmigration. Broadly speaking, it is useful to distinguish between the initial reasons for outmigration and the subsequent reasons for staying in the city, between short run and long run considerations, and between migration of single persons and migration of married men with dependents. A peasant's decision whether to migrate or not is affected by these factors.

Let us take the general case first. As a matter of logic, a married peasant with dependents will not migrate, *cet. par.*, unless the real wage in the non-farm sector is at least equal to the going real wage in agriculture. If the potential migrant expects to emigrate permanently, and thus takes the long run view at the time he makes the decision, he would then require the urban wage rate to be at least equal to the going wage in agriculture. Indeed, the urban wage rate will have to be higher in order to induce the peasant to leave farming and compensate him for the increased cost of living in the cities and to meet other incidental costs, e.g., the cost of establishing oneself in the town, travel and other costs.

Let us take now the specific case--the case of a young male unmarried would-be migrant. On the one hand, this migrant considers the opportunity cost of leaving agriculture, i.e., the average real consumption per capita. On the other hand, he looks at the real urban wage level because this is the amount he anticipates earning if he finds a job. Consequently, in deciding whether to leave agriculture or not, the prospective migrant compares the urban wage rate with the per capita consumption of the peasantry. He will not migrate, *cet. par.*, unless the wage rate is above agriculture's per capita consumption.

In essence, what we argue here is that a single person, by making this comparison and migrating, actually improves his welfare, at least in the short run.<sup>1</sup> Not only does his

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<sup>1</sup>Indeed, it stands to reason that the head of the

welfare improve temporarily as a result of out-migration, but in his eyes it is probably magnified since on the farm he was paid largely in kind, while in his new employment he expects to be paid in cash. In other words, the income that he had received from his agricultural activity was largely not perceptible; the income he anticipates making would be tangible. Certainly in the long run he plans marriage, and his future wife probably would be working for at least some time. Indeed, it is likely that the fact that his future wife would be able to obtain an urban job is a factor in his decision to migrate. Eventually, of course, they will have children and the principal breadwinner will have to support them. But, by this time, there would be no reason for the family to move back to agriculture unless, of course, the average pay of farm workers would be above that of industrial workers.<sup>1</sup>

Third, the model asserts that the rate of expansion of the nonfarm sector determines how fast surplus rural labor will be absorbed. Given constancy of the real wage, the growth of the nonfarm sector depends, in turn, on capital accumulation. The faster the rate of capital formation, the faster will the nonfarm sector grow, and hence, the faster will surplus labor be absorbed, *cet. par.*

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family might encourage the would-be migrant to leave because, on the one hand, more will be left for the remaining ones to consume and, on the other hand, the migrant would be urged to send back part of his wages.

<sup>1</sup>We have dwelt at length on this aspect of outmigration because in Hungary a disproportionately large number of out-migrants were unmarried.

The model, which approximates closely the models of W. A. Lewis, Fei and Ranis, and other economists,<sup>1</sup> permits us to make a number of predictions:

- 1) that real wages in the industrial sector remain constant as surplus labor is transferred
- 2) that the rate of capital formation is the crucial element on the "absorption" side of the transfer
- 3) that as surplus labor is withdrawn the terms of trade turn against the industrial sector.

Later we shall examine these predictions, and their ramifications, in the light of the Hungarian experience.

#### Applicability of the Model to a Socialistic Economy

Since we are dealing with a socialist economy, further comments are called for. Thus far, the model we have outlined has not explicitly taken into account the social and economic system of the economy. The institutional framework, within which the manpower transfer is to take place, is not specified. Nevertheless, the analysis has implied, for example, a free labor market. Workers are free to move from one sector to another, and, in fact, induced to do so by the existence of real wage rate differentials.

Let us examine the applicability of the model more closely, taking up the "release" aspect first.

Suppose, for the moment, that the government uses force to transfer part of the peasantry to industry. If they were

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<sup>1</sup>W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labor," The Manchester School, May 1954, pp. 139-91; John C.H. Fei and Gustav Ranis, Development of the Labor Surplus Economy: Theory and Policy (Homewood, Illinois: Richard D. Irwin, Inc., 1964).

part of what we call surplus labor, their removal would not result in a loss in output. Indeed, those who remain on the farms do not have to be induced to work more or harder to maintain total output. The only problem that the regime would still have to face is to see that the "farmers" do not increase their consumption--that they release the "surplus" food.

If the withdrawn workers were underemployed, there will be a loss in output unless:

- a) the remaining ones can be induced to work more hours, days or
- b) there is an increase in labor productivity.

The remaining workers can be induced to work more and surrender their "surplus food" either by positive or negative incentives. Positive incentives imply the provision of consumer goods at favorable prices. The supply of these manufactured goods would accomplish two objectives: it would induce the peasants to work more, and to part with their extra food. Command economies, however, have relied mostly on "negative incentives." They have collectivized agriculture, thereby tightening their control over the peasantry, and have obtained the surplus food by compulsory deliveries, taxation and other methods.

There is another way to offset the potential loss in output that results from the transfer of the underemployed. This would be to reorganize the remaining workers on a more efficient basis, to change methods of cultivation, and to change the sizes of farms. All these, and similar measures, would tend to increase productivity, given the same level of individual exertion.

The planners can also directly influence the terms of trade between the agricultural and nonfarm sectors, and thereby affect the rate of rural exodus. For example, they can let the prices of nonfarm goods rise in relation to the prices of agricultural products. Such a price policy would benefit the nonfarm sector at the expense of the agricultural sector. These adverse terms of trade, from the point of view of the peasants, would make life more difficult on the farms, and thus tend to accelerate the pace of outward mobility. Again, unless the government used some compulsory methods, the peasants would not part with the surplus food.

We see, then, that the planners have various means of directly influencing the outward movement, but they all hinge upon the performance of agriculture.

With respect to the "absorption" side of the problem, the state can again directly influence the rate of absorption by adopting appropriate price-wage policies in state enterprises; policies that will accelerate or retard capital formation, in accordance with the planner's wishes.

Let us summarize our conclusions. Our model does not rule out the possibility of direct allocation of labor--a straightforward transfer of manpower in accordance with the planners' wishes. It is not inconsistent with the basic propositions of the model to supplement or supersede it by non-market techniques. Surely, the initial existence of surplus labor in agriculture cannot be attributed to the

social organization of the economy. Not only are the "problems" for the two types of economies similar, but so are their "solutions." The achievement of a more nearly optimal allocation of manpower depends, essentially, on the same factors. It is the performance of agriculture, the availability of employment opportunities and the release of the food that will most significantly determine the rate of transfer. In other words, it is the effective functioning of the real economic variables that will affect the volume and rate of transfer. If the planners, however, are not satisfied with the rate of outward mobility, they can directly influence it, as we have seen, by the proper price-wage-collectivization policies.

Thus far, the discussion has been in broad conceptual terms. It has been carried on mostly without specific reference to Hungary. We turn now to a detailed study of the factors that governed the rate of transfer of manpower from agriculture to the nonagricultural sector in Hungary.

### Main Features of Hungarian Agriculture

#### The Pre-World War II Period

It will be helpful to review briefly the main features of agriculture prior to World War II in order to appreciate fully agricultural developments in the post-war period.

On the eve of World War II agriculture played a significant role in the economy. It gave employment to 48% of

the working population,<sup>1</sup> and produced 34% of net national product.<sup>2</sup> Furthermore, agriculture was, by far, the most important export item, its share being 65% of total exports in 1940.<sup>3</sup> Though agriculture played this significant role, the net product of manufacturing and construction together was greater than the net product of agriculture.<sup>4</sup> This suggests that the Hungarians already had an important industrial sector in existence. The country exhibited the common dualistic character of most underdeveloped economies: subsistence agriculture side by side with a market economy.

Hungarians are very fortunate in that they live on very fertile land. The topographic character of the country, its predominantly flat nature, allows 80% of the land to be cultivated. Of the total area of 9.3 million ha., 7.5 million ha. were recorded in 1938 as agriculturally productive land, or about 81%.<sup>5</sup> More than 80% of the land was devoted to agriculture. If one wishes to include forests as part of agricultural land, more than 90% of the area can be considered as productive.

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<sup>1</sup>S. D. Zagoroff et al., The Agricultural Economy of the Danubian Countries 1935-45 (Stanford, Calif.: Stanford University Press, 1955), p. 11.

<sup>2</sup>Ibid., p. 12.

<sup>3</sup>Ibid., p. 209.

<sup>4</sup>Ibid., p. 104.

<sup>5</sup>International Institute of Agriculture, International Yearbook of Agricultural Statistics (Rome) for 1938-39 and 1939-40.

The arable land, which accounts for 70% of farm land, was devoted mostly to cereals and feed crops. Since World War II, however, more land was allocated to grow industrial crops, vegetables and fodder crops.<sup>1</sup>

#### Farm Size and Land Distribution

Unlike other East European states, a significant proportion of the land was in the hands of a relatively few big landowners. As can be seen from Table I-1, less than 1% of the farms included 46.4% of all the land. Approximately 1.6% of the farm families owned more than 50% of the land. About 8,000 large farms occupied as much land as 440,000 small and medium farms. Finally, more than 70% of the farms were under 2.8 ha., so tiny that most of them were not sufficient to support the worker and his family. Consequently, they supplemented their income by working outside their farms. In fact, 66% of the agricultural labor force was composed of landless or land-poor peasants.<sup>2</sup> The state of agriculture prior to World War II was summarized very well by a leading economist and a former chairman of the National Planning Office.

Thus in the interwar period the level of development of Hungarian agriculture moved further and further away from agricultural economies which elsewhere had begun to assume features of capitalism more quickly and profoundly; it retained

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<sup>1</sup>Central Statistical Office, Hungary Today 1965 (Budapest: 1966), p. 73.

<sup>2</sup>Ernst C. Helmreich, editor, Hungary (New York: Frederick A. Praeger, 1957), p. 232.

numerous feudal features, of which, in addition to low yields, the dominating wage conditions were also characteristic. Agricultural workers received only a quarter of their wages paid in cash, more than half of it was paid to them in kind and the remaining one fifth they received in the form of services (right to pasture land, housing, etc.). Money economy was not general in the Hungarian village even as late as the middle of the 20th century! Everything was just as it had been one or two centuries earlier . . . for millions of the agrarian proletariat and small holders participation in agricultural work did not, and could not, mean anything other than miserable existence. . . .<sup>1</sup>

### The Post-World War II Period

Hungarian agriculture has undergone significant changes since the end of the War. Immediately after the War a long overdue Land Reform was initiated by the Provisional Government, aiming at the transfer of about 3,222,000 ha. Large estates were expropriated, about 1.9 million hectares were divided into small holdings, and 1.3 million ha. were kept for public use. The reform was a major one; it allocated land to approximately 640,000 landless or land-poor peasants, with an average allotment of about 3 ha. It affected 30% of the agriculturally active population, and more than one-third of the country.<sup>2</sup> The resulting new land distribution is given in Table I-2. While the number of dwarf farms was still very large (68.1%), the proportion of small farms has increased considerably. The area cultivated by dwarf and small farmers almost doubled. The difficulty with

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<sup>1</sup>Imre Vajda, The Second Five-Year Plan in Hungary (Budapest: Pannonia Press, 1962), p. 58.

<sup>2</sup>Hungary Today 1965, op. cit., p. 15.

the redistribution of the land was that ;

the newly created small peasant holdings were too small for efficient operation, and the new owners were plagued with capital shortages.<sup>1</sup>

Apparently in an effort to placate the landless peasantry the authorities went overboard in dividing the land between farms of less than optimum size. It has been observed that :

from the economic point of view, the main problem posed by the land reform was the reduction of yields produced for the market, caused by the dissolution of productive large and giant farms and their replacement by peasant subsistence farms. The establishment of new farmsteads by the formerly landless and land-poor peasants also increased capital requirements at a time of great capital stringency.<sup>2</sup>

The Communist regime recognized this problem, and about three years later, the State was ready to socialize agriculture. In 1945 the Government needed the political support and cooperation of the peasantry and, consequently, initiated the Land Reform. By 1948, however, the Government had consolidated its power, and thought it desirable--both politically and economically--to socialize agriculture; politically, in order to maintain a more direct control over the peasantry; economically, in order to get hold of the "surplus" food that was so vital for any industrialization plan to be successfully implemented. In short, collectivization of agriculture was used as a tool to control the

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<sup>1</sup>U.S. Department of Agriculture, The Agricultural Economy and Trade of Hungary, Economic Research Service--Foreign, No. 269 (Washington, D.C.: 1969), p. 5.

<sup>2</sup>Helmreich, op. cit., p. 235.

peasantry and accumulate capital.

Basically, the idea was to establish large cooperative farms, instead of the myriad of small peasant holdings. This new policy was obviously very unpopular with the peasants, who had just achieved their independence. Most of them did not want to join the collective farms. After two to three years of rapid and forced collectivization, there was widespread discontent and declines in output. In 1953 the pressure for collectivization was relaxed. A second wave of collectivization was initiated in 1959, and successfully completed by 1960-61. We shall return to these problems in greater detail in the following sections. While the government was planning the collectivization of agriculture it was also planning a far-reaching industrialization program. Both of these plans called for the transfer of vast amounts of manpower from agriculture to industry. We turn now to investigate these aspects of the problem.

### Employment and Migration Trends

#### The Agricultural Sector

Since our main objective is to account for the volume and the rate of transfer, we will begin with agriculture. Table I-3 presents some of the essential statistical data-- it shows the increases and decreases in the actively employed agricultural labor force.

As can be seen, during 1949-1963 there was a total of 844,000 new farm workers (from youth and from those who

previously did not work), and a departure of 779,000 (due to deaths, retirements and other natural causes, excluding migration). This leaves a net natural increase of only 65,000 workers for the entire period.

But, as we can see from the next Table (Table I-4), the agricultural labor force fell from 2,190,000 to 1,560,000 in the same period.<sup>1</sup> If we add the 65,000 net natural increase, we find that, in fact, 696,000 people were transferred to the nonagricultural sectors. This corresponds to an average yearly transfer of about 46,500 workers.

How significant was this transfer in terms of manpower losses and gains?

In terms of losses of agricultural manpower, the transfer of 696,000 workers amounted to 29% of the 1949 farm work force. Furthermore, by far the greater part of those who departed were males and youths.

In 1949 there were about 1.5 million male workers; in 1964 there were less than 1 million left on farms. The number of women actively engaged in agriculture declined only slightly. It has been noted also that the best elements of the population leave the village, as we can see from the following quotation:

The problem of those that leave the village for good is of greater significance. In many cases here too the whole family does not leave the village--

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<sup>1</sup>The two tables cover the same time period because the figure for 1964 refers to January 1, 1964, i.e., Dec. 31, 1963. The figures are rounded; details may not add up to totals.

only some members of the family, mostly the youth. They are attracted by the city lights. . . . To whom does this attraction appeal? First of all to the energetic people . . . essentially, the youth. This blood transfusion may be valuable to the city; . . . on the other hand it poses a problem for the village . . . for how can the new way of farming and life flourish in the village . . . if its most valuable people desert it.<sup>1</sup>

### The Nonagricultural Sectors

Between 1949 and 1964, the economically active population of the nonagricultural sectors increased from 1,832,000 people to 3,298,000, an absolute increase of 1,466,000 persons, or 80% (Table I-5). Put differently, the percentage of non-agricultural workers to the total number of actively employed increased from 45.5% in 1949 to 68% in 1964. The fastest growing branches in terms of employment were construction and manufacturing. The former has increased by 280%; the latter almost doubled (Table I-6). The so-called non-productive branches (civil service, welfare, and other services) have increased relatively slightly, by approximately 30%.

Answering the question we asked above, as to the significance of the transfer in terms of manpower gains, we note that it amounted to 47% of the increase in the employment of the nonfarm sector. This is a very considerable proportion. Looked at differently, on the average, 46,500 new "extra" jobs were created yearly to absorb the mass outflow of labor. These were "extra" jobs, because the nonfarm sector had to absorb first its own net natural increase.

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<sup>1</sup>Vajda, The Second Five-Year Plan in Hungary, p. 60.

This shows, on the one hand, the dependence of the industrial sector on transferred farm labor, and on the other hand, its ability to create new additional jobs. The figures above amply demonstrate, on the one hand, the contribution that farm workers made to the nonagricultural sectors' employment requirements, and on the other hand, the extent to which the nonfarm sector was able to absorb labor.

### The Rate of Transfer

The discussion of manpower developments would not be complete without a brief reference to the rate of transfer. As can be seen from Table I-7, the massive outflow of labor did not proceed with an even tempo. In the period between 1949 and 1953, the pace of out-movement was quite rapid. In a matter of five years, close to 400,000 workers were reallocated. The rate, in 1952, reached 5.7% of the farm work force. It should be pointed out that this period is associated with rapid industrialization, and forced collectivization.

In the period between 1954 and 1956, a reversal in the "trend" occurred. Farm employment increased by a total of 122,000 persons, of whom a net of 80,000 were newcomers, and the remaining 42,000 came from the nonagricultural sectors. Apparently, the farm sector absorbed the new entrants and attracted manpower from the rest of the economy. It is worth mentioning that beginning with mid-1953, new economic policies were introduced that reduced the pace of

industrialization, permitted the disintegration of collective farms, increased the output of consumer goods, and relaxed somewhat the pressure on farmers.

Beginning with 1957 the exodus of farm workers resumed, and since 1959 it has accelerated. Thus, between 1957 and 1963, a net of 345,000 peasants left farming.

Having ascertained the magnitude and the character of the migration flows, the following three chapters will seek to explain, in detail, their causes and suggest the mechanisms that brought them about. The period extending from 1949 to 1963 can profitably be divided into three parts:

- (1) 1949-1953 net outflow of labor
- (2) 1954-1956 net inflow of labor
- (3) 1957-1963 net outflow of labor

The following chapter examines the first period.

## CHAPTER II

1949-1953

### The Agricultural Sector

Since the theoretical model with which we work assumes the existence of surplus labor, we ought to inquire into the applicability of this assumption with respect to Hungary. Can Hungary be characterized as a labor surplus economy? Did she commence her intensive industrialization drive (early 1950s) from a position of "unlimited supply" of labor? In order to answer these questions, let us examine what happened to farm output as labor was withdrawn.

#### Agricultural Production

According to the government's official index, net agricultural output, between 1949 and 1953, was above the 1949 level in every year with the exception of 1952 (Table II-1). According to an unofficial index, prepared by Professor Laszlo Czirjak of Columbia University, net agricultural output, for the same period, was below the 1949 level in every year, except 1951, which was an unusually good year for the farmers. Thus we have two different descriptions as to what happened to net farm output. The official series shows net farm output was rising; the unofficial series shows net output falling. We are inclined to accept Professor Czirjak's estimates, since

the government's official claims do not coincide with certain other developments. The statistical office probably exaggerated the rise in farm output so as not to admit the failure of their policies. Indeed the widespread shortages of grain coupled with sharply rising food prices cast serious doubts on the validity of the official index. Let us examine these developments in greater detail.

Shortages of Grain.--The production of bread grains (wheat and rye) plays an important role in agriculture's overall performance. The output of grains, however, showed poor results in this period as well as throughout most of the entire period. Compared with the production of about 3.50 million tons of bread grains in the pre-war period, production during 1950-1953 averaged only 2.75 million tons, or it was down by approximately 750,000 tons.<sup>1</sup> Because the output of bread grains was not sufficient to meet domestic consumption, Hungary was forced to import bread grain.<sup>2</sup> The fact that Hungary, a country that used to be a net exporter of wheat, became under the communist regime a net importer was a source of great concern to the government, as the following unusually frank statement by a former chief of the National Planning Office will indicate:

The other major task which must be emphasized and clarified is to ensure the country's grain

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<sup>1</sup>U.S. Department of Agriculture, Agricultural Statistics of Eastern Europe and the Soviet Union 1950-1966 (Economic Research Service--Foreign, No. 252, 1969), pp. 38, 41.

<sup>2</sup>Helmreich, Hungary, p. 247.

requirements. This is a puzzle not only to the reader abroad, who may not be thoroughly posted on Hungarian conditions; but we ourselves worry about this question every time it arises. How did it happen that Hungary, the producer of considerable grain surpluses for a century . . . was suddenly compelled in the 1950s to import grain, and has since been unable, except for a few very good years, to bring her production into line with requirements? How has this come about? . . . Who wanted things to be this way, who planned it, where is the document? . . . The sad reality is that there is no such plan, and there never has been one. There is no document which ever indicated a change in the structure of crop farming at the expense of grain; we would search in vain for a document which had prescribed a switch over to grain imports as an ultimate aim.<sup>1</sup>

It is noteworthy that Hungary also suffered from shortages of feed grain. Corn plays an important role in livestock feed. Production of corn during 1950-1953 was about 25% below pre-war levels.<sup>2</sup> The output of potatoes--another important livestock feed--was down by a third. These, and other, shortages affected livestock breeding. Poultry numbers, cows, horses and sheep were all substantially below pre-war levels.<sup>3</sup>

The decline in output resulted from both reduced sown area and lower yields. The reduction in crop area may be attributed to lack of incentives to cultivate the land and/or labor shortages. But, in any case, there is no evidence that it was planned by the authorities. The decline in yields resulted from shortages of equipment, fertilizers and forced

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<sup>1</sup>Vajda, The Second Five-Year Plan in Hungary, p. 63.

<sup>2</sup>U.S. Department of Agriculture, Agricultural Statistics of Eastern Europe and the Soviet Union 1950-1966, p. 50.

<sup>3</sup>Ibid., pp. 84-88.

collectivization.<sup>1</sup> Professor I. Vajda summarized it well when he stated that:

The trouble was that the decrease in sowing area was not accompanied by a growth in yields per unit, that not enough was done by far to achieve it. . . . The problem of Hungarian grain production arises from the one-sided shrinkage in sowing area, while average yields stagnated and in certain years declined. . . . Nobody wanted to import grain . . . we were unavoidably swept into doing it.<sup>2</sup>

Rising Food Prices.--Hungary, as most East European countries during the early 1950s, experienced strong inflationary pressures mainly as a result of food shortages. Prices of foodstuffs between 1949 and 1953 more than doubled--to be exact they rose 119% (Table II-2). This very sharp upward trend, over such a short time interval, reflected mainly the great scarcity of food. The rise clearly suggests that food supplies did not expand sufficiently fast to meet demand. Indeed the situation was so severe that the authorities were forced to ration many food items.

### Agricultural Policy

The farm policy of the government was the prime cause behind the stagnation of agriculture. The collectivization campaign of 1949-1953, the policy against the kulak, forced deliveries, shortages of industrial goods--all contributed to the poor performance of agriculture.

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<sup>1</sup>More on these subjects in a subsequent section.

<sup>2</sup>Vajda, The Second Five-Year Plan in Hungary, pp. 63-64.

Collectivization Drive.--As was mentioned in the previous chapter, soon after the Communist takeover the authorities decided to collectivize agriculture. Hungarian peasants, however, refused to join voluntarily. They entered the cooperatives only under the strongest pressure. For example, peasants who refused to join voluntarily were repeatedly harassed; their children expelled from schools; their taxes raised so heavily that they could not meet their payments.<sup>1</sup> Despite these pressures only a quarter of the total arable land was under collective management in 1952, the peak of the first collectivization drive (Table II-3). The share of the active collective farm members in the farm labor force was even smaller; it amounted to less than one-fifth of the total. Collectivization of the countryside failed. The policy makers underestimated the resistance of the peasants to this movement. Today the officials themselves admit that the government's misguided collectivization policy "did not produce the expected results."<sup>2</sup> Not only that the newly created farms failed but the entire campaign had a negative effect on farm production, since the individual peasant

could never be sure when a new campaign would compel him to join a collective farm. In view of this uncertainty the farmer was reluctant to

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<sup>1</sup> Andor Heller, No More Comrades (Chicago: Henry Regency Press, 1957), pp. 109-10.

<sup>2</sup> Hungarian Central Statistical Office, Statistical Pocket Book of Hungary 1970 (Budapest: 1970), p. 13.

enlarge his productive activity. The peasant was especially unwilling to undertake investment, since he was afraid that their benefits would not be reaped by himself.<sup>1</sup>

It is probably true that the Hungarian peasant responded to the government's efforts to socialize the countryside by withholding what could not be taken by force--his will to work, his knowhow and his ingenuity.<sup>2</sup>

Policy Against the Kulaks.--The policy against the so-called kulaks (peasants who owned more than 14 ha. of land) had also a negative effect on production, since these peasants were the most industrious, capable and experienced. Many peasants with land holdings of less than 14 ha. were also branded as kulaks. The kulaks were blamed for "capitalist mentality" retarding the progress toward the socialization of the countryside.<sup>3</sup> It was generally a crime to work for, or have a contact with, a kulak.

Compulsory Deliveries and Consumer Goods Shortages.--Following the Soviet model the authorities also forced the peasants to hand over to the state a considerable share of their produce at artificially low prices. At the same time the central planners curtailed severely the production of industrial consumer goods. Both of these "programs" reduced the incentive and the profitability of producing surplus food.

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<sup>1</sup>Bela A. Balassa, The Hungarian Experience in Economic Planning (New Haven: Yale University Press, 1959), p. 251.

<sup>2</sup>Heller, No More Comrades, p. 111.

<sup>3</sup>Helmreich, Hungary, p. 241.

Investment.--An additional cause for agriculture's plight was the small share it received in total fixed state investment--11.6% compared with industry's 44% (Table II-4). Investment in agriculture was assigned the lowest priority; the authorities neglected to provide agriculture with sufficient machinery and fertilizers. A United Nations study notes that:

Optimistic estimates of agricultural production were written into plans; but the priority given to industrial expansion precluded inputs of equipment, fertilizers, etc.<sup>1</sup>

Most of the investment that took place occurred in the socialized sector of agriculture. Individual peasants were not expanding their farms, and for good reasons: (a) farm machinery was largely unavailable for the private sector;<sup>2</sup> and (b) the uncertainty of the future, with respect to the collectivization of agriculture, would have discouraged them in any case. It has been suggested that the authorities faced a dilemma. On the one hand they wanted to support private farms in order to stimulate lagging output, but, on the other hand, they planned to socialize agriculture and had no desire to make private farms profitable. In other words

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<sup>1</sup>Secretariat of the Economic Commission for Europe, United Nations, Some Factors in Economic Growth in Europe During the 1950s (Geneva: 1964), Chapter VI, p. 34.

<sup>2</sup>Hungary, Statisztikai Idoszaki Kozlemenyek, No. 1 (1957), p. 69.

within this perspective, it was logical to abstain from measures which could have made private farms more viable.<sup>1</sup>

In short, the main cause of agriculture's difficulties was

the bitter and determined opposition of the peasantry to the government's agrarian policies, expressed either directly, in resistance to collectivization and defiance of regulations concerning cropping and deliveries, or indirectly, in negative reaction to the lack of incentives inherent in the regime's policy. Both production and marketing have been depressed by the regimes social goal, which dictated discrimination against the most productive elements in the countryside.<sup>2</sup>

#### The Possibility of Surplus Labor Examined

Having discussed the exodus of labor from agriculture, the behavior of farm output and the regime's agrarian policies, we turn now to investigate whether surplus labor existed in agriculture. The available evidence falls into two categories:

- (1) the effects on agricultural output of the withdrawal of farm workers; and
- (2) studies comparing manpower requirements with the available supply.

(1) During 1949-1953 the withdrawal of labor accompanied the fall in output. This would suggest that there was no surplus labor. We hasten to add, however, two qualifications

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<sup>1</sup>United Nations, Economic Commission for Europe, Economic Survey of Europe in 1956 (Geneva: 1957), Chapter 1, p. 25.

<sup>2</sup>Helmreich, Hungary, p. 236.

to this conclusion. First, the decline in output was only marginal (except in 1953) when the decline in labor input was substantial. This would indicate the existence of some surplus labor. Second, as labor was withdrawn, economic conditions in agriculture changed, for example, agriculture was partially collectivized. The government's collectivization campaign could have caused decreases in output independent of any changes in the farm work force. It is also possible that those who remained on the farms may have decided to work less and depress output even though they could have produced the original output. Because of these considerations the above evidence is not conclusive, nevertheless, it suggests, in our opinion, that at best there was only a small amount of surplus, but probably none.

(2) In a detailed study of agricultural manpower requirements, made in connection with the Second Five-Year Plan (1961-1965), two leading Hungarian economists noted that during the 1958 harvesting season agriculture required 2.175 million workers given the then state of farm technology (Table IV-2). Manpower needs during the harvesting season of 1949 should have been at least as much, but probably more, because agriculture was considerably less mechanized in 1949. Investments in agriculture between 1954 and 1958 increased considerably. For example, agriculture received more than 10,000 tractors in that period (Table II-6). Consequently, with less mechanization in the early 1950s, manpower

requirements were probably more than 2.175 million workers. The available supply of labor was close to 2.19 million, barely sufficient to meet the requirements. Since the supply of labor continued to decline in the early 1950s, probably some labor shortages developed.

### Further Evidence on Labor Shortage

A study by a Hungarian manpower analyst supports our findings. Mr. György Pogany claims that out migration in 1952 was so great that

a considerable manpower shortage was felt in agriculture and an important part of arable land remained uncultivated.<sup>1</sup>

A United Nations study points out that between July 1953 and April 1954, 60,000 workers returned to agriculture which

put an end to the worsening of sex and age structure; but labor shortages in collective and state farms continued to be felt. State farms had no special difficulties in finding permanent labour if they had living accommodations to offer (which was not always the case); but they were unable to compete for seasonal workers with other sectors of agriculture and with industry.<sup>2</sup>

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<sup>1</sup>Cited in U.S. Dept. of Commerce, The Labor Force of Hungary, Int'l. Pop. Stat. Report Series, P-90, No. 18, p. 12.

<sup>2</sup>Economic Commission for Europe, Economic Survey of Europe in 1957 (Geneva: 1958), Chapter VII, p. 25. Speaking to a former official of a state farm, I was told that his farm, and other state farms, experienced labor shortages in the early 1950s, particularly during the peak season. For example, they hired labor in early spring for the busy season from as far away as 200 miles. But when the harvesting season arrived the workers did not show up; they found jobs closer to their location.

In another context this same study notes that:

In Poland, Hungary and possibly also Rumania the problem is rather one of peak time shortages in some regions and in the socialist sectors, co-existing with surpluses elsewhere.<sup>1</sup>

In our judgment, the evidence strongly suggests that there was no surplus labor in agriculture. Indeed we suspect that agriculture, during this period, suffered from a labor shortage instead of labor surplus. Let us now place this conclusion into a broader perspective.

### Concluding Remarks

The overall economic policy of the state called for the transformation of agriculture into large farms with the main objectives being: (a) the release of manpower for non-agricultural employment, (b) raising agricultural productivity, and (c) getting hold of surplus food for the city dwellers.<sup>2</sup>

The 1949-1953 collectivization campaign "achieved" its first objective; it pushed out of agriculture thousands of peasants. The authorities, however, planned that this transfer of manpower would take place along with an increase in farm output. The first Five-Year Plan (1950-1954) that called for the exodus of hundreds of thousands of peasants also projected a rise in gross farm output of 42% to 54%.

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<sup>1</sup>Economic Commission for Europe, Economic Survey of Europe in 1957, p. 25.

<sup>2</sup>The First Five-Year Plan of the Hungarian People's Republic (Budapest: 1950).

depending on which version of the plan is considered.<sup>1</sup> Essentially the policy makers counted on two things:

- (a) the existence of surplus labor, and/or
- (b) rising productivity.

We noted already that there was no excess labor in agriculture. Productivity was also stagnant. Indeed there is little reason why it should have risen. Agriculture was, after all, the neglected area in the growth strategy. It received only 11.6% of all fixed investments (Table II-4). The bulk of this investment went to the socialized sector of agriculture; nothing was allocated to land improvement (Table II-5). The only significant increase in farm machinery was in grain combines; the stock of tractors increased only marginally (Table II-6). Most of the peasants, however, remained independent and they were plagued with capital shortages.

An authoritative study claims that despite the attempts to collectivize agriculture, the bulk of the food was produced on tiny, inefficient and neglected holdings.<sup>2</sup> The study further notes that the land was neglected by the peasants and its quality deteriorated.<sup>3</sup> On the one hand the government forced many peasants into collectives but failed to provide them with an adequate supply of inputs, e.g.,

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<sup>1</sup>United Nations, Some Factors in Economic Growth, Chapter VI, p. 34.

<sup>2</sup>Hungary, Kozponti Statisztikai Hivatal, Adatok es Adalekok a Nepgazdasag fejlodesenek Tanulmanyazasahoz, 1949-1955 (Budapest: 1957), p. 158.

<sup>3</sup>Ibid.

machinery, fertilizers, credit. On the other hand, the remaining private peasants were not interested in enlarging the efficiency of their farms.

The main difficulty seems to have been the policy makers' improper diagnosis of manpower conditions in agriculture. They thought that there was surplus labor in agriculture and that Stalin's solution was appropriate. By 1953 they painfully discovered, however, that they were wrong. In the middle of that year collectivization was halted, migration back to the farm encouraged and other concessions were given to the peasantry.<sup>1</sup> Let us turn now to the employment opportunities side of the picture.

### Employment Opportunities

#### National Income and Capital Accumulation Trends

The basic factor underlying Hungary's economic development during 1949-1953 was the government's determination to industrialize the economy as rapidly as possible. To attain this goal the regime undertook a total effort to mobilize all of its capital and labor resources.

Net Material Product measured at constant prices, increased 57%, i. e., at a compound rate of 12% per annum (Table II-7). It is generally believed that because of political considerations the authorities exaggerated the actual

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<sup>1</sup>More on this in the next chapter.

increase in output. Professor B. Balassa measured a 40% increase in net material product.<sup>1</sup>

The authorities were also pressing very hard to accumulate capital. Net fixed investment averaged 23% of net material product.<sup>2</sup> Capital accumulation, i.e., additions to the economy's means of production inclusive of fixed and working assets, more than doubled. There was also a considerable increase in additions to fixed capital. Even if the official exaggerated claims are deflated it is unquestionable that during 1949-1953 there were sharp increases in both net material product and investment.

#### Employment Trends

In view of the above developments, there is nothing surprising about the rapid rise of nonfarm employment. As indicated by the data in Table II-8, employment rose at an average annual rate of 6.7%. In absolute terms the increase amounted to 703,000 workers, of which 393,000 were ex-peasants. To look at it differently, about 56% of the additional workers in the nonfarm sector were migrants. The over-all rate of economic growth was so high that it provided sufficient jobs to absorb both the new entrants and the migrants. Within five years the share of the nonfarm sector in the work force rose from 45% to 57%. This represents a significant

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<sup>1</sup>Balassa, The Hungarian Experience, p. 214.

<sup>2</sup>United Nations, Some Factors in Economic Growth, Chapter VI, p. 35.

achievement. All of the industry divisions in the nonfarm sector recorded employment increases, with most of the gains taking place in industry and construction sectors. We turn now to a brief review of developments in these two sectors.

### Industry

Massive capital expenditure by the state was the prime factor behind the creation of about 300,000 additional jobs. Gross Fixed Investment in constant forints rose by 114% between 1950 and 1953, far outpacing the growth in output and employment (Table II-9). Industry received by far the largest share of capital allocations--averaging 44% (Table II-4).

It should be noted that industry could have created more jobs. The fact of the matter is that the government was committed to industrialize the economy as rapidly as possible. It directed the bulk of its investment funds to heavy industry, which is known to require large amounts of investment but generates little increment in employment. For example, an investment of 472 million forints in a power plant created 1,303 jobs; an investment of 193 million forints in a machine building plant created 1,896 jobs. At the same time, 23 million forints invested in a new clothing plant created 1,831 additional jobs.<sup>1</sup> The investment effort of the regime has concentrated on heavy industry, i.e., on

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<sup>1</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Evkonyv 1949/1955 (Budapest: 1957), pp. 49-50.

those branches of industry that were least likely to absorb large numbers of workers. A similar observation was made by Professor Balassa who wrote:

In general, in allocating investment funds among industries, the development of material-intensive branches were emphasized at the expense of labor-intensive sectors.<sup>1</sup>

It appears that because investment went mostly to the expansion of technologically intensive capital goods, the impact on employment was not as much as it otherwise might have been.

### Construction

Jobs in construction advanced at an annual rate of 28.4% (Table II-8). In fact, it was by far the fastest growing sector. This spectacularly rapid increase in the demand for labor resulted mainly from the intensive use of labor in this sector. Close examination of investment and employment data will bear out this assessment. In 1950, construction received 3.9% of fixed investments; by 1953 it was down to 2.6% (Table II-9). During the same time period its share in employment rose from 3.9% to 7%. Expressed alternatively, the growth in investment in relation to the increase in the labor supply was negligible; a 15% increase in investment compared with a 247% increase in employment.<sup>2</sup> There can be no doubt that the spectacular growth in labor

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<sup>1</sup>Balassa, The Hungarian Experience, p. 184.

<sup>2</sup>The investment data are for the period 1950-1953.

input was not matched by a corresponding increase in investment. The absorption of such a huge increase in manpower, without an adequate increase in investment reflected the increased labor intensity of production, and it was at the expense of future gains in employment. (See Table II-8 for the period 1953-1956.)

It would have been desirable to know what percentage of the workers were ex-peasants. Data on this are not available. The bulk of them, however, consisted of transferred manpower. The reason for this is that construction at the time was not mechanized and thus required mostly unskilled labor. A Hungarian manpower analyst notes that the migrating peasants during 1951 and 1952 went mostly to industry and construction.<sup>1</sup> Indeed, it has also been noted that "the comparatively low level of earnings in this sector [construction] in Hungary in the early 1950's would seem to stem partly from a significant intake of unskilled labor as investment activity expanded rapidly."<sup>2</sup>

### Investment Policy

There is one additional interesting aspect of the government's over-all investment policy that is worth exploring since it bears directly on our inquiry. It was noted in

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<sup>1</sup>Palfai Istvan, "A mezogazdasag Munkaerohelyzete," Statisztikai Szemle (Statistical Review), February 1963, p. 117.

<sup>2</sup>Secretariat of the Economic Commission for Europe, United Nations, Incomes in Postwar Europe: A Study of Policies, Growth and Distribution (Geneva: 1967), Chapter VIII, p. 27.

a leading Hungarian journal that the government favored expenditures on new investments at the expense of delayed retirement of old ones; i.e., it emphasized the expansion of capacity rather than the modernization of equipment. The article notes:

During the first five year plan the exchange of obsolete machines was hindered by the fact that the emphasis was then primarily on the establishment of new plants, while the so-called simple reproduction and modernization of fixed goods was neglected.<sup>1</sup>

This kind of investment policy, in contrast to the one noted above with respect to heavy industry, had beneficial effects on the rate of growth of nonfarm employment. Emphasizing the expansion of new equipment permitted a larger increase in employment than there otherwise would have been. We are doubtful, though, that this policy was instituted because of its beneficial effects in absorbing extra manpower. We rather suspect that the goal was to squeeze out as much output as possible from the existing old, and less productive, equipment.

The main conclusion that emerges is that the industrialization efforts of the government rapidly expanded job opportunities. Without the increase in nonfarm jobs the exodus would have been impossible. The following section discusses why the peasants responded to these job openings.

### Income Differentials

#### Conceptual and Statistical Problems

Proper comparisons of real earnings between farm and nonfarm workers are known to involve a number of conceptual

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<sup>1</sup>Laszlo Galla, "Some Problems of the Economy of Fixed Goods," Kozgazdasági Szemle, No. 2 (1960), p. 259.

and statistical problems. Hence a few comments on the comparability of the figures presented in Tables II-10 and II-11 are in order.

First, our comparison is between the real consumption per worker in agriculture with real wages of wage earners. Two things should be made explicit. First, the term "consumption" is used here to mean "real income per farm worker plus or minus changes in stocks." Thus this measure includes in addition to the value of the produce consumed on the farm, income derived from both nonfarm and farm work. It reflects also the average product per farm worker. Second, the "real consumption" measure, used in Tables II-10 and II-11, was obtained by dividing "total real income plus/minus changes in stocks" by the active farm labor force.

Second, in order to facilitate the comparison, our wage series refer to wages of manual workers in the manufacturing (Table II-10) and construction (Table II-11) industries--officials' salaries are excluded. We selected these two industries because the bulk of the able-bodied young men joined these two sectors. We would have liked to find wage series for unskilled laborers, but unfortunately data are not available. It is clear, though, that unskilled workers in both of the sectors earned less than what is presented in the tables, thus the majority of the migrants could not have realistically expected to earn those wage rates.<sup>1</sup>

Third, the workers' wage data do not include some additional non-wage benefits which they received but the

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<sup>1</sup>Note we ignore the risk of not finding a job in the city because in Hungary the probability of this was close to zero.

peasants did not. The wage earners and their eligible dependents were covered by social security, which was administered by the Council of Trade Unions.<sup>1</sup> The system covered all workers in plants, offices, institutions, agricultural cooperatives, state farms, machine tractor stations and university students; excluded were non trade union members, that is, largely independent peasants. In 1951 about 50% of the total population was covered by social insurance.<sup>2</sup> The workers received also sickness payments, clothing allowances and contributions to the cost of meals consumed on the job. The wage data do not reflect these incomes. These non-wage benefits amounted to about 15% of real personal income of workers.<sup>3</sup>

Fourth, the figures in Tables II-10 and II-11 exclude state rendered services in kind (e.g., education, health). These services, however, have gone preferentially to workers. An official government publication notes that:

The standard of living is also influenced by factors other than the income level. Workers who live mostly in towns have more favorable conditions as regards health and cultural supply, transport, public services, etc., than the rural population.<sup>4</sup>

Finally, needless to say, the workers' income data do not include other real income benefits of urban life, i.e., the psychic income of living in a city.

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<sup>1</sup>Helmreich, Hungary, pp. 342-43.

<sup>2</sup>Ibid.

<sup>3</sup>Balassa, The Hungarian Experience, p. 221.

<sup>4</sup>Hungary, Hungarian Central Statistical Office, Statistical Pocket Book of Hungary 1970 (Budapest: 1970), pp. 255-56.

To summarize, on the one hand the wage data underestimate the workers' standard of living; it excludes fringe benefits, psychic income and state rendered services in kind. On the other hand our wage data exaggerate the income that a would-be migrant could have expected to get, because they include the earnings of skilled laborers. Since the differentials were quite wide in Hungarian industry they probably offset the added income derived from fringe benefits. Consequently, on balance, the data in Tables II-10 and II-11 present a realistic picture of the income differential facing a would-be migrant.

Notwithstanding these imperfections in the data presented, they indicate that a surprisingly narrow differential existed (1949-1950) between real wages of farm workers and of unskilled industrial laborers. As can be seen from the tables, and from the evidence to be presented below, the peasants fared better in the distribution of income, in comparison with wage earners.<sup>1</sup> The gap facing a prospective migrant disappeared during 1951-1954 mainly because of the relatively steeper decline in the income and consumption of wage earners. The existence of such a narrow gap during 1949-1950, and the substantial equality thereafter, is unusual in light of the experience of other countries, e.g., China, Egypt, Japan, U.S.A. In these countries the differential was wider during their respective industrialization stage. Some of the reasons

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<sup>1</sup>The term 'wage earner' refers only to laborers in industry and construction unless otherwise stated.

for the general equality in wage rates are discussed below. Here it will suffice to state that this reinforces our earlier conclusion with respect to the lack of surplus labor in agriculture. Returns to human capital in farming were relatively high because labor was probably scarce.

### Wage Earners' Incomes

All the available evidence clearly points to the fact that real income and consumption of wage earners declined sharply between 1949 and 1953. It has been said that a noticeable deterioration in the quality of goods took place during these years. A report by the Central Bureau of Statistics has estimated the extent of the quality deterioration.<sup>1</sup> Using then the modified price index real wages appear to have declined by about 20-25%, and real incomes somewhat less.<sup>2</sup> The smaller decline in real per capita income has been attributed to the fact that as real wages deteriorated, additional members of the family entered the labor force, thereby lessening the effect on per capita income. It is interesting to note the relatively sharper decline of wages in the construction industry mainly because of the large influx of unskilled peasants. Construction workers in Hungary earned less than industrial workers. In all countries of Eastern

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<sup>1</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyek, No. 1, p. 70.

<sup>2</sup>These are the estimates that are generally accepted in the literature. See, United Nations, Incomes, Chapter VII, p. 44; Balassa, The Hungarian Experience, pp. 221-23.

Europe (except East Germany) construction workers, at that time, earned between 6 to 18% more than industrial workers.<sup>1</sup> Let us examine more closely what brought about the decline in real wage rates.

### Wage Policy

We had occasion to note in the previous section the state's vigorous industrialization drive during this period. This ambitious policy required massive investments. This, in turn, called for large savings; i.e., keeping consumption levels down. Thus the authorities intentionally depressed the real incomes of the urban population. They purposely lowered consumption levels in order to release resources for the production of capital goods; the income policy of the government was dictated by its accumulation policy. The regime accomplished its objectives by systematically raising working norms. For example, norms

were readjusted July 31, 1950 on the basis of work performed in April 1950, when work contests set a record performance commemorating the "liberation" of Hungary.<sup>2</sup>

Norms were raised again in mid-1952. Indeed the officials themselves admitted that as a result of their actions there "will be a slight and temporary drop in wages."<sup>3</sup>

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<sup>1</sup>United Nations, Incomes, Chapter VIII, p. 29.

<sup>2</sup>Helmreich, Hungary, p. 278.

<sup>3</sup>Ibid.

### Collectivization--Revisited

Collectivization of the countryside helped the regime to push real wages down, by making the number of peasants willing to work, at existing wage rate differentials, greater than demand. It has already been stated that the average Hungarian peasant was, by and large, against the collectivization of agriculture. He refused to join voluntarily--he was reluctant to give up his land and freedom. The wrongful policies of the government introduced a general fear and uncertainty into the daily lives of the peasants.<sup>1</sup> It looked, at the time, as if individual farming would soon cease to exist. Evidence, indicative of the general pessimism that prevailed during 1950-1952 is given by the fact that the peasants largely refrained from expanding their farms, and/or investing in machinery and equipment.<sup>2</sup> It may be more than a coincidence that during 1949-1953, net outflow reached its peak in 1952 which was also the year when collectivization pressures reached their peak.<sup>3</sup> And this, though the relation between peasants' and workers' incomes was never so favorable as in that year (Tables II-10 and II-11).

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<sup>1</sup>Saghy Vilmos, "A mezogazdasági termeles és felvásárlás fejlődése és jelenlegi helyzete," Közgazdasági Szemle (1960), p. 910.

<sup>2</sup>Hungary, Statisztikai Idoszaki Közlemenyek, No. 1 (1957), p. 68.

<sup>3</sup>During the second collectivization drive, 1959-1961, similar phenomena took place, as we shall point out when we take up that period.

Both the immediate and long-term effects of these developments were to encourage out migration. It has been said that the

peasants haunted by the name of kulak, and broken by fear, offered their possessions to the State and went to work in factories or mines to try to escape persecution.<sup>1</sup>

### Peasantry's Income

Looking at Tables II-12 and II-13, it becomes apparent that both income and consumption have undergone sharp fluctuations. Income rose during 1949-1951, dropped abruptly in 1952, and recovered during 1953. With the exception of 1953, consumption followed the same pattern.

Owing to larger receipts from farm marketings--reflecting mostly the sharply higher prices--farm income rose during 1949-1951 (Tables II-12 through II-14). The continued decline in the number of farmers, and the rise in net output in 1951 (associated with excellent weather conditions) also contributed to the rise in per capita farm income. Inasmuch as the prices paid by the peasants for the goods and services purchased increased less, the terms of trade moved in their favor (Table II-15).

Now, it may appear strange that in 1951, in a year of rising output, prices should also rise. Two explanations will be offered. First, it should be remembered that we deal here with a command economy. Indeed, in a closed capitalist

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<sup>1</sup>Heller, No More Comrades, p. 111.

economy unusually good crops would likely lead to lower farm income because of the inelasticity of demand for farm produce. But in a planned economy this should not be expected as the following quotation makes clear:

As a rule, trends in output and in prices are inversely correlated in a truly competitive market--diminished supply pushing prices up and increased supply forcing them down. However, for the bulk of agricultural output in the planned economies there is no such built-in equilibrating mechanism. Indeed, the compulsory quota system of deliveries . . . tends to produce an opposite effect.<sup>1</sup>

Second, despite the rising output the peasants were reluctant to part with their produce. As can be seen from Table II-13, they increased dramatically their on-the-farm consumption. The need to get hold of additional food reached such proportions that various state agencies were competing against each other in order to obtain the food. The rise in contractual and free procurement prices was attributed in part to this fact.<sup>2</sup> The rise in the free market prices reflected: (a) the limited supplies the peasants were bringing to the market, and (b) the inadequate supply of food delivered to the towns by the authorities.<sup>3</sup> (More on this subject in the final section of this chapter.)

In 1952 the peasantry endured a major setback. Farm output fell sharply as a result of a disastrous harvest and

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<sup>1</sup>United Nations, Incomes, Chapter VII, p. 50.

<sup>2</sup>Ferenc Vagi, "Paraszti Termeles es Realjovedelem Alakulasa," Kozgazdasagi Szemle, No. 3 (1958), pp. 251-52.

<sup>3</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyekek, 1957, No. 1, p. 29.

probably due to the intensification of the collectivization drive. A sharp decline in their income followed. The decline in consumption, however, was only moderate since the peasants were able to use up a large part of their accumulated reserves (Table II-12, Column 3). In the following year the situation reversed itself. The peasants' income rose, but their consumption declined, since they were replenishing their diminished stocks.

Thus, it is fairly clear that the peasants managed to mitigate their plight during 1952 by "eating up" a large part of their inventory. We may note, in passing, that although net money income from farming fell by about 25%, consumption declined by 10% and own-consumption by only about 5% (Table II-13). It shows the ability of the farmers to resist the fall in their income. Furthermore, own-consumption on a per capita basis was above the 1949 level despite the fact that output and income were below it.

The conclusion that emerges from the above discussion is that during 1949-1951 the peasants' income was rising. Considering, however, the deterioration in the quality of goods they purchased, the rise was probably small. We should bear in mind that the income of wage earners was steadily declining; thus, in relative terms, the peasants were better off.

The above discussion also throws some light on the not surprising development (in view of the Soviet experience) that during the industrialization drive the peasants fared better. Probably it was not the intention of the government

to help the peasants at the expense of the urban population. The development rather reflected the difficulties the authorities had in getting hold of the necessary food supplies in a very incompletely collectivized agriculture.

#### The Role of "Short-Run Transitory Gains"

The analysis to this point would seem to indicate that outmigration took place despite the fact that the expected wage in the factories and on the construction projects was approximately the same as on the farms.<sup>1</sup> What explains, then, the fact that industry and construction were able to expand their labor force without encountering recruitment difficulties? To ask it differently, what motivated close to 400,000 peasants to leave their farms? Before we answer in terms of non-economic reasons, let us examine an economic one, i.e., let us examine the choice faced by a young unmarried would-be migrant.

As can be seen from Tables II-10 and II-11, columns (8) and (6) respectively, if a single person (male or female) had accepted an urban job he (or she) would have immediately improved his (or her) welfare substantially. Even if he had anticipated his long-run earnings in industry and agriculture to be the same, it would still have been rational for him to migrate because of the initial "short-run transitory gain"

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<sup>1</sup>Let us bear in mind that average urban earnings were higher than average rural earnings. According to official statistics per capita income in the towns was about 15% above rural per capita income.

which, of course, would also be, ipso facto, a long-run gain. Needless to say, if the costs of establishing himself in the city were relatively high and/or he planned an early marriage with children and/or forced to make substantial remittances, the net initial gain would have been small or none, and thus might not have been sufficient to induce him to migrate. Our main point is that even if our single person had a perfect foresight with respect to relative earnings, family responsibilities, remittances, it might have been still rational and worthwhile for him to migrate because of the expected net short-run gain. Young people do not have infinite time horizons; indeed, they probably have a high time preference. Consequently, we believe that many of them were lured by these "short-run transitory gains." It is conceivable that in some cases the young single would-be migrant might also have been "pushed out" by the head of the family. When the marginal product of this single person is less than the average product on the farm, it is in the interest of the head of the household to "dismiss" him.

In addition to the "collectivization-push" of agriculture which was discussed at some length before, there was probably another reason for outmigration, namely, the search for a new way of life. Probably some migrants were attracted

to the city, with its streets and lights, because it offered them a different and, in their eyes, a better way of life. Let us not forget, in this connection, the very poor conditions in the villages, many of which had no lights, roads, cinemas, etc. Thus moving into a city, or nearby, surely must have represented to many peasants an improvement. For one thing, the migrant in his new job did not have to work from dawn to dusk. For another, the job was steady (with no seasonal ups and downs) and so was the pay.

#### Methods of Food Transfer to the Nonagricultural Sector

The relevancy of these problems to our major theme is quite clear. A transfer of food must accompany a transfer of labor; the migrating workers had to be provided with at least the same quantity of food they used to consume on the farms. In short, the labor reallocation process requires that along with the outflow of labor, there should be an outflow of food. A practical method had to be found to siphon off the surplus food.

### Compulsory Deliveries

This "practical method" consisted of forcing the peasants to surrender part of their produce to the state at low delivery prices. Thus, the authorities introduced obligatory deliveries whereby the farmers were requested to give up a given quantity of their produce (crops, animals, animal products), based on the size and income of their farms. The peasants were forced to meet these obligations regardless of their own needs or their economic conditions.<sup>1</sup> That the government had no alternative but to resort to "confiscation" becomes apparent once we remember that (a) consumer goods were generally scarce, and (b) collectivization basically failed.

### Consumer Goods

The obvious device to get hold of the surplus food would have been to offer the peasants manufactured consumer goods at attractive prices. While this would not insure that they would consume less (i.e., surrender more), it would, nevertheless, have provided an important incentive to do so. The Hungarians, and for that matter all of the Communist states, have not relied much on this device. It was incompatible with the regime's over-all desire for rapid economic development. The period 1949 to 1953 witnessed a great shortage of consumer goods. Mr. Kovach Denes, in a detailed study of the peasantry's economic conditions, claims that the

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<sup>1</sup>Vilmos, "A mezogazdasagi termeles," p. 922.

peasants increased their own-consumption partially because of the shortages of manufactured goods.<sup>1</sup> Mr. F. Vagi, in his study, reaches the same conclusion.<sup>2</sup>

The over-all failure of the collectivization drive was already noted above. Despite the efforts to collectivize agriculture, it remained by and large in private hands. Given the scarcity of manufactured consumer goods, combined with the failure of collective farming, on the one hand, and the need to secure adequate food supplies for the towns, on the other, the government was forced to rely on compulsory deliveries.

How successful was the government in siphoning off the extra food from the peasants? Did the peasantry lower its food intake?

A conclusive answer to these questions cannot be given, because it requires a comparison of the existing conditions with the ones that would have existed without direct governmental intervention. Nevertheless, we have some data that throw light on this issue. Table II-16 shows only minor changes in procurement percentages between 1950 and 1953, with the exception of 1952. For a period when peasant population was falling, the percentage of the crops marketed remained virtually the same.

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<sup>1</sup>Kovach Denes, "Elelmiszerfogyasztás Magyarországon az 1950-1955 években," Közgazdasági Szemle, No. 1 (1958), p. 95.

<sup>2</sup>Vagi, "Paraszti Termeles," pp. 245, 250.

Before concluding, however, that the government's policy failed we have to examine whether livestock numbers were rising or falling since some of the crops listed in the table were also fodder crops. If the stock of cattle was rising we could have expected procurement to fall. But this was not the case. As we noted before, livestock numbers between 1950 and 1953 fell; the number of cows, swine, horses and poultry declined.

#### Summary and Conclusions

The flight of the peasants from agriculture between 1949 and 1953 can be explained in terms of "employment pull" of the nonfarm sector, and the "collectivization push" of the farm sector. The rapid economic growth, combined with the high rate of investment, opened up an increasing number of jobs. The availability of employment at higher wages, in the nonagricultural sector, served as an important incentive to leave agriculture. The migrants were probably motivated to leave their existing jobs by the differential in earnings. Indeed, a small reduction in the differential was not sufficient to halt out-migration; the gap remained considerable. Furthermore, they were "pressured" to migrate because of the unstable conditions in agriculture, i.e., collectivization of the countryside. Out-migration, during this period, resulted from the repulsion of agriculture, on the one hand, and increasing employment availabilities in the rest of the economy, on the other.

## CHAPTER III

1954-1956

### Shortages of Nonfarm Jobs

#### Introduction

As indicated in Chapter I, out-migration ceased during 1954-1956; indeed, a "back to farm" movement took place. Not only did agriculture absorb its natural increase of 80,000 persons, but in addition 42,000 returned to farming. Thus, farm employment increased by a total of 122,000 persons. Our main objective in this chapter is to account for this trend reversal. The first section suggests that the return was induced, in part, by the lack of sufficient growth in industrial jobs to provide employment for the rising population. The second section takes up the question of income differentials. The final section assesses the role that agriculture might have played in motivating the peasants to re-enter farming.

#### Economic Slowdown

The period 1954-1956 can best be characterized as a period of a general slowdown. There was a marked slowdown in the rate of expansion of net material product, accumulation of capital, employment, industrial output and in other important economic indicators. Consumption was the only

variable that registered a sharp advance. What are the reasons behind the sluggishness of the economy? As usual, there are a number of reasons.

The achievements of the economy during 1949-1953 were not without costs. The intensive industrialization drive severely strained the economy's capacity to produce. The excessive rate of expansion manifested itself in terms of sharply rising prices, poor performance of agriculture, foreign trade difficulties, and declining living levels. Indeed, by 1953 the architects of the five-year plan (1950-1954), Messrs. Rakosi and Gero, admitted openly their mistaken policies.

We committed a fault first of all by changing over to an excessively fast development of our heavy industry and producer goods industries and by often neglecting in our planning the material resources and realistic possibilities of our country. But the most important of our faults was committed when, in February 1951, the industrial targets of our plans were raised by us to much too high levels.<sup>1</sup>

By 1953 the policies of the regime "strained the capacity of the national economy to breaking point."<sup>2</sup>

In mid-1953 a new government, headed by Mr. Imre Nagy, took office. The new regime recognized the wrong policies of the previous administration and attempted to rectify them. It called for a more balanced development of the economy, the production of more consumer goods, relaxation in the drive

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<sup>1</sup>As quoted by Balassa, The Hungarian Experience, p. 32.

<sup>2</sup>Central Statistical Office, Hungary Today 1965, p. 22.

to collectivize agriculture and a rise in the standard of living.<sup>1</sup>

The policies of the Nagy government ran into difficulties soon after their inauguration. By the spring of 1955, with the downfall of Malenkov in the U.S.S.R., the old leadership regained its full power, and the return of the old policies was under way. An excellent summary of the events and their significance is given by an official publication.

In 1953-1954 an attempt was made to change the existing situation, that is, to rectify the errors. Some improvement did in fact follow but the economic measures taken were not well considered or carefully prepared. A radical improvement in the political situation was made impossible by the inability, and downright refusal, of the old leadership, which had remained in power, to make a clean break with their earlier wrong policies. This meant that the corrective measures failed to achieve their aim and instead of further attempts being made to explore other methods, the trend towards reform was reversed and a return to the old political course began.<sup>2</sup>

### Shortages of Raw Materials

Another related factor that limited the expansion of employment was the existence of an acute shortage of raw materials.<sup>3</sup> These shortages were widespread and evident in most sectors of the economy.<sup>4</sup> The scarcity of raw material

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<sup>1</sup>Imre Nagy, On the activity of the government in the past six months and the tasks for 1954, Speech of the Chairman of the Council of Ministers of the Hungarian People's Republic (January 23, 1954), in English.

<sup>2</sup>Central Statistical Office, Hungary Today 1965, p. 22.

<sup>3</sup>United Nations, Some Factors in Economic Growth, Chapter VI, p. 35.

<sup>4</sup>Janos Kornai, Overcentralization in Economic Administration (Oxford University Press, 1959), pp. 175, 181-82.

supplies forced the enterprises to operate below their capacity which, in turn, limited the growth in their demand for labor. The shortages were a natural outcome of the regime's ambitious industrialization drive in general, and of the planners' emphasis on the development of heavy industry in particular. To carry on industrial production on the unprecedented scale of the early 1950s required large amounts of fuel and raw materials which were unavailable in sufficient quantities. Neither could Hungary afford to import enough fuel and raw materials because exports were lagging. The poor performance of agriculture has aggravated this problem, as the remark by Mr. J. Kornai makes clear.

Along with the mistakes made with industrialization policies, the state of agriculture has been an important additional factor in the production of shortages. . . . This lagging behind of agriculture has been a major cause of the appearance, from time to time, of shortages of foodstuffs and of industrial materials derived from agriculture.<sup>1</sup>

The difficulties that Hungary experienced in terms of its foreign trade were both the cause and the result of these shortages. As is known, Hungary depends heavily on imports of raw materials, but the above author notes:

Our capacity to import has been very disadvantageously affected by the well-known fact that we have become debtors on foreign account in recent years.<sup>2</sup>

### Investment

Passing from the faults of the previous period to the actual policies of 1954, a major contributing factor to the

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<sup>1</sup>Kornai, Overcentralization in Economic Administration, pp. 181-82.

<sup>2</sup>Ibid., p. 182.

economic slowdown was the sharp reduction in capital spending. As can be seen from Table II-9, gross fixed investment in the socialist sector was drastically cut in 1954 and was kept at approximately those relatively low levels throughout 1955-1956. On the average, the volume of fixed investment during 1954-1956 was down by 18% in comparison with the period 1950-1953. The sharpest cutback took place in the building and construction sector where investment declined from a yearly average of 671.5 million forints (1950-1953) to 239 million forints during 1954-1956, i.e., a 66% reduction.

The reasons for these drastic cutbacks were both the inability and unwillingness of the regime to continue their pressure on the population in order to squeeze out the necessary savings. Between 1949 and 1953 Hungary saved a large portion of its income; net fixed investment reached about 23% of net material product. This high rate of investment was maintained at the expense of consumption. One of the main goals of the Imre Nagy government was to raise living standards, allowing consumption levels to rise at the expense of investment. It has been noted that during 1954-1957 net fixed investment ratio was down to 15%.<sup>1</sup> Hence, during this period we see a reversed situation--consumption rising, investment falling.

### Employment

The incidence of these developments on employment is not surprising. The slackening of economic activity resulted

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<sup>1</sup>United Nations, Some Factors in Economic Growth in Europe During the 1950's, Chapter VI, p. 35.

in a lag in the demand for labor, as reflected by the small rise in employment (Table II-8). The decline in the rate of expansion of nonfarm employment is more striking. In contrast with 1949-1953, when nonfarm employment expanded at an average annual rate of 6.7%, nonfarm employment in the current period rose at an average rate of .4%. Employment advances in industry leveled off approximately in the same order of magnitude. The contrast between the two periods is sharpest, however, in the case of the construction sector, where in the early period employment expanded at an average rate of 28% while in this period it declined at a rate of 5%. This should come as no surprise since we have seen that it was also the sector that experienced the largest cutback in its own investment. Thus, with the investment program drastically cut, there was less demand for labor. Consequently, the sector was unable to provide jobs. Indeed, it was unable to retain its previous labor force.

Let us examine briefly developments in the trade sector of the economy since they throw additional light on our claim that capital formation played a crucial role in the opening up of employment opportunities. As can be seen from Table II-8, the trade sector was the slowest growing sector during 1949-1953, and the fastest growing during 1954-1956. In fact, during the latter period the rate of expansion of employment was more than twice as rapid as during the earlier period, and way above the nonfarm average. There are three reasons for these phenomena. First, the expansion of sales of consumers' goods required more labor; the sharp increase in retail

sales called for additional manpower. Second, fixed investment in the sector was rising at a time when it was falling for all nonfarm branches of the economy (Table II-9). As can be seen from the Table, the sector received larger and larger shares of total investment. Third, the relative scarcity of industrial jobs may have led to "overcrowding" in the sector. Note also that in 1950 monthly average earnings of employees in the trade sector were 7% below earnings in industry; by 1955 it was down to 18% (Table III-1). Thus, it would seem that the workers were "attracted" to the sector by the shortages of job openings elsewhere rather than by rising relative incomes.

To further support our claim that investment was a key determinant of the growth of nonfarm employment we have correlated changes in investment with changes in the nonfarm labor force (Table III-2). The results confirm our assertion. The coefficient of correlation,  $r$ , is equal to 0.54, and is significantly different from zero at 98% level of confidence.

### Income Differentials

#### Introduction

Any attempt to explain the "trend reversal" would not be complete without a reference to earnings differentials. One might suspect, at least on an a priori basis, that the back-to-the-farm movement was motivated by a relative improvement in farm living conditions. Our objective in this

section is to ascertain whether such a narrowing of differentials took place.

The evidence points to the fact that no significant improvement in the peasantry's relative living conditions had occurred. Quite the contrary. As indicated in Table III-3, workers' income per capita rose substantially faster than the peasants'. The rise in the workers' earnings was sufficiently rapid to recover their earlier losses and restore, approximately, the 1950 relative positions. Let us turn now to examine the trends somewhat closer.

#### Peasantry's Income

The rise in the farmers' real earnings resulted mainly from (a) favorable price developments and (b) increases from off-farm employment.

As shown in Table III-4, a dramatic increase in procurement prices for farm produce occurred during 1953-1956. Average prices paid by the state for produce purchased almost doubled. The rise in the prices of products sold by private farmers, excluding interfarm sales, was considerably less (35%). Given that the prices paid by the peasants declined somewhat, the terms of trade widened significantly in their favor (Table II-). The result of these actions was a rise in the per capita real income of the peasantry. Indeed, with such an improvement in the price ratios we would have anticipated a larger impact on after-tax earnings. This, however, has not occurred mainly because the tax burdens of the farms were rising and because of a significant increase in the peasant population due to the return of migrants. We should

remember that quota deliveries were still in existence (their prices increased the least) and having met their own demand, not much was left for sale to the state or on peasant markets.

The gain in per capita income also reflected the increased role played by "wage income," i.e., income derived from off-farm employment. As can be seen from Table II-12 and II-13, such income rose rapidly and added to the rise in per capita earnings.

A comment on the divergence between the rise in income and consumption is called for. The 30% rise in the latter (Table III-3) exaggerates the actual improvement in living standards for at least two reasons. First, in 1953, our base year, consumption was depressed because the peasants were replacing the stocks used up during 1952 (Table II-12). Note that per capita increase in inventories was 840 forint, the largest increase between 1949 and 1957. Second, in 1956, our terminal year, the peasants raised their consumption momentarily at the expense of additions to their stocks.

#### Wage Earners' Income

Table III-3 shows that starting with 1953 a significant improvement in wage earning populations' income took place. The rise in real wages amounted to 35%, a very sharp increase indeed. This rise in real wages is somewhat surprising in view of the labor market conditions in the nonfarm sector. Thus the question we have to answer is, why did real wages rise during a period when nonfarm jobs were relatively scarce?

A Paradox and its Solution.--It is relatively a simple matter to resolve this paradox. We have to remember only that we deal here with a planned economy where wage increases (or decreases) do not necessarily signal labor scarcity. Wage determination was largely a matter of administrative decision. The new regime decided in mid-1953 to relax working norms and adjust wage rates upwards.<sup>1</sup> During the Rakosi era wages were pressed downward considerably and the central planners, fearful of an open revolt, wished to restore the urban population's living standards. The upward movement in real wages was brought about by a small reduction in prices of consumer goods (Table II-2), and a large increase in money earnings.

To look at it from a different angle, there is no evidence that the increase resulted from competitive bidding for labor by firms. There is no evidence that the increase resulted from industry's need to raise wages in order to keep its labor force.<sup>2</sup> Indeed, the enterprises were very limited, during these years, to manipulate wages. It has been noted that wage rates were centrally determined, and were identical, by and large, in all parts of the country.<sup>3</sup> Thus, in our

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<sup>1</sup>Helmreich, Hungary, p. 282.

<sup>2</sup>We should mention that a U.N. study attributes the rise in wage rate, especially in 1954, to a wage drift. No explanation is given as to why this might have occurred. United Nations, Incomes, Chapter VII, p. 43.

<sup>3</sup>Michael Gamarnikow, Economic Reforms in Eastern Europe (Wayne State University Press: Detroit 1968), p. 57.

judgement, it was the wage policy of the government that was largely responsible for the rise in the wage rates and not labor market conditions.

Insufficient Savings.--Needless to say, this policy slowed down the growth of the economy, since it curtailed the ability of the government to save and invest. As was mentioned before, the peasants were forced to sell a large share of their produce at artificially depressed prices. The state, in turn, resold the produce to the urban population at much higher prices. The difference, or the turnover tax, was used to finance investment projects. This has changed, however, during this period. On the one hand, in an effort to induce the peasants to produce more, the state increased the prices it paid to the peasants for the food purchased. On the other hand, in an effort to raise real incomes the state, in reselling the produce, had not charged higher prices--in fact food prices declined somewhat. The result must have been a decline in the turnover tax--and in the state's accumulation of funds. This then also explains the decline in investment activity.

One clear conclusion emerges from the above discussion, and that is: income differentials played no role in motivating the peasants to return and/or stay in agriculture. The move back seems not to have been in response to improved relative living conditions. If earnings had been a major factor moving labor back, we would have expected to find

relative incomes of the peasants improved. We have not found this, however, To be sure, there was an absolute increase in peasantry's income which might have been sufficient to motivate some homesick migrants to return to agriculture. This, of course, does not rule out the possibility that over-all socio-economic conditions improved, thus making agriculture a more attractive place to stay. We turn now to examine this possibility.

### New Agricultural Policy

#### Collectivization Drive

Mr. Imre Nagy, the new Prime Minister who came to power in 1953, introduced important changes in farm policy that were welcomed by the peasantry. First, and the most important from our point of view, was the collectivization policy. Having seen the failure of previous policies, the new regime halted forced collectivization. As a consequence of this decree, a sharp drop in membership in fact occurred (Table II-3). It stands to reason that this new "relaxed" approach to collectives contributed to the cessation of the exodus from the villages, since the "incentives" to migrate were not as strong. The peasant was not faced with the difficult choice of joining a collective or leaving agriculture. There appeared to be, perhaps, a new hope for the continuation of private farming. The confidence of the peasants was further encouraged by the relaxation of policies against the kulak, the "stopping of the expulsion of the medium and large peasants from the land."<sup>1</sup>

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<sup>1</sup>Balassa, The Hungarian Experience, p. 253.

These changes, however, were only of short duration. By 1955 voices were raised against the too lenient policy toward the kulaks and the rate of collectivization accelerated once again. By 1956 the peasants were forced back to collectives, and the government lost the good will of the rural population.

Thus, in our opinion, this new policy played, at best, only a minor role. The cessation of pressure during 1954 probably contributed to the trend reversal; the application of pressure, starting with 1955, could hardly have played a contributing role.

#### Procurement Changes

Second, the new Prime Minister modified the government's procurement and investment policies. Compulsory deliveries were consistently lowered from their high levels until October 1956, when they were abolished completely.<sup>1</sup> To obtain the nonfarm population's food requirements, the government relied more and more on contractual and free sales to the state. To give an additional incentive to part with the produce, prices of farm produce were increased. Thus, the peasants had an opportunity to sell a larger share of their produce at higher prices and earn larger incomes. As can be seen from Table II-9, investment allocations to agriculture during 1954-1955 also rose considerably.

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<sup>1</sup>Hungary, Kozponti Statisztikai Hivatal, Statistical Yearbook 1957 (Budapest, 1958), p. 183.

### Summary and Conclusions

The main reason behind the cessation of out-migration was the inability of the nonfarm sector to create sufficient jobs. In order for out-migration to have continued, a substantially higher rate of growth of employment would have been required. But the economy was basically stagnant and did not provide the necessary jobs to absorb the new entrants and the migrants. Another way of saying this is that the transfer was halted mainly because of shortages in savings and raw materials. The trend reversal was not solely caused by the above-mentioned shortages, but they were the main cause. Perhaps the mildly improved conditions in agriculture diminished the pressure to flee the farms.

## CHAPTER IV

1957-1963

### The Dismal Failure of Agriculture

Turning now to the final period of our study, 1957-1963, three important developments stand out. First, the exodus of the farm workers resumed and since 1959 it accelerated. Between 1957 and 1963 a net of 345,000 peasants left farming. Second, compulsory deliveries were abolished, procurement prices raised, investment in agriculture rose considerably, and old age insurance was extended to the peasantry. Third, collectivization of agriculture was successfully completed in 1961. Having decided late in 1958 to do so, the authorities proceeded vigorously and in a matter of three years practically all of the land was under a socialist control (Table II-3). What was the impact of these changes on farm output?

### Agricultural Production

According to the unofficial index, net farm output declined 11% between 1957-1958 and 1963-1964 (Table II-1). According to the official index net output stagnated. A clear indication that agriculture was inadequately performing, however, is evidenced by the fact that Hungary had to import grain throughout the 1960's (Table IV-1). The supply

of grain did not expand sufficiently fast to meet the rising demand. Because of this, the policy makers had a choice of two alternatives:

- (a) allow prices of important foodstuffs to rise,  
and/or
- (b) import the necessary grain from abroad.

Probably because of political considerations it chose the latter course of action. Thus, Hungary imported annually hundreds of thousands of tons of bread grain. The country's wheat and rye requirements were approximately 2.4-2.5 million tons; the average crop was only 2.1 million tons.<sup>1</sup> In order to sustain the level of livestock production the government was forced to import vast quantities of feed grain. The bulk of the grain imports came from the West because the U.S.S.R. and other Eastern European countries faced similar difficulties. The chief suppliers of grain were France, Canada, U.S.A. and Argentina.<sup>2</sup>

The importation of grain is particularly noteworthy because:

- (a) The Second Five Year Plan (1961-1965) called on Hungary to become self sufficient in grain production. The main task of the Plan was to

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<sup>1</sup>Imre Kovacs, ed., The Fight for Freedom (New York: Waldon Press, 1966), p. 242.

<sup>2</sup>U.S. Department of Agriculture, The Agricultural Economy and Trade of Hungary, pp. 14-15; Kovacs, The Fight for Freedom, p. 242.

increase production of bread and feed grain sufficiently to cover the country's requirements and thus eliminate the need to import.<sup>1</sup>

(b) The poor performance of agriculture aggravated Hungary's balance of payments. The Plan envisaged a 61% rise in exports and a 33% increase in imports.<sup>2</sup> Largely because agricultural output declined, exports lagged behind imports in every year of the plan except in 1961.<sup>3</sup> Thus the authorities had to use scarce foreign exchange to import grain when foreign exchange was badly needed to import raw materials and fuel.

#### Investment and the Provision of Non-Labor Inputs

These developments occurred despite the significant advances made in agricultural investments and in the provision of productive inputs. The average level of agricultural investments during 1957-1963 rose by more than 57% (in constant prices) over the previous seven year period (Table II-9). The lion's share of agricultural investments was set aside for mechanization.<sup>4</sup> It should be noted that

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<sup>1</sup>Dimeny Imre, "A magyar mezogazdasag feladatai a part VIII Kongresszusa utan" ("The Tasks of Hungarian agriculture following the Eight Party Congress"), Kozgazdasagi Szemle Vol. 2, February 1963, p. 131; I. Vajda, The Second Five-Year Plan, p. 61.

<sup>2</sup>Imre Pardi, "A magyar nepgazdasag fejlodese a II. oteves terv idoszakaban" ("The Development of the Hungarian National Economy in the Period of the Second Five-Year Plan"), Kozgazdasagi Szemle, No. 11 (1961), p. 1391.

<sup>3</sup>Kovacs, The Fight for Freedom, p. 242.

<sup>4</sup>Vajda, The Second Five-Year Plan, p. 64.

increased mechanization probably had a dual impact on agriculture: it released labor as well as limited the rise in yields per ha. The substitution of machinery and equipment for hand labor tends to adversely affect yields per ha. because generally speaking it is a more wasteful method of land cultivation. Government deliveries of tractors and grain combines rose dramatically. From 1957 to 1964 the supply of tractors rose from approximately 27,000 to 84,000, an increase of more than 200% (Table II-6). In 1957 Hungarian agriculture had altogether 2350 grain combines; by 1964, grain combines totaled approximately 7950. The rapid replacement of animate energy by inanimate can be seen by the significant drop in the number of horses on the farms. In 1957 there were 720,000 horses in the country; in 1964 there were only 323,000.<sup>1</sup> The introduction of tractors changed the methods of land cultivation. In 1956, for example, grain was machine harvested on 19.3% of the total grain area, in 1960 on 42.6% and in 1961 on 60%.<sup>2</sup>

Major advances were also made in the use of fertilizers. In 1957 the government supplied 77,000 tons of fertilizer; in 1964, 342,000 tons were supplied (Table II-6). The consumption of fertilizers increased over 300%. Alternatively, fertilizer application rates, per ha. of arable land, amounted to about 60 kg. of active ingredients in 1964, compared with only 13 kg. in 1957.

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<sup>1</sup>U.S. Department of Agriculture, *Agricultural Statistics of Eastern Europe and the Soviet Union*, p. 87.

<sup>2</sup>Imre Pardi, "A magyar nepegazdasag fejlodese....," p. 1277; Vajda, *The Second Five-Year Plan*, p. 64.

In summary, significant changes took place in agriculture. Instead of the myriad of small farms, most of the land was farmed by approximately 4,000 farming units (Table II-3).<sup>1</sup> The average size of state farms was about 4,000 ha., the average size of collective farms was over 1,000 ha. Farm machinery and chemical products were used increasingly by the farmers. The planners were optimistic that these measures "will make grain imports unnecessary by the second half of the Five Year Plan."<sup>2</sup> By that time they expected to have enough bread grains to meet domestic demands.

#### A Perplexing Question

The performance of agriculture, however, fell far short of expectation. Despite the massive investments, grain had to be imported; farm output was unable to keep pace with the growth of the economy and the population. The important question is: what went wrong? Why didn't the progress of mechanization and the greater use of fertilizers contribute more to the expansion of output? Why were the returns to these capital inputs so low? In short, why wasn't agricultural output responding more favorably?

#### Some Tentative Answers

First, the inputs were not used effectively. As we shall point out in a subsequent section, collective farms, for example, lacked managerial talents, faced organizational

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<sup>1</sup>Collective farm peasants were allowed to retain approximately one acre of land for their own use.

<sup>2</sup>Vajda, The Second Five-Year Plan, p. 65.

difficulties, and the peasants lacked sufficient incentives to produce more. Second, the increased inputs were needed to compensate for the rapidly falling labor input. But for the substantial increases in non-labor inputs farm output would have dropped much more. Indeed, Hungarian officials themselves acknowledged (by 1965) that the investments constituted "holding action against the loss of labor."<sup>1</sup>

The discussion to this point indicates, or at least does not contradict the claim, that agriculture suffered from labor shortages. As labor was withdrawn farm output fell. Even the massive investments were insufficient to compensate for the loss of labor; even with the aid of increased mechanization the smaller labor force was unable to maintain output. Of course it is possible that output declined because collectivization interrupted the production process--and not because of labor scarcity. While this is possible--indeed probable--there is direct evidence that there was a labor shortage in agriculture. Let us examine closely this evidence.

### Labor Shortage in Agriculture

#### A Report by the Central Statistical Office

First, we would like to cite a study prepared by the Central Statistical Office investigating the impact of increased mechanization on the release of labor during

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<sup>1</sup>U.S. Department of Agriculture, The U.S.S.R. and Eastern European Agricultural Situation, Review of 1965 (May 1966), p. 36.

1959-1962.<sup>1</sup> The study notes that year after year, because of the scarcity of labor during the summer months of July and August, certain tasks had to be postponed for the fall. This, however, caused difficulties during the fall season because it interfered with the routine work that had to be done at that time. Thus the peasants either did not do the job at all, or when feasible it was further postponed.<sup>2</sup> Thus, because of labor shortages in the collectives during the summer and fall seasons of 1962 a significant share of the work was postponed and performed in the spring of 1963. Frequently, however, the weather was poor during the fall season and the job was not done at all--resulting in a loss in output.<sup>3</sup>

The study makes it quite clear that a significant labor shortage existed in the collectives, particularly during the peak season. The report states that

the farms were unable to mobilize the needed manpower and consequently the work was done systematically late.<sup>4</sup>

Because collective farms were generally unable to compete for labor with state farms and industry, they faced difficulties recruiting the necessary labor during the seasonal peak.

Peasants turned to collectives

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<sup>1</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyek, No. 7, 1963.

<sup>2</sup>Ibid., pp. 145-46.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 147.

only when they could not find work elsewhere and when they finished their work on their private plots.<sup>1</sup>

### The Second Five-Year Plan

Second, we would like to refer to a study done by two prominent economists in connection with the Second Five Year Plan (1961-1965).<sup>2</sup> Based on detailed computations, using two different methods, and taking into account the seasonality of agriculture, they estimated agriculture's manpower requirements for 1958 to be 1,786,000 peasants; peak requirements for the month of July were estimated to be 2,174,000 farm workers (Table IV-2). The actual available manpower in 1958 was approximately 2,000,000 active workers. Apparently, agriculture was short 174,000 working peasants during the critical month of July, but had a surplus of 214,000 peasants during the March-October season. The manpower situation was far worse in 1965. The projected manpower demand for July of that year was 1.9 million farmers. The actual available labor in 1965 was 400,000 less. Unlike 1958, when agriculture experienced a labor shortage only during the peak harvesting season, in 1965 there was an overall labor shortage throughout the active farming season March-October.

### Worsening Age-Sex Structure of the Farm Work Force

Third, the worsening age-sex structure of the farm work force should be considered since it unquestionably

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<sup>1</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyek, No. 7, 1963, p. 154.

<sup>2</sup>Gyorgy Fekete and Janos Timar, "A mezogazdasagi munkakepes nepsseg foglalkoztatottsaga a masodik oteves terv idoszakaban" (The Labor Power Position in Agriculture During the Period of the Second Five Year Plan), Kozgazdasagi Szemle, May 1961.

aggravated agriculture's labor shortages. Since the late 1940's the out-migrants consisted mostly of peasant youth. Between 1949 and 1960 the proportion of young farm workers (below 20 years of age) among the total farm work force declined considerably--from 15.7% in 1949 to 9.6% in 1960 (Table IV-3). Looked at from the opposite angle, 29% of the peasants were 50 years or older in 1949; in 1960, 42% were above 50. Finally, 20% of all working peasants were above 60, while only 4.2% of non-farm workers were above that age.<sup>1</sup>

Along with these changes in the age structure, the sex composition of the farm work force changed too. The proportion of females in the farm labor force rose dramatically. Looking at Table I-4 we see clearly that the decline in active earners took place mostly among males. While the number of females in the farm work force between 1949 and 1964 changed little, the number of males declined by 600,000 persons.

#### Shortage of Skilled Farm Managers

Finally, we ought to mention the critical shortage of skilled farm managers and technicians in the collectives. These new big farms needed young, dynamic people who knew how to organize the work and manage the farms, i.e., people with technical skills and managerial talents. The farms were lacking an adequate supply of these individuals. It has been noted that

the labor problems result first of all from difficulties of managing the newly formed collectives. These

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<sup>1</sup>Palfai Istvan, "A mezogazdosagi munkaerohelyzete," p. 120.

are starting difficulties. The young have not joined the collectives, and even as family members they do not take their share in communal work.<sup>1</sup>

Surely, part of the manpower shortage resulted from labor's misuse by the inexperienced managers. To this extent, the shortage was only transitory until the managers gained the necessary experience in organizing the work force.

We only cited here the main studies dealing with this question. Other studies<sup>2</sup> also confirm that agriculture, and in particular collective farms, lacked sufficient manpower to carry on production. It should also be noted that as a result of the 1956 revolution more than 100,000 people left the country.<sup>3</sup> Since presumably the bulk of the migrants were adults, this tightened the labor market and probably aggravated the shortage of labor on the farms. In any case, the evidence clearly points to the fact that out-migration proceeded at a too rapid rate; too much labor was drained off the farms. Let us now examine the reasons for the exodus: why did the peasants leave the countryside? The reasons are familiar. They are basically socio-economic.

### Main Reasons for Out-migration

#### The Search for Higher Incomes

First, earnings in the nonfarm sectors remained higher in comparison with earnings of state farm workers and collective farm peasants. The differential narrowed for state farm

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<sup>1</sup>Ibid.

<sup>2</sup>Laszlo Csete, "A termelo szövetkezeti munkaerőhelyzetel kapcsolatos gazdasági problémák" ("Economic Problems Connected with the Manpower Situation of Cooperative Farms"), Közgazdasági Szemle, No. 10 (1963), pp. 1192-94.

<sup>3</sup>Hungary Today 1965, op. cit., p. 22.

workers primarily because labor shortages in state farms forced the government to revise upward the wage rates (Table III-1). The differential for collective farmers remained basically the same. Workers in industry and construction earned substantially more than collective farm peasants. On a per capita basis the peasantry's total real income, in 1962, was 17% below that of wage earners.<sup>1</sup> In order to slow down out-migration the authorities favored a reduction in income differentials. The policy makers desired to reduce the gap in living conditions by increasing faster the share of income from social funds going to the peasantry. Thus the Second Five Year Plan called for approximately the same increases in per capita personal disposable income for the two groups, but a relatively faster increase in social benefits going to collective farmers. In 1960, workers and employees received, on a per capita basis, 60% more in social benefits; by 1962, it was down to 42%.<sup>2</sup> Professor I. Vajda notes that:

Most remarkable in this respect [social benefits] is the fact that during the period of the Plan social welfare benefits will be extended to nearly the entire peasantry, who had been completely excluded earlier. By 1965 in Hungary the agricultural population will also be receiving family allowances and old-age pensions; in the rural areas, too, working women will have the help of kindergartens in the rearing of their children. This will be a social revolution in the life of the village.<sup>3</sup>

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<sup>1</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyek, No. 6 (1963), p. 42.

<sup>2</sup>Ibid.

<sup>3</sup>Vajda, The Second Five-Year Plan, p. 98.

It is noteworthy that social conditions in the villages remained backward throughout the fifties and early sixties. For example, there were still villages without electricity which meant an

absence of culture . . . if there is no electricity there are no cinemas, no radios, no evening hours at the library, no club activity. . . .<sup>1</sup>

In order to make life in the villages more attractive, the Plan called for the complete electrification of the countryside by 1963-1964.

#### The Search for Steady Employment

We see, then, that during the Second Five Year Plan period the government undertook a major effort to improve the peasantry's living conditions. The granting of old age pensions to collectivized peasants, and the provision of other social benefits, certainly brought living conditions of the peasants nearer to those enjoyed by the workers. This notwithstanding, collective farms were, and remained, less attractive places to live and work in comparison with urban areas and nonfarm jobs. The younger generation preferred to leave whenever nonfarm jobs became available. It has been claimed that peasants searched for jobs during the slack period and when they found one they did not come back to farming.<sup>2</sup> It is surely not a coincidence that the greatest

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<sup>1</sup>Vajda, The Second Five-Year Plan, p. 99.

<sup>2</sup>Fekete and Timar, "A mezogazdasagi munkakepes nepsseg foglalkoztatottsage," p. 638.

shortage of farm labor existed in the industrial regions of the country, i.e., in areas where nonfarm jobs were expanding most rapidly. It is also not a coincidence that the percentage of males in collective farms in the industrial regions was much lower than in the agricultural regions, mainly because the able-bodied people were attracted to industry.<sup>1</sup>

A second related reason for the exodus was the search for steady and continuous employment. Two noted economists observed that

the seasonal nature of farm work is the cause that many peasants--particularly the young ones--want to migrate to the cities to look for steady and continuous employment.<sup>2</sup>

### Vocational Training

Still another reason for the exodus is the fact that increasing numbers of peasant youths received vocational training for occupations other than agriculture. The above authors noted that:

Nor may the circumstance be neglected that a considerable part of peasant youth--due to the training they receive--take their first jobs outside agriculture.<sup>3</sup>

Another scholar was more specific on this point, stating that:

A significant share of peasant youths studied industrial trades, and having acquired these skills, they did not come back to agriculture but turned mostly to industry and other nonfarm sectors to

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<sup>1</sup>Palfai Istvan, "A mezogazdosag munkaerohelyzets," p. 125.

<sup>2</sup>Fekete and Timar, "A mezogazdasagi munkakepes nepsseg foglalkoztatottsage," p. 520.

<sup>3</sup>Ibid., p. 638.

find their first job. The learning of skills and the migration of youths resulted, in the past decade, from the government's socio-economic policies, that is, from the need to meet industry's growing demand for labor.<sup>1</sup>

Indeed many young peasants migrated even without first acquiring a particular skill.<sup>2</sup> Enough has been said in the previous chapters on the role that forced collectivization plays in the transfer process. Hence it will be sufficient just to add here that in addition to the "pull" factors discussed above, socialization of the countryside surely accelerated the exodus. In summary, the peasants migrated because the urban centers offered them the chances of finding better jobs, steady employment, improved educational opportunities and a more attractive way of life.

Having noted the existence of a labor shortage in agriculture and discussed its main causes, let us examine now what steps, if any, the government took in order to halt the exodus.

### Manpower Policy

#### A Misguided Policy

During the 1950's the authorities operated under the assumption that a vast reservoir of manpower existed in agriculture. This was both the official and unofficial view. A key objective of the First Five Year Plan (1950-1954) was to

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<sup>1</sup>Palfai Istvan, "A mezogazdosag munkaerohelyzete," p. 118.

<sup>2</sup>Ibid.

transfer approximately 350,000 peasants out of agriculture. The Second Three Year Plan (1958-1960) also called for out-migration and a decline in the farm work force.<sup>1</sup> Collectivization of agriculture was the main tool by which these objectives were to have been accomplished. Collectivization did, in fact, "achieve" these objectives: it contributed significantly to the exodus. The crucial point to note, though, is that socialization of the countryside "released" labor that was still needed there; it solved a problem that largely did not exist.

#### A Rational Policy

There is evidence to suggest, as we mentioned before, that during the 1960's the planners became aware of this problem and took, or recommended, steps to slow down the exodus.

In drawing up the Second Five Year Plan (1961-1965) the planners recognized that agriculture can no longer be a major source of manpower for the nonfarm sectors. They observed that

everything should be done so that industry, construction and other nonfarm sectors should not attract the labor that is still needed in the villages.<sup>2</sup>

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<sup>1</sup>Szabo Joseph, "A három éves terv néhány főb vonása" ("Some of the Main Features of the Second Third Year Plan"), Kozgazdasági Szemle, No. 7 (1958), p. 679.

<sup>2</sup>Laszlo Berettyan and Janos Timar, "A népgazdaság munkaero helyezete a II ötéves terv időszakában" (The Labor Power Situation of the Peoples' Economy in the Period of the Second Five Year Plan), Kozgazdasági Szemle, No. 7 (1961), p. 774.

The policy makers claimed that it will be of great importance that the increase in the number of persons employed in the nonagricultural sectors, particularly in industry and building, should not exceed the planned quotas.<sup>1</sup>

The planners preferred to halt out-migration altogether but they recognized that a net minimum of 60-70 thousand peasants would migrate in any case. As a matter of fact, they noted openly that this unusually small amount of exodus would take place only if economic conditions in the collectives improved.<sup>2</sup> We might note that during the first three years of the Plan, already more than twice as many transferred (Table I-7).

Wage Policy as a Tool  
of Manpower Policy

Perhaps the government's wage policy during the early sixties was also dictated by its manpower policy. Between 1957-1959 real wages rose dramatically, because the authorities both wanted to appease the workers, having lost the revolution, and wished to provide sufficient incentives to facilitate the recovery. The upward trend continued in the 1960's but at a very moderate rate. The policy makers desired to halt out-migration and possibly because of that they limited the rise in real wages. There was only a negligible rise in urban wage rates between 1960-1962, mainly because the regime did not permit any increases to take place. In 1960 working norms were increased by 10 to 15 percent. When

the news of the reorganization first appeared in the press, government propaganda reassured workers

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<sup>1</sup> Berettyan and Timar, "A nepgazdasag munkaero helyezete," p. 844.

<sup>2</sup> Ibid., p. 774.

that the higher target figures did not mean automatic cuts in their earnings. Soon, however, the workers learned that their anxiety had been well founded. . . . Later it was freely admitted that in certain cases the new norms had produced a drop in earnings.<sup>1</sup>

In 1961 there was a second increase in working norms. Since during these two years collectivization of the countryside reached its peak, the government probably wanted to halt the exodus of farm workers by limiting the attractiveness of urban wages.

At the same time the regime tried to raise collective farmers' incomes by manipulating the terms of trade in their favor. For example, the prices the state paid for farm produce, between 1960-1962, rose by 11%, but the prices the peasants had to pay for the goods and services they purchased rose only 4.3%.<sup>2</sup> Despite this pro-peasant policy the efforts of the government remained largely ineffective. The peasantry's per capita personal disposable income rose much less than planned, because farm output lagged. The actual rise in farm income that did occur resulted mostly from substantial increases in state rendered services in kind.

#### Failure of Manpower Policy

The authorities failed in their efforts to halt out-migration, mainly because collective farms were unattractive economically and socially. Out-migration proceeded faster

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<sup>1</sup>Kovacs, The Fight for Freedom, p. 235.

<sup>2</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idosfaki Kozlemenyek, No. 6 (1963), p. 49.

than planned. Employment in industry and construction grew more than anticipated. By 1965 the authorities themselves recognized the need for reforms. By that time they became convinced that their policies failed and economic reforms were needed to get agriculture and the rest of the economy moving again.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

The previous chapters touched on various aspects of the determinants of the transfer of labor from agriculture to nonagricultural activities. The main objective of this chapter is to assess how well the Hungarians have done in relation to the goals they have set out and in relation to the existing objective conditions. This chapter consists of four sections. In the first, we discuss the crucial variables that determined the rate of transfer. In the second, we analyze the presuppositions and purposes of the planners. In the third, we compare the actual conditions as they existed with conditions as seen by the planners. In the final section, we relate our findings to the main propositions stated in our first chapter.

#### Determinants of the Transfer

The "collectivization-push" of the farm sector and the "employment-pull" of the nonfarm sector were the two crucial variables explaining the manpower transfer. Forced collectivization of agriculture ousted hundreds of thousands of peasants from their land. Compulsory collectivization on Stalinist lines introduced fear and confusion into the lives of the peasants and disrupted the organization of agriculture. We noted before the Hungarian peasants' dislike for the

collective system. Rather than join collective farms, many preferred to abandon farming altogether. Generally speaking, we found a strong relationship between outmigration and collectivization. Outmovement appears to have been greatest when collectivization pressures reached their peak.

The transfer of labor, of course, also depended on the availability of employment in the nonfarm sectors. Because of the government's employment-creating policies during 1949-1953 and 1957-1963, nonfarm employment grew vigorously; indeed, it grew faster than population or the number of school leavers. The result was that a growing number of more attractive industrial jobs became available to which younger peasants gravitated. Outmigration ceased during 1954-1956, mainly because of a temporary setback in the government's industrialization program, i.e., scarcity of nonfarm jobs.

The peasantry's reasons for outmigration were probably both economic and non-economic. It is important to distinguish between the forces that "pushed-out" middle-aged peasants, on the one hand, and the forces that tended to "pull-in" youth, on the other hand. We suspect that collectivization-push was the main factor behind the exodus of middle-aged peasants, first, because they were forced to give up their land, and second, because joining the collective would have meant a drastic change in their way of life. Rather than resettle in the countryside, in the newly formed collectives, some of these peasants preferred to take non-farm jobs if they could be found. Collectivization-push probably played

a lesser role in the exodus of young peasants, primarily because no land was taken away from them. It stands to reason, therefore, that they were less antagonistic towards collective farms. This does not mean, of course, that young peasants gravitated toward collective farms. On the contrary, given non-farm employment opportunities they rather migrated. What motivated them was the expectation of earning more in the towns and/or the superior cultural and educational opportunities available there. Migration of the youths was encouraged by the fact that the urban wage rate was above their per capita consumption in the village. In other words, even if real wages (for unskilled labor) were basically the same in both sectors, some of the youth might have migrated because they expected to move into the ranks of the skilled workers and thus earn relatively more, and/or take advantage of our so-called "net short run gain" (i.e., the difference between their consumption on the farm and their expected wage in the city) or because they rejected farming as a way of life. Probably all of these factors played some role.

#### The Objectives of the Planners

Hungary's first Five Year Plan (1950-1954) called for drastic increases in industrialization, collectivization of agriculture and the transfer of labor out of agriculture. The key objective of the Plan was to industrialize the economy as rapidly as possible. To use the words of the top ranking Communist of this period, Mr. Matyas Rakosi, Hungary was to

be "transformed into a country of steel and iron."<sup>1</sup> The Plan emphasized the development of heavy industry. The decision to expand industry, and particularly heavy industry, was not founded on economic principles; it was basically a political decision of the top policy makers reflecting the desires of the Soviet leadership and/or sharing the same set of priorities. The party planners also made great efforts to become economically self-sufficient. This surely represented a mistaken policy because Hungary is known to be very poor in raw materials and fuel. To achieve the goals of this ambitious Plan, agriculture was called upon to supply the needed manpower and capital.

The planners apparently regarded Hungary as having an abundance of cheap labor in agriculture. They seem to have accepted the concept that there is surplus labor on the farms in the sense of whole persons who could be removed without a loss in output. Collectivization of agriculture was the tool they planned to use to cut down on the available surplus. Indicative of the fact that the planners thought that there is abundance of labor in the economy--primarily in agriculture--is their neglect to prepare manpower balances. Dr. Janos Timar,<sup>2</sup> the leading manpower expert of Hungary, noted in an article in Kozgazdasagi Szemle in 1960, that up

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<sup>1</sup>As cited by Balassa, The Hungarian Experience, p. 32.

<sup>2</sup>Janos Timar, "A munkaero-gazdalkodas tervszerusege a szakmunkas-szukseglet es fedezet tervezese," Kozgazdasagi Szemle, No. 6, 1960, p. 653.

until then insufficient attention was paid to manpower planning. This neglect he attributes mainly to the flexibility of the labor supply in the early 1950s, i.e., to the abundance of labor supply in the economy. The author concludes by stating that the time had arrived to pay closer attention to manpower planning, and that there is no reason why manpower balances should not be prepared as rigorously as other balances.

There is sufficient evidence that the policymakers were convinced, at the time, that their industrialization program could be carried out without any serious labor shortages developing. To put it differently, they believed that agriculture could release the required manpower without a loss in output, and consequently they put excessive pressures on the farmers either to join collectives or go to the factories and/or to the construction projects.

#### The Existing Conditions in Agriculture

The actual conditions in agriculture, however, were different. Our study seems to show that there was no surplus of whole persons in agriculture within the institutional set-up. The decision to collectivize agriculture was probably a mistake because it (a) "released" labor that was still needed there and (b) disrupted the production process and thus lowered farmer output. Since there was no surplus labor in agriculture, productivity would have to increase to release labor without a loss in output. Despite the rise in the

capital/labor ratio in agriculture during 1949-1953, productivity remained the same. The fundamental problem of agriculture was, on the one hand, the inability of the planners to raise productivity of agriculture so as to free people on the land for work in industry, and, on the other hand, their continued diversion of manpower resources into industry. Recognizing these mistakes by 1953-1954, the policy-makers relaxed the collectivization drive and encouraged movement back to the farms. During 1955-1956 the Stalinists regained power and the pressures on the peasants resumed. During 1957-1958 conditions on the farms were uncertain and volatile in wake of the 1956 Revolution. Between 1959-1961 collectivization was completed. The poor performance of agriculture, however, continued to plague the economy. Hungary had to import large quantities of wheat annually in order to feed its people. During this period the policy makers began to recognize the need to halt outmigration.

Basically, the regime's agricultural policy was based on an incorrect analysis of manpower conditions in agriculture. The planners confused the existence of seasonal unemployment with the existence of surplus labor. They diverted labor out of agriculture and created, in the process, a manpower shortage, particularly during the harvesting season. This peak-time labor shortage could have been taken care of if the planners would have mobilized the urban population and directed it back to the farms for those critical weeks.

On the other hand, the planners could have let the peasants remain in agriculture, and by putting them to work during the slack farming season they could have gained tens of thousands of additional labor days. Neither of these options was utilized by the Hungarians.

#### Hungarian Economic Development and the Surplus Labor Model

It will be useful to examine now the experience of the Hungarian economy in terms of the propositions stated in our first chapter concerning the Lewis and Fei-Ranis model for surplus labor. Strictly speaking, this model does not apply to Hungary. Our investigations suggested that Hungary did not have surplus agricultural labor. Mention has already been made that, given the institutional setup and the regime's development strategy, there was no room to transfer permanently large numbers of peasants from agriculture without loss in output. On the one hand, the withdrawal of labor between 1949-1953 and 1957-1963 was accompanied by a drop in farm output. On the other hand, the increase in the agricultural labor force during 1954-1956 was associated with a rise in food output. This does not, of course, constitute a proof that farm labor was scarce, but it is consistent with that argument. The relatively high earnings of farm workers may also suggest that labor was not abundant in agriculture. In 1952, for example, the average farm worker earned approximately as much as the average unskilled factory worker.

To be sure there are certain features in Hungary's economic development that parallel the model, but the similarity is superficial. For example, the large exodus of labor between 1949 and 1953 occurred while the urban wage level was falling. According to the Fei-Ranis model, as surplus labor is transferred, the urban wage rate tends to remain constant, or at least does not tend to rise. As was noted in a previous chapter, the urban wage level declined sharply during this period. Thus the behavior of the wage rate would seem to fit the model quite well; indeed, it would fit it too well. It has to be remembered, however, that the decline in the urban wage rate--and the corresponding narrowing of urban-rural income differentials--was due to the government's wage policies. Thus the urban wage rate was held down artificially by the state; it did not result from economic forces. Again, as was noted in a previous chapter, collectivization of the countryside helped the regime push real wages down. It might be mentioned, in passing, that the policy of depressing wages was a wise one given the desire to accumulate capital rapidly.

From 1953 to 1963 the terms of trade moved consistently against the industrial sector. This generally occurs when labor is not in surplus and/or where there are difficulties of getting hold of the agricultural surplus. The worsening of the terms of trade for industry, were brought about, to a large extent, by the relative scarcity of farm produce.

As we noted before, labor in agriculture was not in surplus. The authorities also faced difficulties transferring the agricultural surplus to the industrial sector. It is known that during the early stages of industrialization it is desirable to shift the terms of trade against agriculture, thereby transferring real income toward the urban sector, and allowing a higher rate of capital formation.<sup>1</sup> Because of severe food shortages, however, the government was unable to shift relative prices against agriculture. Because of the continued general scarcity of farm products, throughout the 1950's and early 1960's, the government, in an effort to induce the peasants to produce more, increased the prices it paid to the peasants, which, in turn, caused a relative increase in agricultural prices. This pro-peasant policy resulted in a substantial improvement in agriculture's terms of trade, and put an upward pressure on the urban wage rate. The urban wage level, therefore, had to be raised to cover the higher food costs.

Between 1959 and 1963 per capita real earnings of workers and employees rose by 91%, compared with a 55% rise in the peasants' real per capita income. The rise in workers' real earnings was more than matched by the growth in nonfarm productivity. The rise in peasants' income, however, was not matched by an equal rise in farm productivity. Favorable

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<sup>1</sup>John W. Mellor, The Economics of Agricultural Development (Ithaca, New York: Cornell University Press, 1966), pp. 95-96.

terms of trade were the major factor behind the growth of their income.<sup>1</sup>

In the absence of detailed data on the earnings of these two socio-economic groups--particularly the peasants--it is difficult to draw exact conclusions as to the behavior of the urban/rural income differential. While the above figures clearly indicate that the workers improved their position in comparison with the peasants, there is little evidence that would support this. We suspect that the gap has not widened; in fact, it probably narrowed. First, the income gap surely narrowed for state farmers. As can be seen from Table III-1, state farmers improved their relative position. Collective farmers were much on a level with state farmers. Thus, it is unlikely that the differential between collective farmers (and private peasants) and state farmers would have widened. Second, the peasants' standard of living was all along lower than that of workers and employees by roughly the same amount. In 1949, the per capita consumption of the peasants was 19% below the wage earners (1949-1955 it averaged 15.5% below).<sup>2</sup> The situation of the peasants in 1962 was roughly the same; total real income of the peasants was 17% less than that of the workers and salaried employees.<sup>3</sup>

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<sup>1</sup>United Nations, Incomes, chapter VII, p. 54.

<sup>2</sup>Hungary, Adatok es Adalekok, op. cit., p. 360.

<sup>3</sup>Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyek, No. 6 (1963), p. 42.

In short, we have to be cautious in interpreting the income series given in Table III-3. Because of the drastic structural changes that took place in agriculture, the lack of reliable price indices, the scarcity of information on fringe benefits, and for other reasons, it is difficult to say precisely how the differential moved. It is clear, however, that parallel with the rise in the income of the workers there was also a rise in the income of the peasants.

In summary, the poor performance of agriculture caused a steady worsening in the terms of trade for the industrial sector and a rapid rise in the urban wage level, both of which limited the ability of the regime to generate capital formation in the industrial sector via money profits. In more general terms, the lack of improvement in agriculture, the slow growth of farm productivity, and the generally inadequate functioning of the command system were the real factors behind the movement (that started in the mid 1960's) to reform the economy.

As a final thought, one might ask whether Hungary's overall economic policy during the 1950's and early 1960's was wise; whether the decision to develop industry at the expense of agriculture was rational; whether the social return on the allocation of resources in general was maximal. It is beyond the scope of this dissertation to give a full answer to these broad questions. In the light of our previous analysis, however, it appears to us that the Hungarian economy would have experienced less stress and strain had the policy

makers followed a more "balanced growth path" to development, i.e., had they also developed agriculture. Admittedly, this would have been more difficult to do and might, in fact, have produced a slower rate of growth than the one actually achieved.

TABLE I-1

FARM AND FARM LAND: DISTRIBUTION BY SIZE OF FARMS  
1930

Class of Farms (ha.)	Farms (number)	Farms (% of total)	Farm land (1000 ha.)	Farm land (% of total)
Dwarf farms (under 2.88)	1,142,294	71.5	1,006	10.9
Small farms (2.88-5)	200,341	12.5	840	9.2
Medium sized (5-50)	240,761	15.5	3,070	33.5
Large Peasant farms (50-100)	6,274	.4	502	5.5
Large gentry (100-500)	6,332	.4	1,576	17.2
Giant farms (500 and over)	1,644	.1	2,175	23.7
	<u>1,597,646</u>		<u>9,169</u>	
Under 50 ha.		99.1		53.6
50 and over ha.		.9		46.4

Source: S. D. Zagoroff, et al., The Agricultural Economy of the Danubian Countries 1935-45 (Stanford, California: Stanford University Press, 1955), p. 48.

TABLE I-2

DISTRIBUTION OF LAND HOLDINGS BY SIZE OF FARM AND AREA  
1946

Class of Farm (ha.)	Number (in thousands)	Per- centage	Area (1000 ha.)	Per- centage
Dwarf farm (-2.8)	1,406	68.1	1,367	17.9
Small farms (2.8-5.7)	388	18.8	1,932	21.1
Medium farms (5.7-28.5)	247	11.9	2,935	32.0
Large farms (28.5- )	25	1.2	2,663	29.0
	<u>2,066</u>	<u>100.0</u>	<u>9,167</u>	<u>100.0</u>

Source: Bela A. Balassa, The Hungarian Experience in Economic Planning (New Haven: Yale University Press, 1959), p. 245.

TABLE I-3

MANPOWER GAINS AND LOSSES, EXCLUDING MIGRATION, IN THE  
ECONOMICALLY ACTIVE POPULATION OF AGRICULTURE  
(in thousands)

Year	Entrants to the employed farm popu- lation +	Departures due to natural causes (death, retirements) -	Net increase (+) or decrease (-) in the economically active population
Total	844	779	+65
1949	75	29	+46
1950	81	32	+49
1951	54	39	+15
1952	36	39	- 3
1953	43	37	+ 6
1954	64	35	+29
1955	58	30	+28
1956	56	33	+23
1957	52	29	+23
1958	43	31	+12
1959	35	23	+12
1960	83	182	-99
1961	55	111	-56
1962	55	66	-11
1963	54	63	- 9

Source: Hungary, Statisztikai Központi Hivatal,  
Statisztikai Idoszaki Közlemenyek, No. 76,  
pp. 72-147.

TABLE I-4

ACTIVE EARNERS IN AGRICULTURE, BY SEX  
(in thousands)

Year	Beginning of the year (total)	Net Change	Male (beginning of the year)	Female
1949	2,191	-56	1540	651
1950	2,135	-23	1453	682
1951	2,112	-58	1388	724
1952	2,053	-119	1377	676
1953	1,934	-24	1283	651
1954	1,910	+42	1304	606
1955	1,952	+38	1319	633
1956	1,990	+42	1308	682
1957	2,032	-24	1319	713
1958	2,008	-29	1296	712
1959	1,979	-50	1258	721
1960	1,929	-146	1226	703
1961	1,783	-82	1125	658
1962	1,701	-67	1068	623
1963	1,634	-75	1007	627
1964	1,560		957	603

Source: Hungary, Statisztikai Központi Hivatal,  
Statisztikai Idoszaki Közlemenyek,  
No. 76, pp. 72-146.

TABLE I-5

ACTIVE EARNERS IN AGRICULTURAL AND NON-AGRICULTURAL SECTOR  
(in thousands, beginning of the year)<sup>1</sup>

Year	E a r n e r s			% of Distribution			Index (1949=100)		
	Agr.	Non- agr.	Total	Agr.	Non- agr.	Total	Agr.	Non- agr.	Total
1949	2,191	1,832	4,023	54.5	45.5	100	100	100	100
1950	2,135	2,032	4,167	51.2	48.8	100	97	111	104
1951	2,112	2,199	4,311	49.1	51.9	100	96	120	107
1952	2,053	2,313	4,366	47.0	53.0	100	94	126	108
1953	1,934	2,472	4,406	44.0	56.0	100	88	135	110
1954	1,910	2,535	4,445	42.9	57.1	100	87	138	111
1955	1,952	2,570	4,522	43.2	56.8	100	89	140	112
1956	1,990	2,635	4,625	43.0	57.0	100	91	144	115
1957	2,032	2,564	4,596	44.2	55.8	100	93	140	114
1958	2,008	2,663	4,671	42.9	57.1	100	92	145	116
1959	1,979	2,774	4,753	41.6	58.4	100	90	151	118
1960	1,929	2,898	4,827	39.9	60.1	100	88	158	120
1961	1,783	2,993	4,776	37.3	62.6	100	81	163	119
1962	1,701	3,064	4,765	35.7	64.3	100	78	167	118
1963	1,634	3,171	4,805	34.0	66.0	100	75	173	119
1964	1,560	3,298	4,858	32.1	67.9	100	71	180	121

<sup>1</sup>The figures were rounded; details may not add up to totals

Source: Hungary, Statisztikai Hozponti Hivatal,  
Statisztikai Idoszaki Kozlemenyek, No. 76,  
pp. 72-146.

TABLE I-6

ACTIVE EARNERS BY ECONOMIC SECTORS<sup>1</sup>  
 (in thousands, beginning of the year)

Year	Industry	Construc- tion	Communi- cations	Trade	Non- Productive	Non-Agri- cultural	Agri- cultural	Total
1949	780	76	162	213	601	1832	2191	4023
1950	829	133	166	221	683	2032	2135	4167
1951	844	204	185	237.5	728	2199	2112	4311
1952	925	264	201	231	692	2313	2053	4367
1953	963	300	218	237	755	2472	1934	4406
1954	1088	264	232	239	713	2535	1910	4445
1955	1132	219	231	270	719	2570	1952	4522
1956	1144	218	252	281	740	2635	1990	4625
1957	1120	224	246	278	696	2564	2032	4595
1958	1257	232	246	294	665	2663	2008	4671
1959	1266	250	264	295	699	2775	1979	4754
1960	1324	269	282	314	708.5	2897	1929	4826
1961	1361	265	290	331	748	2993	1783	4776
1962	1394	266	293	329	782	3064	1701	4765
1963	1444	281	299	344	803	3171	1634	4805
1964	1504	285	307	367	836	3298	1560	4858

<sup>1</sup>Details will not necessarily add up to totals because of rounding.

Source: Hungary, Statisztikai Központi Hivatal, Statisztikai Idoszaki Közlemenyek, No. 76, pp. 72-146.

TABLE I-7

MIGRATION IN AND OUT OF AGRICULTURE  
(in thousands)

Year	Active earners January 1	Net increase or decrease during the year	Total (1) (2)	Active earners December 31	Transfer of labor in (+) or out (-)	Transfer ex- pressed as % of January 1 of each year
	(1)	(2)	(3)	(4)	(5) (4) - (3)	(6)
1949	2191	46	2237	2135	-102	-4.7
1950	2135	49	2184	2112	- 72	-3.7
1951	2112	15	2127	2053	- 73	-3.5
1952	2053	- 3	2050	1934	-116	-5.7
1953	1934	6	1940	1910	- 30	-1.6
1954	1910	29	1939	1952	+ 13	+ .7
1955	1952	28	1980	1990	+ 10	+ .5
1956	1990	23	2013	2032	+ 19	+1.0
1957	2032	23	2055	2008	- 47	-2.3
1958	2008	12	2020	1979	- 41	-2.0
1959	1979	+12	1991	1929	- 62	-3.1
1960	1929	-99	1830	1783	- 48	-2.5
1961	1783	-56	1727	1701	- 26	-1.5
1962	1701	-11	1690	1634	- 56	-3.3
1963	1634	- 9	1625	1560	- 65	-4.0

Source: Hungary, Statisztikai Központi Hivatal, Statisztikai Idoszaki Közlemenyek, No. 76, pp. 72-146. See also the table on p. 18.

TABLE II-1  
 INDEX OF NET AGRICULTURAL OUTPUT, 1949-1965  
 1949=100

Year	Official	Czirjak's <sup>1</sup>
1949	100	100
1950	112	98.4
1951	133	106.4
1952	83	97.4
1953	115	89.3
1954	110	96.9
1955	127	117.9
1956	106	112.5
1957	124	124.6
1958	129	130.2
1959	133	114.2
1960	119	99.9
1961	114	102.5
1962	115	100.8
1963	121	111.6
1964	126	115.0
1965	113	101.2

Source: Laszlo Czirjak, Hungarian Agricultural Production and Value Added 1934-1938 and 1946-1965 (New York: Columbia University, Research Project on National Income in East Central Europe, 1967), p. 42.

<sup>1</sup>It should be noted that in no year between 1949 and 1965 did farm output reach the pre-World War II level; indeed, in most years it was substantially below it.

TABLE II-2  
 CONSUMER PRICE INDEX OF LABORERS AND EMPLOYEES  
 1949=100

Year	Food	Clothing	Manufac- tured Goods	Heating & Lighting	Services	Total
1949	100	100	100	100	100	100
1950	112.9	103.6	98.3	101.3	102.6	105.7
1951	148.3	116.0	99.3	107.3	104.5	127.7
1952	220.0	162.4	140.8	110.3	114.8	179.1
1953	219.2	161.3	137.3	124.2	115.7	178.3
1954	209.7	155.5	133.3	128.7	115.5	169.6
1955	203.4	156.2	133.3	128.7	115.6	168.2

Source: Hungary, Kozponti Statisztikai Hivatal,  
Statisztikai Ev-konyv 1949/1955 (Budapest:  
 1957), p. 298.

TABLE II-3  
COLLECTIVE FARMS IN HUNGARY 1950-1963

Year	(1)	(2)	(3)	(4)
1950	2,185	203	17.3	34.5
1951	4,625	216	29.9	119.7
1952	5,110	294	28.0	311.3
1953	4,536	252	46.5	370.2
1954	4,381	247	38.3	250.4
1955	4,816	273	37.1	230.3
1956	2,089	286	42.6	306.0
1957	3,394	242	34.1	119.5
1958	3,507	273	35.0	156.0
1959	4,061	445	50.1	169.0
1960	4,265	857	87.8	724.7
1961	4,205	1081	95.4	1101.7
1962	3,720	1247	96.2	1278.2
1963	3,612	1296	96.8	1241.9

- (1) Number of collective farms; total producers cooperatives; from 1959 on the data exclude cooperative groups.
- (2) Average size of collective farms; excludes private plots. Average farm size calculated from official data of agricultural land held by cooperative farms. From 1959 on producers cooperatives only.
- (3) Percentage of agricultural area held by state and collective farms; includes private plots.
- (4) Number of active members on January 1st each year.

Source: Columns (1), (2), and (3)  
U.S. Department of Agriculture, Agricultural Statistics of Eastern Europe and the Soviet Union 1950-1966, ERS-Foreign No. 252, pp. 22-25.

Column (4)  
Hungary, Statisztikai Központi Hivatal,  
Statisztikai Idoszaki Közlemenyek, No. 76,  
pp. 140-41.

TABLE II-4

GROSS DOMESTIC FIXED INVESTMENT IN THE SOCIALIST SECTOR  
DISTRIBUTION BY ECONOMIC BRANCHES

	Average of 1950-1953	Average of 1954-1956	Average of 1957-1963
Industry	44.3	44.6	44.5
Building Industry	3.1	1.3	2.0
Agriculture	11.6	21.2	15.1
Transport & Communications	14.6	8.2	12.4
Trade	2.3	2.9	3.4
Communal Branches	24.1	21.8	22.6
Total	100.0	100.0	100.0

Note: The calculations are based on official data at current forints. The yearly percentage ratios were arithmetically averaged to derive the average period percentage.

Source: Table II-9.

TABLE II-5

DISTRIBUTION OF AGRICULTURAL INVESTMENT AMONG FARM  
SECTORS,<sup>1</sup> 1950-1963  
(million forints)

Year	Total	State Farms	State Forests	Collective Farms	Machine Tractor Stations	Land Improvement	Other <sup>2</sup>
1950	950	374	114	67	280	0	115
1951	1386	656	193	192	270	0	75
1952	2036	876	206	485	386	0	84
1953	2221	998	216	361	351	0	295
1954	2670	1046	313	300	552	0	459
1955	2665	982	373	341	444	0	526
1956	1794	704	202	339	326	0	223
1957	1256	779	143	n.a.	65	128	141
1958	2768	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1959	5725	1526	220	n.a.	1189	409	2381
1960	7574	1711	232	n.a.	1778	352	3501
1961	5800	1438	212	3133	552	287	178
1962	7113	1942	271	3600	795	299	206
1963	8842	2432	302	4259	1026	560	263

<sup>1</sup>Appropriated funds for the year in current prices. Investments include contributions from state budget and investment funds of collective farms.

<sup>2</sup>Not identified; n.a. = not available

Source: U.S. Department of Agriculture, Agricultural Statistics of Eastern Europe and the Soviet Union 1950-1966, ERS-Foreign 252, 1969, p. 28.

TABLE II-6  
 SELECTED AGRICULTURAL INPUTS, 1950-1964

Year	Tractors in 15 h.p. units (end of year) Thousands	Number of Grain Combines <sup>1</sup>	Fertilizer availability (plant nutrients) 1000 tons
1950	12.7	25	35.2
1951	13.0	160	48.7
1952	13.4	764	46.0
1953	14.3	1657	47.9
1954	17.7	2274	65.4
1955	23.7	2227	54.3
1956	26.2	2269	54.7
1957	26.7	2346	77.1
1958	27.6	2324	106.6
1959	36.4	n.a.	171.5
1960	47.9	4167	167.5
1961	52.7	4698	215.2
1962	61.1	5604	274.4
1963	71.8	7014	299.6
1964	83.8	7957	342.2

<sup>1</sup>No Census date given.

Source: U.S. Department of Agriculture, Agricultural Statistics of Eastern Europe and the Soviet Union (Economic Research Service-Foreign No. 252), 1969, pp. 32-34.

TABLE II-7

INDICES OF NET MATERIAL PRODUCT AND CAPITAL ACCUMULATION  
1949=100

Year	Net Material Product	Accumulation <sup>1</sup>	Increase in Fixed Assets
1949	100	100	100
1950	120.6	154.3	120.5
1951	141.2	228.7	185.3
1952	138.5	187.4	222.4
1953	156.7	235.1	242.2
1954	150.3	178.4	197.5
1955	163.7	212.5	210.7

<sup>1</sup>Accumulation consists of increases in fixed assets and in variable funds, i.e., changes in the total value of fixed assets and in working capital.

Source: Hungary, Statisztikai Központi Hivatal  
Statistical Yearbook 1957 (Budapest: 1958),  
p. 51.

TABLE II-8  
 AVERAGE ANNUAL RATES OF GROWTH OF EMPLOYMENT  
 1949-1963

	<u>Entire Period</u>	<u>Sub-Period</u>		
	1949 - 1963	1949 to 1953	1953 to 1956	1956 to 1963
Industry	4.5	6.9	1.0	4.3
Construction	9.3	28.4	-5.4	3.5
Transportation	4.3	7.4	2.0	3.1
Trade	3.7	2.3	5.2	4.0
Non-Productive	2.2	3.9	-0.8	2.7
Agriculture	-2.25	-2.7	2.1	-3.7
Non-Agricultural	4.0	6.7	.4	3.7
Total	1.2	2.0	1.1	0.8

Source: Table I-6

TABLE II-9

ALLOCATIONS OF GROSS FIXED INVESTMENTS, IN THE SOCIALIST  
SECTOR, BY ECONOMIC BRANCHES, 1950-1963  
(millions of 1959 forints)

Year	Indus- try	Building Industry	Agri- culture	Communica- tions and Transport	Trade	Communal Branches	Total
<u>Total (fixed) Investments</u>							
1950	6035	616	1548	3049	442	4108	15800
1951	9672	792	2247	2910	556	5222	21400
1952	11997	568	3328	3844	490	5573	25800
1953	12913	710	3631	2894	519	6634	27300
1954	8014	227	4347	1323	510	4479	18900
1955	7725	160	4361	1549	516	3489	17800
1956	8850	331	2944	1638	552	4085	18400
1957	7938	334	1954	1426	686	5262	17600
1958	10378	315	2790	2408	810	5850	22500
1959	14550	571	4850	3867	1141	6720	31700
1960	16182	893	6064	5431	1190	7440	37200
1961	15093	629	5296	4071	993	7017	33100
1962	16846	764	6341	5310	1146	7293	38200
1963	18050	1134	7892	6453	1482	8589	43600
<u>Percentage Distribution of Total (fixed) Investments</u>							
1950	38.2	3.9	9.8	19.3	2.8	26.0	15800
1951	45.2	3.7	10.5	13.6	2.6	24.4	21400
1952	46.5	2.2	12.9	14.9	1.9	21.6	25800
1953	47.3	2.6	13.3	10.6	1.9	24.3	27300
1954	42.4	1.2	23.0	7.0	2.7	23.7	18900
1955	43.4	0.9	24.5	8.7	2.9	19.6	17800
1956	48.1	1.8	16.0	8.9	3.0	22.2	18400
1957	45.1	1.9	11.1	8.1	3.9	29.9	17600
1958	45.9	1.4	12.4	10.7	3.6	26.0	22500
1959	45.9	1.8	15.3	12.2	3.6	21.2	31700
1960	43.5	2.4	16.3	14.6	3.2	20.0	37200
1961	45.6	1.9	16.0	12.3	3.0	21.2	33100
1962	44.1	2.0	16.6	13.9	3.0	20.4	38200
1963	41.4	2.6	18.1	14.8	3.4	19.7	43600

Source: United Nations, Economic Bulletin for Europe,  
Vol. 18, No. 1 (Nov. 1966), p. 59.

TABLE II-10

## WAGES OF WORKERS IN MANUFACTURING AND IN AGRICULTURE

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1949	572	6864	100	50.7	13528	10320	.76	.37
1950	656	7872	106.8	54.6	14406	11610	.80	.39
1951	700	8400	130.0	67.2	12495	12584	1.00	.48
1952	905	10860	187.4	100.0	10876	11614	1.06	.49
1953	937	11244	186.4	103.2	10890	11068	1.01	.52
1954	1060	12720	178.4	100.0	12720	12344	.97	.43

## Columns:

- (1) Nominal average net monthly wage; the net wage is equal to the average wage less taxes (income and childlessness tax), pension fee, and state loan payments
- (2) Nominal average yearly wage
- (3) Consumer Price Index, 1949=100
- (4) Adjusted Consumer Price Index, 1954=100
- (5) Real Wages per wage earner
- (6) Real consumption (wage) peasantry
- (7) Agricultural wages as a proportion of wages in manufacturing
- (8) Real consumption per capita of the peasantry as a proportion of real wages per wage earner

Sources: Columns (1) and (3), Hungary, Kozponti Statisztikai Hivatal, Statisztikai Evkonyv 1949/1955 (Budapest: 1957), p. 296.  
 Column (4), own computation based on Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyekek, No. 1, p. 70.  
 Columns (5) - (8), own computation.

TABLE II-11

WAGES OF WORKERS IN STATE BUILDING AND CONSTRUCTION  
AND IN AGRICULTURE<sup>a</sup>

Year	(1)	(2)	(3)	(4)	(5)	(6)
1949	630	7560	14901	10320	.70	.34
1950	647	7764	14209	11610	.80	.40
1951	682	8184	12174	12582	1.03	.49
1952	855	10260	10276	11614	1.13	.52
1953	895	10740	10402	11068	1.06	.54
1954	987	11964	11964	12344	1.03	.46

<sup>a</sup>Without the number and wages of industrial apprentices.

Columns:

- (1) Average monthly nominal wages
- (2) Yearly nominal wages
- (3) Real wages of construction and building workers,  
1954=100
- (4) Real consumption (wage) peasantry
- (5) Agricultural wages as a proportion of construction wages
- (6) Peasant's per capita income as a proportion of real  
wages of construction workers.

Sources: Column (1), Hungary, Statisztikai Közpon-ti Hivatal, Statistical Yearbook 1957 (Budapest: 1958), p. 68.  
Columns (2) - (6), own computation.

TABLE II-12

PER CAPITA REAL INCOMES OF PEASANTS  
(in terms of 1954 purchasing power, forints)

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1949	1529	3037	+ 466	5032	456	5488	5022
1950	1837	3377	- 78	5136	447	5583	5661
1951	1835	3767	+ 502	6104	362	6466	5964
1952	1368	3590	-1731	3227	395	3622	5353
1953	1660	2853	+ 840	5352	541	5893	5054
1954	1901	3056	+ 444	5401	617	6018	5574
1955	2410	3215	+ 204	5829	628	6457	6253
1956	2638	3237	- 318	5557	716	6273	6591
1957	2566	3360	+ 537	6463	779	7242	6705

## Columns:

- (1) Net cash income from agriculture (including receipts from sales to the state and on peasant markets)
- (2) Produce consumed on farms (i.e., consumption from own production)
- (3) Net change in stocks
- (4) Real personal income from agriculture
- (5) Farmers' income from wages derived from nonfarm work
- (6) Real agricultural and wage income of farm population; real income (consumption plus increase or minus decrease in stocks)
- (7) Real value of consumption

Source: Hungary, Statisztikai Központi Hivatal, Statistical Yearbook 1957 (Budapest: 1958), p. 269.

TABLE II-13

INDEX OF PER CAPITA REAL PERSONAL INCOME OF PEASANTS  
(in terms of 1954 purchasing power; 1949=100)

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1949	100	100	--	100	100	100	100
1950	120.1	111.2	--	102.1	98	101.7	112.7
1951	120.0	124.0	--	121.3	79.4	117.8	118.8
1952	89.5	118.2	--	64.1	86.6	66.0	106.6
1953	108.6	93.9	--	106.3	118.6	107.4	100.6
1954	124.3	100.6	--	107.3	135.3	109.7	111.0
1955	157.6	105.9	--	115.8	137.7	117.7	124.5
1956	172.5	106.6	--	110.3	157.0	114.3	131.5
1957	167.8	110.6	--	128.4	170.8	132.0	133.5

## Columns:

- (1) Net cash income from agriculture
- (2) Produce consumed on farms
- (3) Net change in stocks
- (4) Real personal income from agriculture
- (5) Farmers' income from wages derived from non-agricultural work
- (6) Real income
- (7) Real value of consumption

Source: Table II-12

TABLE II-14

PRICES RECEIVED BY PEASANTS IN THE PRIVATE SECTOR  
OF AGRICULTURE ACCORDING TO MARKETING FORM  
(1949=100)

Year	Marketing Form			Average
	Compulsory Delivery	Contractual free procurement	Free market	
1949	100	100	100	100
1950	100.5	94.7	136.7	115.4
1951	107.8	112.8	270.3	182.7
1952	103.7	120.1	290.3	176.8
1953	102.3	144.6	340.5	217.7
1954	109.1	210.1	325.2	239.4
1955	113.1	210.4	333.6	244.2

Source: Hungary, Statisztikai Központi Hivatal,  
Statisztikai Idoszaki Közlemények, No. 1,  
p. 29.

TABLE II-15  
 INDICES OF PRICES RECEIVED AND PRICES PAID BY  
 PEASANTS AND PARITY RATIO  
 (1949=100)

Year	Prices received by private peasants <sup>1</sup> (1)	Prices paid by private peasants (2)	Ratio (1):(2)/100
1949	100	100	100
1950	108.5	111.1	97.7
1951	162.5	124.1	130.9
1952	152.3	172.5	88.3
1953	181.3	172.0	105.7
1954	212.5	166.6	127.6
1955	225.3	166.7	135.2
1956	244.7	165.4	147.9
1957	290.5	173.5	167.4
1958	270.7	176.6	153.3
1959	265.3	176.4	150.4
1960	280.2	176.2	159.0

<sup>1</sup>These are the prices received by the peasantry for goods sold outside the agricultural sector, i.e., excluding intersectoral prices. They differ therefore from the prices given in Table II-14.

Sources: For the period 1949-1955, Hungary, Statisztikai Központi Hivatal, Statisztikai Idoszaki Közlemenyek, No. 1, p. 52 and p. 69.

For the period 1956-1960, Hungary, Statisztikai Központi Hivatal, Mezőgazdasági Aralakulás 1957-1960 (Budapest, 1962), p. 76.

TABLE II-16

## PROCUREMENT AS PERCENTAGE OF PRODUCTION, SELECTED CROPS

	1950	1951	1952	1953	1954	1955	1956	1957
Wheat	41.8	46.7	58.1	48.5	47.4	53.8	50.4	43.7
Rye	48.1	49.4	57.7	50.4	44.6	57.1	51.6	41.2
Barley	21.5	27.8	42.5	28.3	24.8	20.1	18.8	11.5
Maize <sup>1</sup>	11.9	15.8	26.1	12.8	12.2	16.1	8.4	5.3
Potatoes <sup>2</sup>	20.1	17.2	28.6	16.6	16.5	18.1	18.5	12.4

<sup>1</sup>Average harvest results calculated on the basis of shelled May corn.

<sup>2</sup>Including industrial and seed potatoes.

Source: Computations from Hungary, Statisztikai Kozponti Hivatal, Statistical Yearbook 1957 (Budapest: 1958), pp. 154, 184.

TABLE III-1

MONTHLY AVERAGE EARNINGS BY SECTORS, SELECTED YEARS  
 PERCENTAGE DEVIATIONS FROM EARNINGS IN INDUSTRY

Productive Sectors	1950	1955	1960	1964
Construction	-7	-2	+1	+3
Agriculture (state)	-44	-24	-16	-16
Transport and Communications	-14	-9	-7	-1
Trade	-7	-18	-12	-12
Non Productive Sectors <sup>1</sup>	-5	-9	-4	-1

<sup>1</sup>Communal Services, Public Health, Education (excluding scientific institutions), Banking and Insurance Administration.

Source: Secretariat of the Economic Commission for Europe, United Nations, Incomes in Postwar Europe: A Study of Policies, Growth and Distribution (Geneva: 1967), Chapter VIII, p. 29.

TABLE III-2

THE NONFARM LABOR FORCE AND TOTAL REAL  
FIXED INVESTMENT, 1949-1963

Year	(1)	(2)	(3)	(4)
	Nonfarm labor force (end of year) in thousands	Total fixed real invest- ment (bil- lions of forints)	Change in investment $\Delta I$ in billions of real forints	Change in nonfarm labor force $\Delta L$ in thousands
1949	2032	10.5		
1950	3199	15.8	5.3	167
1951	2312	21.4	5.6	114
1952	2472	25.8	4.4	161
1953	2535	27.3	1.5	63
1954	2570	18.9	-8.4	35
1955	2635	17.8	-1.1	65
1956	2564	18.4	0.6	-71
1957	2663	17.6	-0.8	99
1958	2774	22.5	4.9	111
1959	2898	31.7	9.2	124
1960	2993	37.2	5.5	95
1961	3064	33.1	-4.1	71
1962	3171	38.2	5.1	107
1963	3298	43.6	5.4	127

Source: Column (1), Table I-5.  
Column (2), Table II-9; the entry for 1949  
own estimate.

TABLE III-3

REAL PER CAPITA PERSONAL INCOME OF WAGE EARNERS  
AND PEASANTS 1949-1963

Year	(1)	(2)	(3)	(4)
1949	100	100	100	100
1950	101.3	102.8	101.7	112.7
1951	89.7	97.8	117.8	118.8
1952	82.3	87.5	66.0	106.6
1953	87.0	91.0	107.4	100.6
1954	102.3	115.0	109.7	111.0
1955	106.0	121.8	117.7	124.5
1956	118.3	129.3	114.3	131.2
1957	139.7	148.8	132.0	136.9
1958	145.4	158.2	121.3	137.2
1959	153.1	168.9	134.2	153.2
1960	156.0	172.6	132.8	161.5
1961	156.3	173.1	137.7	157.5
1962	158.6	178.1	147.0	167.8
1963	166.0	191.0	155.0	172.0

## Columns:

- (1) Workers' and employees' real wages per wage earner
- (2) Personal Income of Wage Earners (excluding state rendered services in kind)
- (3) Peasants' per capita disposable personal real income (excluding state rendered services in kind)
- (4) Personal consumption (excluding state rendered services in kind and changes in private assets)

Source: Hungary, Kozponti Statisztikai Hivatal, Statisztikai Idoszaki Kozlemenyek, No. 6 (1963), p. 46, columns 1,2; p. 49, columns 3,4.

Entry for 1963: own computation.

TABLE III-4

INDICATORS OF AGRICULTURAL PRICES PAID TO PRODUCERS  
IN HUNGARY 1952-1958

Form of Marketing	Y e a r s						
	1952	1953	1954	1955	1956	1957	1958
All products sold by private farms by means of:							
Compulsory Delivery	100	99	105	109	108	-	-
Contractual and free sales to the state	100	120	175	175	183	191	180
All sales to the state	100	112	165	193	218	284	264
Sales on free markets	100	117	112	115	115	104	99
All products (excluding interfarm sales) from:							
State farms	100	102	126	188	198	228	237
Agricultural Cooperatives	100	101	140	140	148	192	181
Private farms	100	119	140	148	161	191	178
Private farms (including interfarm sales)	100	123	135	138	145	163	153

Source: United Nations, Economic Commission for Europe, Economic Survey of Europe 1960, Ch. IV, p. 36.

TABLE IV-1

## HUNGARY'S GRAIN IMPORTS, BY QUANTITY, 1960-1965

Commodity	1960	1961	1962	1963	1964	1965
	(1000 tons)					
Wheat and flour	314.4	448.0	225.4	340.4	332.0	122.0
Feed Grain	41.5	184.5	483.7	279.9	268.1	550.3
Total	355.9	632.5	709.1	620.3	600.1	672.3

Source: U.S. Department of Agriculture, The Agricultural Economy and Trade of Hungary, Economic Research Service-Foreign No. 269, p. 14.

TABLE IV-2  
MANPOWER REQUIREMENTS ACCORDING TO SEASONS

Season	1958	1965	Difference
	(1000 peasants)		
March-October	1,786	1,652	-134
July-peak season	2,174	1,919	-255
November-February	1,103	1,040	- 63

Source: Fekete Gyorgy and Timor Janos, "A mezogazdasagi munkakepes nepesseg foglalkoztatottsaga a masodik ot eves terv idoszakaban," Kozgazdasagi Szemle, May 1961, p. 515.

TABLE IV-3

AGE DISTRIBUTION OF ACTIVE EARNERS IN AGRICULTURE  
AND NONAGRICULTURAL SECTOR

Class	Active Earners (%)			
	In Agriculture		In Nonagricul- tural Sectors	In Agricultural Cooperatives <sup>1</sup>
	Jan. 1 1949	Jan. 1 1960	Jan. 1, 1960	June 30, 1961
Below 20	15.7	9.6	8.1	3.1
20-39	37.0	32.1	53.3	27.8
40-49	18.1	16.4	18.7	20.2
50 and over	29.2	41.9	19.9	48.9
Total	100.0	100.0	100.0	100.0

<sup>1</sup>Excluding pensioners.

Source: Palfai Istvan, "A mezogazdasag munkaerohelyzete,"  
Statisztikai Szemle, February 1963, p. 121.

## APPENDIX

It has been suggested to me by Professor Harry I. Greenfield, of Queens College of the City University of New York, that it might be useful to compute a coefficient of intersectoral labor shift. This coefficient is defined as the ratio of:

$$\frac{\% \text{ change in outmigration}}{\% \text{ change in urban rural income differential}}$$

This coefficient measures the strength of the monetary incentive to migrate. To illustrate, let us assume the coefficient to equal 2. This might be interpreted, then, to mean that a 1% change in income differentials is associated with a 2% change in outmigration, i.e., off-farm migration is responsive to changes in income differentials. If the coefficient is less than 1, it would suggest the reluctance of peasants to migrate, i.e., outmigration is inelastic relative to income differential changes.

There are a number of conceptual and statistical problems involved in the actual computation of this coefficient. To begin with, this coefficient assumes that the key factor behind outmigration is a change in income differential. While undoubtedly many peasants migrate because they anticipate earning more, outside of agriculture, one should not forget that there are many other reasons for outmigration, e.g., collectivization-push, better possibilities for personal advancement, and the like. Another source of difficulty is

the proper time period for which the coefficient should be computed. That is, should it be computed on a yearly basis, or perhaps for every five year period? Using a long time period the ceteris paribus conditions are certain to be violated. Finally, the question of lagged response of farmers to a change in income differentials should be considered. It is likely that off-farm migration in period  $t$  depends on the movement in income differentials in period  $t-1$ . Alternatively stated, most probably a change in differentials in the present period affects outmigration in the subsequent period. It might also be that the peasants are more responsive, in the short run, to money wage differentials than to real wage differentials.

In addition to these difficulties, there are statistical problems involved. Comparisons between the income levels of wage earners and peasants are known to be problematical. Measuring small changes in these differentials is extremely difficult and hazardous. In the case of Hungary, data were simply not available to permit the computation of this coefficient for the entire period.

When the coefficient was computed for the sub-period 1949-1953, using money incomes and lags, the record seemed to show a behavior contrary to the implied hypothesis. That is, despite a significant deterioration in the urban workers' relative income position during 1949-1952 (21%) there was an unexpected substantial outmigration (13%) between 1950 and 1953. The explanation lies in the fact that collectivization and/or other considerations were probably more important in deciding whether to migrate or not.

## BIBLIOGRAPHY

### A. Hungarian Publications

#### 1. Official

In English:

Hungarian Central Statistical Office, Statistical Yearbook 1957. Budapest, 1958.

\_\_\_\_\_. Hungary Today 1965. Budapest, 1966.

\_\_\_\_\_. Statistical Pocket Book of Hungary 1970. Budapest, 1971.

In Hungarian:

Kozponti Statisztikai Hivatal, Statisztikai Evkonyv 1949-1945. Budapest, 1957.

\_\_\_\_\_. Adatok es Adalekok a Nepgazdasag Fejlodesenek Tanulmanyazasahoz, 1949-1955. Budapest, 1957.

\_\_\_\_\_. Mezogazdosagi Aralakulas 1957-1960. Budapest, 1962.

\_\_\_\_\_. Statisztikai Idoszaki Kozlemenyek, No. 1, 1957.

\_\_\_\_\_. \_\_\_\_\_, No. 6, 1963.

\_\_\_\_\_. \_\_\_\_\_, No. 7, 1963.

\_\_\_\_\_. \_\_\_\_\_, No. 76.

#### 2. Non-Official

In English:

The First Five-Year Plan of the Hungarian People's Republic. Budapest, 1950.

Kornai, Janos. Overcentralization in Economic Administration. London: Oxford University Press, 1959.

Nagy, Imre. On the Activity of the Government in the Past Six Months and the Tasks for 1954. Speech of the Chairman of the Council of Ministers of the Hungarian People's Republic, January 23, 1954.

Timar, Janos. Planning the Labor Force in Hungary. New York: International Arts and Science Press, 1966.

Vajda, Imre. The Second Five-Year Plan in Hungary. Budapest: Pannoria Press, 1962.

In Hungarian:

Kozgazdasagi Szemle (Economic Review)

Berettyan, Laszlo and Timar, Janos, "A nepgazdasag munkaero helyezete a II oteves terv idoszakaban" (The Labor Power Situation of the Peoples' Economy in the Period of the Second Five-Year Plan), No. 7 (1961), p. 774.

Csete, Laszlo, "A termelo szovetkezeti munkaerohelyzetel kapcsolatos gazdasagi problemak" (Economic Problems Connected with the Manpower Situation of Cooperative Farms), No. 10 (1963), pp. 1182-94.

Denes, Kovach, "Elelmiszerfogyasztas Magyarorszagon az 1950-1955 evekben" (Food Consumption in Hungary in the Period 1949-1955), No. 1 (1958), pp. 91-100.

Dimeny, Imre, "A magyar mezogazdasag feladatai a part VIII Kongresszusa utan" (The Tasks of Hungarian Agriculture Following the Eighth Party Congress), No. 2 (1963), pp. 130-43.

Fekete, Gyorgy and Timar, Janos, "A mezogazdasagi munkakepes nepsseg foglalkoztatottsaga a masodik oteves terv idoszakaban" (The Labor Power Position in Agriculture During the Period of the Second Five-Year Plan), No. 5 (1961), pp. 513-36.

Galla, Laszlo, "Az alloeszkoz-gazdalkodas nehany problemaja" (Some Problems of the Economy of Fixed Goods), No. 2 (1960), pp. 136-48.

Pardi, Imre, "A magyar nepgazdasag fejlodese a II, oteves terv idoszakaban" (The Development of the Hungarian National Economy in the Period of the Second Five-Year Plan), No. 11 (1961), pp. 1265-83.

Szabo, Joseph, "A harom eves terv nehany fob vonasa" (Some of the Main Features of the Second Three-Year Plan), No. 7 (1958), pp. 673-87.

Timar, Janos, "A munkaero-gazdalkodas tervszerusege a szakmunkas-szukseglet es fedezet tervezese" (The Planned Nature of the Manpower Economy - The Planning of the Requirement and Supply of Skilled Workers), No. 6 (1960), pp. 649-69.

Vagi, Ferenc, "A paraszti termelés és realjövédalom alakulása" (Peasant Production and Real Income Development), No. 3 (1958), pp. 240-56.

Vilmos, Saghy, "A mezőgazdasági és felvásárlás fejlődése és jelenlegi helyzete" (The Development and Present Position of Agricultural Production and Purchasing), No. 89 (1960), pp. 909-25.

Statisztikai Szemle (Statistical Review)

Mészáros, István, "A mezőgazdasági termelés munkaerő szükséglete" (The Manpower Requirements of Agricultural Production), April 1952, pp. 287-95.

Palfai, István, "A mezőgazdaság munkaerőhelyzete" (Agriculture's Manpower Conditions), February 1963, pp. 115-37.

B. United Nations Publications

Economic Commission for Europe, Economic Survey of Europe in 1956. Geneva, 1957, Chap. I.

\_\_\_\_\_. Economic Survey of Europe in 1957. Geneva, 1958. Chap. VII.

\_\_\_\_\_. Economic Survey of Europe in 1960. Geneva, 1961. Chap. IV.

Economic Bulletin for Europe, Vol. 18, No. 1 (November 1966).

Secretariat of the Economic Commission for Europe, Some Factors in Economic Growth in Europe During the 1950s. Geneva, 1964.

\_\_\_\_\_, Incomes in Postwar Europe: A Study of Policies, Growth and Distribution. Geneva, 1967.

C. United States Government Publications

U.S. Department of Agriculture, Economic Research Service--Foreign No. 252, Agricultural Statistics of Eastern Europe and the Soviet Union 1950-1966. 1969.

\_\_\_\_\_, --Foreign No. 269, The Agricultural Economy and Trade of Hungary. 1969.

\_\_\_\_\_, \_\_\_\_\_, The U.S.S.R. and Eastern European Agricultural Situation, Review of 1965 and the Outlook for 1966. 1966.

U. S. Department of Commerce, The Labor Force of Hungary,  
International Population Statistics Report, Series P-90,  
No. 18.

#### D. Miscellaneous

- Balassa, Bela A. The Hungarian Experience in Economic Planning. New Haven: Yale University Press, 1959.
- Czirjak, Laszlo. Hungarian Agricultural Production and Value Added 1934-1938 and 1946-1965. New York: Columbia University, Research Project on National Income in East Central Europe, 1967.
- Clark, Colin and Haswell, Margaret. The Economics of Subsistence Agriculture. New York: St. Martin's Press, 1966.
- Enke, Stephen. Economics for Development. New York: Prentice-Hall, Inc., 1963.
- Fei, John C. H. and Ranis, Gustav. Development of the Labor Surplus Economy: Theory and Policy. Homewood, Ill.: Richard D. Irwin, Inc., 1964.
- Gamarnikow, Michael. Economic Reforms in Eastern Europe. Detroit: Wayne State University Press, 1968.
- Heller, Andor. No More Comrades. Chicago: Henry Regency Press, 1957.
- Helmreich, Ernst C., ed. Hungary. New York: Frederick A. Praeger, 1957.
- International Institute of Agriculture, International Yearbook of Agricultural Statistics 1938-39 and 1939-40. Rome.
- Kovacs, Imre, ed. The Fight for Freedom. New York: Waldon Press, 1966.
- Lewis, W. Arthur. "Economic Development with Unlimited Supplies of Labor," The Manchester School, May 1954, pp. 139-91.
- Moore, Wilbert E. Economic Demography of Eastern and Southern Europe. Geneva: League of Nations, 1945.
- Mellor, John W. The Economics of Agricultural Development. Ithaca, N.Y.: Cornell University Press, 1966.
- Rosenstein-Rodan, Paul N. "Problems of Industrialization of Eastern and South-Eastern Europe," Economic Journal (June-September, 1943), pp. 202-11.

Warriner, Doreen. Economics of Peasant Farming. London:  
Oxford University Press, 1964.

Zagoroff, S. D., et al. The Agricultural Economy of the  
Danubian Countries 1935-45. Stanford, Calif.: Stanford  
University Press, 1955.