

ELEUTHERIOS N. BOTSAS

Oakland University

## SOME ECONOMIC ASPECTS OF SHORT-RUN GREEK LABOR EMIGRATION

---

### I. INTRODUCTION

Traditionally, the economic forces that set into motion international mobility of labor have been divided into «pull» and «push». The former may be said to represent the demand for labor, and the latter the supply of labor. Useful as it may be for countries with marginal differences in per-capita income, such an analysis is of questionable validity in the case of labor mobility from countries of low income to countries of higher income, especially when the incomes of the former countries rise faster than the incomes of the latter. Moreover, the importance of «friends and relatives» as a source of first-hand information has been neglected in the traditional literature. I shall attempt in this paper to show not only the inability of the traditional concepts to explain Greek emigration but also the importance of first-hand information in international labor mobility. Therefore, three hypotheses will be tested : (1) employment-ratio hypothesis, (2) wage-rate differentials hypothesis, and (3) information hypothesis. The first hypothesis states that short-run migration from Greece to Germany depends on the respective unemployment rates. The second hypothesis states, on a priori grounds, that short-run migration depends on the relative movements of wage-rate differentials.

Belton M. Fleisher has argued that «we should expect year-to-year variations in the level of migration to be more closely associated with the unemployment rate (or some other measure of job availabilities) than with relative inter-regional wage rates»<sup>1</sup>. With respect to short-run versus long run, the International Labor Office has argued that «immigrants in general often seem less interested in immediate economic

---

1. Belton M. Fleisher, «Some Economic Aspects of Puerto Rican Migration to the United States», *Review of Economics and Statistics*, XLV (1963), p. 249.

advantages than in long-term opportunities in themselves and their children ...»<sup>2</sup>. Such arguments may be valid when wage differentials are not large enough to offset the costs of emigration and the premium of uncertainty, and when the decision to migrate is irreversible. On a priori grounds, there is nothing to justify such assumptions. If international labor mobility is a response to economic differentials, then both wages and employment probability should play a role in explaining migration.

Unemployment cannot be neglected in any international labor-mobility study. The argument that unemployment is the sole, or even the dominant, determinant of international migration, irrespective of wages, implies that workers prefer work to idleness, regardless of earnings. Moreover, since income is the product of both wages and employment, why should workers be insensitive to wage differences? Indeed, one would expect, on a priori grounds, that as long as the income differential between two countries is large enough to more than offset the cost of mobility and the premium of uncertainty, workers will prefer the uncertain but high income of the high-wage country to the certain «subsistence» income of the low-wage country.

The third hypothesis, which, to my knowledge, has not been explored in the past, is a more difficult hypothesis to cope with. In essence, it argues that differences in unemployment and wages are meaningless unless they are transmitted to, and translated for, the workers in the country of emigration. Today, employers and inter-governmental agencies distribute information about job vacancies, wages, cost of living, and other relevant variables. But first-hand information, based on the experience of friends, relatives, and fellow countrymen, performs a more useful function than information based on German sources. In a poll of Dutch emigration, for example, it was found that «the structure, volume, and trend of annual Dutch emigration are in a great measure determined by the presence of fellow nationals who emigrated previously to the different countries of destination»<sup>3</sup>. Moreover, the number of friends and relatives living abroad provides not only first-hand information but also temporary shelter, food, and psychological compassion so that the emigrand will not feel alone in a foreign environment. Further-

---

2. International Labour Office, *International Migration, 1945-1957* (Geneva 1959), p. 252.

3. M. Zañartu, «Immigration and Development», *International Migration*, I (Nov. 1962), p. 92.

more, this hypothesis states that intra-European migration is not irreversible.

## II. THE BEHAVIOR OF GREEK EMIGRATION TO GERMANY

Permanent Greek emigration to other European countries, in general, and West Germany, in particular, is a recent phenomenon. Up to the early 1920's, the United States used to absorb the bulk of Greek emigrants. In the inter-war period, emigration was negative. In the early postwar years, gross emigration to the rest of the world gained momentum slowly, but, even as late as 1959, it amounted to only about 24 thousand<sup>4</sup>. Diagram 1 depicts the migratory movements for the recent years.

Intra-European migration is far from being permanent. The Greek authorities classify all those who state *ex ante* intentions of staying abroad for more than one year as permanent emigrants. In a survey conducted by the Greek periodical, *Epoches*, it was found that only a small proportion of those questioned declared that they would stay in Germany for an indefinite period of time. The results of that questionnaire are reproduced in Table 1.

It should be borne in mind that the sample is too small to permit any definite conclusions. Moreover, it is estimated that about 25 percent of the emigrants repatriate every year. On the other hand, a large number of those who declare *ex ante* intentions of temporary emigration become permanent emigrants. This is especially true with respect to transoceanic emigration. The majority of foreign workers in Germany, however, regard their migration as a temporary «exile» rather than as a permanent change of home. Table 2 shows the high rates of emigrants returning to their respective countries.

---

4. See Eleutherios N. Botsas, *Some Economic Aspects of International Migration: The Case of Greek Labor Mobility* (unpublished Ph. D. dissertation, Wayne State University, 1965), Chapters 2-3.

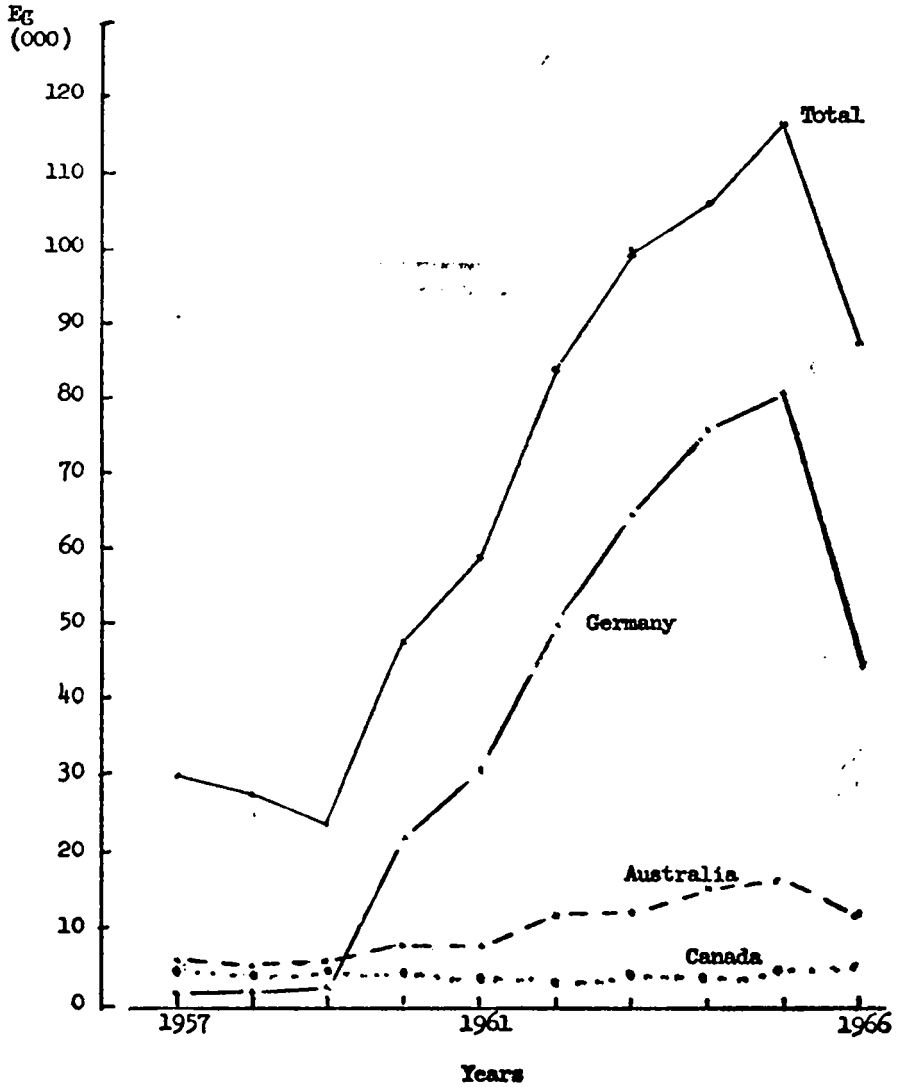
FIGURE 1. *Permanent Greek Emigration, 1957-1966*

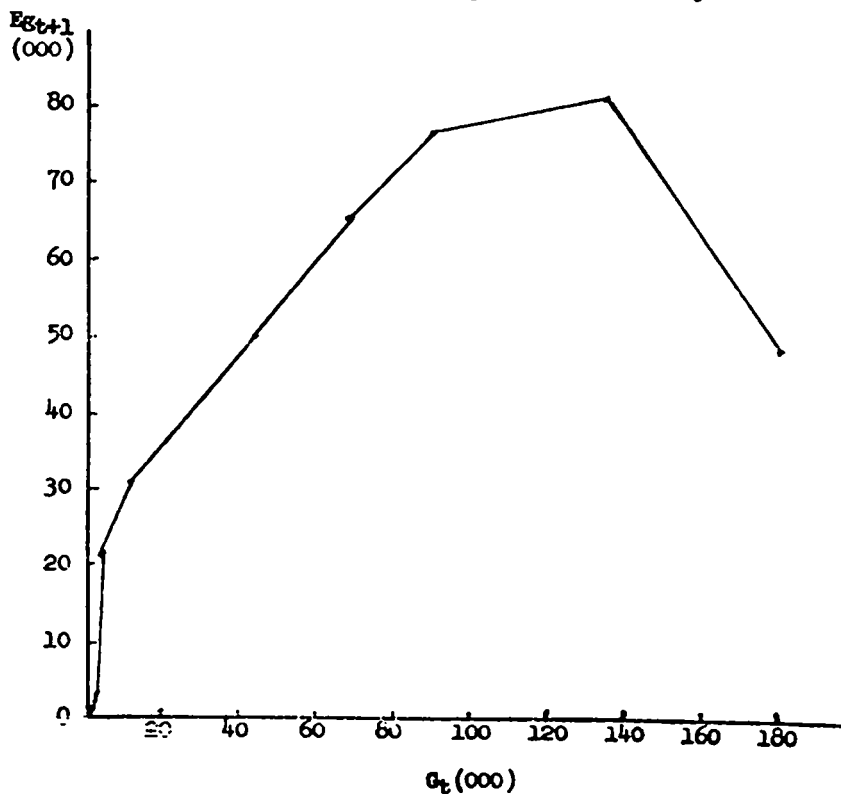
FIGURE 2. *Gross Emigration to Germany*

TABLE 1

Duration Trip to Germany	Number of Migrants	
	Before leaving for Germany	Greeks in Germany
As long as it takes to learn a skill	5	5
As long as it takes to save a certain amount	—	3
Until I am drafted	—	4
1-2 years	1	6
2-3 years	5	—
3-5 years	5	5
Over 5 years	5	4
Uncertain period of time	2	14
Forever	1	5
<b>Total</b>	<b>24</b>	<b>46</b>

Source: *Epoches*, No 21, January 1965, p. 20.

T A B L E 2  
*Ratios of Departures of Foreign Workers to Arrivals  
 in Western Germany, 1961 to 1965*

	1961	1962	1963	1964	1965
Total	0.39	0.59	0.69	0.65	0.56
of which :					
Italians	0.51	0.68	0.92	0.94	0.63
Spaniards	0.11	0.41	0.51	0.52	0.51
Greeks	0.14	0.40	0.38	0.42	0.48
Turks	0.30	0.31	0.48	0.17	0.20

Source: U.N., Economic Commission for Europe, Economic Survey of Europe in 1965, Part I, Chapter II, p. 79.

Given these general remarks about the behavior of Greek emigration, we proceed with the test of the hypotheses.

The unemployment-rates and wage-rates differentials hypotheses can be tested in the following way :

$$Eg/LF = A + b_1X_1 + b_2X_2 \dots\dots\dots (1)$$

where Eg = total annual gross emigration from Greece to Germany

LF = total Greek labor force

$$X_1 = \frac{1 - U_2}{1 - U_1}$$

$U_2$  = German unemployment rate

$U_1$  = Greek unemployment rate <sup>5</sup>

$$X_2 = \left( \frac{W_2}{W_1} - 1 \right)$$

$W_2$  = hourly manufacturing wage rates in Germany for male-female mix <sup>6</sup>

$W_1$  = hourly manufacturing wage rates in Greece for male-female mix

To avoid multicollinearity, simple regressions were run for unemployment and wages. Moreover, since the German unemployment-rate is extremely low, employment ratios are better estimates than  $U_1/U_2$  as  $X_1$ . Thus, a least squares estimate of the form :

5. The Greek unemployment-rate estimates exclude unemployed seamen.

6. The wage rates employed here are those reported in I.L.O., Bulletin of Labour Statistics.

$$Eg/LF = A + bX_1 \dots\dots\dots (2)$$

yields the following results (standard errors in parentheses):

$$Eg/LF = -.5795 + .5899 X_1 \dots\dots\dots (2a)$$

(.1825)

The  $R^2$  coefficient is .563 and the T-ratio = 3.2102. Substituting net emigration for gross yields:

$$En/LF = -.7001 + .7018 X_1 \dots\dots\dots (2b)$$

(.3366)

$$R^2 = .42 \text{ and T-ratio} = 2.0848$$

Introducing  $X_2$ , wage-rate differentials, does not improve the estimate by much:

$$En/LF = -.7118 + .7343 X_1 - .0105 X_2 \dots\dots\dots (3)$$

(.3558)            (.0154)

$R^2 = .47$ , and the simple correlation coefficient for  $X_2$  is  $-.134$ , which makes no economic sense.

It appears that the unemployment hypothesis «explains» a major part of the short-run Greek emigration to Germany. If the movements in relative unemployment rates explain that much of emigration, it should also follow that, since German unemployment is close to zero, Greek unemployment should be able to explain at least a major part of Greek emigration. A look at the raw data suggests, however, that the Greek unemployment rate has been declining throughout the period of high emigration. A simple regression of the form:

$$Eg/LF = A + bU_1 \dots\dots\dots (4)$$

yields an  $R^2$  of 0.80, but the correlation coefficient has the wrong sign, suggesting the possible effects of emigration on unemployment rather than explaining emigration<sup>7</sup>.

The wage hypothesis is of no greater help in explaining Greek emigration, either gross or net. Disaggregating the data into males and females (the subscripts «m» and «f» stand, respectively, for males and females), we can define two new variables,  $X_4$  and  $X_5$ , where

$$X_4 = \left( \frac{W_{m2}}{W_{m1}} - 1 \right)$$

$$\text{and } X_5 = \left( \frac{W_{f2}}{W_{f1}} - 1 \right)$$

7. A cross-sectional estimate of regional Greek unemployment with regional gross emigration was also run, but no significant correlation was found.

The least squares estimates obtained from this disaggregation are :

$$Eg_m/LF_m = .0288 - .0108 X_4 \dots\dots\dots (5)$$

(.0067)

$$R^2 = .30 \qquad (R = -.5489)$$

$$Eg_f/LF_f = .0254 + .0151 X_4 \dots\dots\dots (6)$$

(.0018)

$$R^2 = .924$$

Lack of data on the sex composition of the returning emigrants does not permit a test of net emigration.

The wage-rate differentials hypothesis fails to «explain» any part of emigration for males. Moreover, it consistently yields the «wrong» sign between wage-rate and emigration movements. The hypothesis is, however, in harmony with female emigration. This may be due to the lower status that Greek females enjoy compared with their German counterparts, as well as to the fact that Greek women migrate to accumulate enough savings for a dowry. The employment ratio for female emigration yields :

$$Eg_f/LF_f = .7631 + .7806 X_1 \dots\dots\dots (2c)$$

(.3253)

$$R^2 = .418$$

Since  $X_1$  is based on the overall unemployment rates rather than on unemployment among women, equation (2c) underestimates the relative importance of unemployment as an explanatory variable of Greek female emigration. The unemployment rate among Greek women is much higher than the overall rate. Given the dominant role of the wage-rate differentials, however, the contribution of unemployment rates would be negligible.

The third hypothesis, that the annual flow of migration depends on the number of countrymen living in Germany, seems more in agreement with the data than the other two hypotheses. It is postulated that the annual flow of Greek labor force to Germany depends on the net number of Greeks who lived in Germany the previous year,

$$Eg_t/LF = AG_{t-1} \dots\dots\dots (7)$$

where  $G$  = the number of Greeks (in thousands) in Germany. The following estimates are obtained :

$$\log (Eg_t/LF) = 3.2699 + .7814 \log G_{t-1} \dots\dots\dots (7a)$$

(.1229)

$$R^2 = .835, \text{ and } T\text{-ratio} = 6.36$$

### III. EVALUATION OF THE INFORMATION HYPOTHESIS

The information hypothesis suggests that workers do not necessarily migrate when differences in unemployment and wage rates are maximum but rather when such differences are translated into terms that can be understood, analyzed, and compared by prospective migrants. The earnings of a German worker in Germany are of no concern to the Greek worker in Greece. He is interested in earnings, cost of living, social conditions, etc., of the Greek rather than the German worker in Germany. Such information provides the basic elements of his decision whether or not it pays to go to self-exile for some time with the hope of improving his economic status in the future.

The migrant may improve his future by acquiring certain skills which he transfers to Greece and/or by accumulating capital with which he can become a small entrepreneur in Greece. This is supported by both the high rate of returning Greeks and emigrant remittances. Moreover, «recent surveys of foreigners in Western Germany suggest that a majority regard employment abroad as temporary. Usually they work hard, welcome overtime work, and adopt a modest standard of living in order to earn and save as much as possible before making a fresh start in their home country»<sup>8</sup>.

There have been constant Greek complaints that the majority of Greeks in Germany acquire either no skills or skills for which there is no demand in Greece. If this is the case, then it may appear that the above argument falls apart. This is not the case, however, Those who acquire «no skills» acquire something which they lacked in Greece : capital and exposure to industrial discipline. From the point of view of the requirements of the Greek economy, this may not be the best alternative, but, from the point of view of the workers, this may be the only workable alternative.

One may be tempted to conclude that workers emigrate in order to be close to their friends and relatives. This is not the case, however. Greek workers, by and large, have more friends and relatives in Greece than in Germany. The role of fellow countrymen is one of help, demonstration, and free information. For the worker to migrate, it must be true that the present value of the expected combined stream of income

---

8. U.N., Economic Commission for Europe, *Economic Survey of Europe in 1965*, Part I, Chapter II, p. 80.

in Germany and Greece must be greater than the present value of his stream of income in Greece alone.

This type of analysis faces this problem of migration in the framework of human capital. Therefore, question of time horizon, discount rates, wages, and employment probability must be raised<sup>9</sup>. Since there is evidence that foreign workers in Germany consider their immigration as a temporary phenomenon, let us assume that (1) they stay, on the average, five years in Germany; (2) that whatever advantage they gain in Germany, in terms of earning power, over the alternative of staying in Greece will last for five more years (these two assumptions, which seem to be very realistic, define the relevant time horizon); (3) that the relevant wages are the average German wage rate for those who migrate, whether they are in Germany or in Greece;<sup>10</sup> and (4) that the employment probability is that of Greece when they are in Greece, and that of Germany when they are in Germany<sup>11</sup>.

Under these assumptions, migration depends on differences in the present values of the two streams of income<sup>12</sup>,  $Y_1$  for Greece, and  $Y_2$  for Germany, or

$$Eg/LF = A + b(Y_2 - Y_1) \dots\dots\dots (8)$$

$$\text{where } Y_1 = \sum_1^n \left[ W_1 Pe_1 \frac{1}{(1+r_1)^n} \right] \dots\dots\dots (9)$$

$n = 1, 2, \dots, 10$

$W_1$  = annual wage income in Greek manufacturing (in thousand drachmae)

$Pe_1$  = probability of being employed in Greece (=  $1-U_1$ )

$r_1$  = the Greek discount rate

$$Y_2 = \sum_1^j \left[ W_2 P_2 \frac{1}{(1+r_2)^j} \right] + \sum_j^n \left[ W_2 Pe_1 \frac{1}{(1+r_1)^{n-j}} \right] \dots\dots\dots (10)$$

9. I assume here that the life expectancy does not change.

10. The German wage rate for those who return to Greece is a proxy for real wages rather than money wages paid in Greece.

11. Since Greek data on unemployment are far from reality, I doubled the unemployment rate for every year. Thus, the Greek employment rate employed here has been corrected.

12. Relative differentials, or  $\frac{Y_2 - 1}{(Y_1)}$  were also tested and, as expected, showed no correlation.

$W_2$  = annual wage income in German manufacturing (in thousand drachmae)

$Pe_2$  = probability of being employed in Germany (=  $1-U_2$ )

$r_2$  = the German discount rate

$j$  = the number of years spent in Germany

The problem of a unique discount rate that is present in capital theory is also present here. The German bank-discount rate has fluctuated around 5 percent, while the discount rate of the Bank of Greece has declined from 11 percent in 1958 to 5.5 percent in 1966. There is no theoretical justification, however, for one to use bank rates for the migrants. Moreover, it is not clear at all whether the emigrants consider the German discount rate. It was decided, therefore, to use three discount rates instead of one: (1)  $r_1 = r_2 = .08$ , (2)  $r_1 = .08$ ,  $r_2 = .06$ , and (3)  $r_1 = r_2$  = the discount rates of the bank of Greece. The following least squares estimates were obtained <sup>13</sup>:

$$Eg/LF = -1.7140 + .01330 (Y_2 - Y_1) \dots \text{(for } r_1 = r_2 = .08) \dots \dots \text{(9a)}$$

$$(.3243)$$

$$R^2 = .83, \text{ and adjusted for degrees of freedom,} = .72.$$

$$Eg/LF = -1.6969 + .01260 (Y_2 - Y_1) \dots \text{(for } r_2 = .06, r_1 = .08) \dots \dots \text{(9b)}$$

$$(.3271)$$

$$R^2 = .83, \text{ and adjusted for degrees of freedom,} = .72$$

and

$$Eg/LF = -1.1824 + .01005 (Y_2 - Y_1) \dots \text{(for Bank of Greece } r\text{'s)} \dots \text{(9c)}$$

$$(.2975)$$

$$R^2 = .86, \text{ and adjusted for degrees of freedom,} = .77$$

#### IV. SUMMARY

An attempt was made to test the following hypotheses of international migration: (1) the unemployment hypothesis, (2) the wage hypothesis, and (3) the «information» hypothesis. The first hypothesis failed to yield the expected results. The second hypothesis is a strong explanation of female emigration, but yields no correlation for the total emigration. Moreover, this hypothesis yields the «wrong» sign for male migration.

The information hypothesis is consistent with both the historical record and resource allocation theory. Indeed, the decision to accept or

13. Net emigration yields results almost identical with those of gross emigration.

reject an offer from an institution is affected by advice received from friends even in the academic community. There are no reasons to expect workers to behave in a different way. On the contrary, in international labor mobility, one should expect the role of information to be more decisive than in the case of inter-regional mobility.

The present results are suggestive rather than conclusive in the theory of international labor mobility. Better statistical data and further research are necessary in this field. It is evident, however, that the «push» forces are irrelevant in the case of Greek emigration.