Tax incentives, discriminatory factor prices and the regional economic problem: the case of Greece

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Abstract: In this article an appraisal of the Greek regional incentive provisions enacted in the past is attempted. At a first stage, the exposition of some theoretical arguments, that should be followed in the planning of every regional incentive process, and which are very well founded, is given. These theoretical arguments are derived from a geometric and algebraic exposition of the regional problem. At a second stage, the Greek regional incentive structure is reviewed to see whether it was in accordance with the powerful theoretical arguments presented. It was shown that no proper consideration was given to the importance of labor subsidies as a means for the solution of the regional unemployment problem, while capital cost differentials existed to an extensive degree. A shift of investment then to developing areas was found, which could have contributed to the provision of regional investment subsidies. But it was indicated that capital intensive industries were those that had caused the shift and thus investment incentive provisions did not succeed in resolving the regional unemployment problem.

Key words: tax incentives, regional economics, discriminatory factor prices

JEL codes: R58

1. Introduction

Discriminatory factor taxation within the same geographical region, but among various industries or even among firms in the same industry, has been shown (Anastasiou, [2]) to exercise its effects on the economy’s total output. Using general equilibrium analysis of production and exchange it was indicated that national output was caused to be at lower levels than the production possibilities of the economy, and this was also manifested for the Greek case. If one wants to analyze the effects of discriminatory factor prices, but now at a regional level, one has to consider the specific characteristics of the regional problem. These characteristics are mainly two. Firstly, that the existence of national wage bargaining imposes fixed wage rates that are faced by all firms. Secondly, one of the two main factors of production, namely labor, is taken to be immobile between various regions.

The first characteristic is mainly derived from casual empiricism (Archibald, [4]) and it can be explained only by the existence of a certain degree of labor market imperfection. It is national wage bargaining that imposes higher rates than the opportunity cost of labor that can be found in various areas.
of different effective demand. The imposition of national wages prevents workers from bidding down wages for creating more jobs, or conversely, firms cannot employ cheaper labor. The characteristic of labor immobility can be attributed to various reasons. One of them is very much related to the unresponsiveness of wage differentials to the marginal product of labor. Higher productivity cannot be met by higher wages and labor with lower productivity (or labor with lower opportunity costs due to excess labor supply) cannot be absorbed due to national wage fixing. Lack of information about prospective labor opportunities, or even to conditions of living, schooling, housing, etc., can be another reason to prevent workers from moving (Sjaastad, [8]). Information is indeed very much crucial to the operation of the labor markets. Finally, potential migrants could have been reluctant to migrate due to certain costs (either pecuniary or ‘psychic’ as they are called) involved in every move.

2. A geometric treatment of the regional problem

Following the explanation of the two labor market characteristics, the regional problem can now be presented. A geometric treatment will be given first, while an algebraic explanation of the same problem with the relevant cures suggested will be presented next. In principle the diagrammatic treatment is a simplified version of the algebraic explanation presented originally by Johansen [5] and extended later by Archibald [4] to a British setting (see Sumner, [10]). The geometric presentation will help clarify the regional problem before any cure is attempted on the basis of theoretical arguments. If we suppose the two producers A and B of goods X and Y to be situated now in two specific geographical regions A and B or +graphically at points A_X and B_Y of the Edgeworth-Bowley box (Fig. 1) and face no factor price differentials, their various isoquants formed by alternatively changing capital and labor endowments should be tangent to each others’ on successive points of the line A_XB_Y. Since labor is assumed immobile and each region’s share is determined, say, by the line L_AL_B, the only possible attainable point on the efficiency locus will be point P (tangency of A_1A_2 and B_3B_4 isoquants). Supposing there is high production activity in region A (taken to be the more developed area), and producer A wanted to increase his production to A_2A_2, equilibrium cannot be attained at point R where B’s product will be B_3B_3, because the excess

![Figure 1: Production and labor immobility](image_url)
labor required for this production is not available in region A. To attain points on the constraint $L_A L_B$ other than P factor prices should differ. So a first observation is noticed relevant to the regional problem and this indicates national production at levels (point Q) below the maximum attainable as defined by the economy's production possibility frontier $A_X B_Y$ (see also Fig. 2). Suppose production takes place at point Q along $L_A L_B$ with A producing $A_2 A_2$ and B producing $B_2 B_2$. Production at this point assumes that factor prices are free to vary so that markets could clear with the appropriate factor price differentials created automatically. If factor prices are decided at a national level, while the labor market is assumed to clear in the region of high production activity (that is producer A, employing all its region's available labor, can still produce at the $A_2 A_2$ level), producer B cannot remain anymore on the level of $B_2 B_2$ production. Using the rest of available capital he can only produce along the horizontal line through Q and at a point of tangency of an isoquant and an isocost line. This will be point S where the isocost at this point has the same slope with producer's A isocost at point Q, taken the slopes of isocosts to represent the marginal rates of technical substitution. Unemployment then of the amount QS in region B will be the result of national wage fixing while the national production will be reduced even further, as indicated by point S in the economy's output possibility plane of Fig. (2). So the two main features of the

![Figure 2: Labour immobility and output](image)

regional problem derived from the above geometric analysis, and which are common to every economy with various regions with a differential degree of development, are indicated to be production below the economy's maximum possibilities and a persistent rate of unemployment in its less developed regions.

### 3. Fiscal policy and the regional problem

Up to now no mention was made about factor price subsidization and more generally on the role of fiscal policy for regional development. This is the next task. Given that labor is assumed to be immobile, unemployment in a region has been suggested to be cured by subsidizing it. This will become clear by developing a powerful theoretical argument attributed to Leif Johansen [5]. He has further indicated the inappropriateness of fiscal policy in providing regionally discriminatory subsidies to capital, a factor that is considered, due to its mobility, to be common to all regions.
Johansen’s argument is developed within a linear programming framework where he assumes the existence of two regions (A and B) each one involved in two production processes, and each one employing two regionally-specific but industrially mobile factors and another factor which is assumed to be common to both regions (that is a perfectly mobile factor). This is of course a more general case than the geometric formulation presented earlier. The notation is as follows:

\[ x_1, x_2: \] the outputs of the two production processes in Region A.
\[ y_1, y_2: \] the outputs of the two production processes in Region B.
\[ V_1, V_2: \] the total amounts available of the two regionally specific factors in Region A.
\[ W_1, W_2: \] the total amounts available of the two regionally specific factors in Region B.
\[ F: \] the total amount available of the common factor (a factor that is not tied to any particular region).

\[ a_{ij}: \] amount of the ith resource of Region A used in the jth production process in Region A.
\[ b_{ij}: \] amount of the ith resource of Region B used in the jth production process in Region B.
\[ g_1, g_2: \] amounts of the common factor F used in the two production processes in Region A.
\[ h_1, h_2: \] amounts of the common factor F used in the two production processes in Region B.

In linear programming analysis \( x_1, x_2, y_1, y_2 \) are the choice variables of the programme and \( a_{ij}, b_{ij} \), their corresponding coefficients. The given information on the availability of resources in each region introduces the following constraints:

\[ a_{i1}x_1 + a_{i2}x_2 \leq V_i \]
\[ a_{21}x_1 + a_{22}x_2 \leq V_2 \]
\[ b_{11}y_1 + b_{22}y_2 \leq W_1 \]
\[ b_{11}y_1 + b_{22}y_2 \leq W_2 \]
\[ g_1x_1 + g_2x_2 + h_1y_1 + h_2y_2 \leq F \]

while the set of nonnegativity restrictions which rules out production of negative outputs is:

\[ x_1, x_2, y_1, y_2 \geq 0 \]

An essential ingredient of the linear programme is also the objective or policy function. This is taken to be the maximization of income derived from the various production processes, i.e.,

\[ R = P_1x_1 + P_2x_2 + Q_1x_1 + Q_2x_2 \]

where the P’s and Q’s are the product prices. While the analysis is confined to only two regions and two production processes it can very well be extended to an arbitrary number of regions and processes (as well as resources) in which case the maximand will be the national income.

The optimal solution to the above problem will indicate the amounts of output to be produced. To find the accounting (or shadow) prices (as are defined in linear programming) of the resources involved in an optimal solution one needs to consider the dual programme. If the choice variables of the dual are called \( r_1, r_2, s_1, s_2, u \), and the rules of transformation are applied to the primal (1) to (3) the dual programme takes the form:

Minimize \( R^* = r_1V_1 + r_2V_2 + s_1W_1 + s_2W_2 + uF \)

Subject to

\[ r_1a_{11} + r_2a_{21} + u g_1 \geq P_1 \]
\[ r_1a_{12} + r_2a_{22} + u g_2 \geq P_2 \]
\[ s_1b_{11} + s_2b_{21} + u h_1 \geq Q_1 \]
\[ s_1b_{21} + s_2b_{22} + u h_2 \geq Q_2 \]

and

\[ r_1, r_2, s_1, s_2, u \geq 0 \]
Obviously the column vector of constants in the primal constraints, after it is transposed, becomes the row vector of coefficients in the dual objective function. Also the row vector of coefficients in the primal objective function is, after it is transposed, the column vector of constants in the dual constraints. The solution of the dual then will provide the values of \( r_1, r_2, s_1, s_2, u \). These values signify economically the valuation of the resource they are related to. This can be seen from (4) which is a function expressed in value terms as it is also its counterpart (3) (profits in, say, euros). These values actually indicate the accounting price (or the price used to formulate production cost) of the \( i^{th} \) resource.

Johansen’s main suggestion is to indicate what the values of these accounting prices ought to be so that profitability calculations made with the help of these prices will indicate which process should be operated. This is done through the correspondence that is established between the optimal solution of the dual and primal programmes. For example, applying the duality theorems indicates that whenever a process (say, \( x_1 \)) belongs to the set of optimal processes (and this process is undertaken, so that \( x_1 > 0 \)) the corresponding condition in (5) will be satisfied as a strict equality, i.e.

\[
r_1a_{11} + r_2a_{22} + u g_1 = P_1
\]  

(7)

This further means that the accounting prices in (7) above should be such that the product price of \( x_1 \) covers exactly the calculated cost. In the case that (7) is not fulfilled (being then a strict inequality), \( x_1 \) should be zero, that is the production process for \( x_1 \) is not operated. So a rule is established as to necessary values of accounting prices for a production process to be operated. It is through these prices then, as discussed below, that regional incentives could operate in trying to correct market imperfections in input prices and ultimately the rate of unemployment. By observing further the system of accounting prices that appear in the dual and can indicate a set of optimal processes, the following principal rule is expressed (Johansen, [5], p. 69):

“The accounting prices which indicate the optimal set of processes must be such that each common factor has the same accounting price in every region, while regional resources (even if they are physically the same) generally have accounting prices which differ from region to region”.

Obviously the accounting prices of physically similar but spatially different factors can differ. Supposing labor to be one such factor, one can see that although market wages in, say, two regions can be the same (arranged for example by some national wage bargaining) the accounting price of labor in the two regions may differ (compare also the earlier exposition of the problem). Regionally differentiated labor subsidies then can be provided to bring the prices on which firms base their decisions into correspondence with those required by the optimality conditions discussed before. According to the above principal rule, one can also see that the prices to be subsidized should not be those of the common factor. If new capital is considered as a common resource, one can see the fallacy of fiscal policies pursued by various governments in providing regionally discriminating capital subsidies.

4. The Greek case

Regional issues that are faced by either developed or developing economies are quite numerous and the regional economic imbalance may be corrected with the contribution of a number of policies available to each government. The aims of the present section are limited and concentrate mainly on manufacturing regional incentive provisions as one form of policy to influence regional economic decisions. The purpose is to try to provide some evaluation of the Greek measures used in relevance also to the theoretical arguments presented earlier. Our concentration on regional incentives for manufacturing is in accordance with the primary concern that Greek authorities have given to the development of the less advanced industrial sector and the attempt made to get Greece out of a quite dominant agricultural structure to a more industrialized one.
a) Capital or Labor Subsidies?

Reviewing the Greek regional incentive legislation\(^2\) what can be observed in general is that the system’s provisions are differentiated in relevance to specific needs of each region, and this is a positive element of the whole system, since national objectives can be met through the regional incentive provisions. There is in fact a close integration between national and regional objectives\(^3\). Concentrating in particular on the provision of capital and labor subsidies one can observe the following: the various incentive schemes applied so far do not seem to have given the proper consideration to the importance of labor subsidies, as they enter investor's cost calculations, for the absorption of the excess labor supply and thus elimination of regional unemployment. Although some of the measures provided require the creation of a certain number of jobs, there is no essential labor premium in the whole system that can fundamentally help in the reduction of regional unemployment hence the maximization of national output. Only a very weak measure relates to the reduction of employers plus employees social insurance contributions, while at the same time the differentiation of capital subsidies is very marked for each region approaching very high levels (up to 150 per cent investment allowance, for example, for the border regions of Area E), to intensify the cost of capital differentials among the various Areas of the country. Given some available data from the past and for easiness of comparisons Table (1) has been constructed to indicate the percentage differences in the cost of the same investment good (either equipment or buildings) between Area A and Areas B and (C+D+E)\(^4\). The use only of investment allowances and accelerated depreciation provisions has been employed, with the relevant rates for each year taken from previously reported regional incentive laws. The percentages of the Table indicate by how much an investment good was cheaper in Regions B and (C+D+E) in comparison to Region A. If one accepts the assumption of the mobility of capital, the common factor of production which should have the same accounting price in every region, one can see the fallacy of the Greek incentive policy in trying to maintain these extreme differences in the price of the common factor. If capital cost differentials can be an extra reason for investment at the regional level (that is there will be a substitution effect), they will have adverse effects on the economy's transformation curve and on production below the possible maximum efficient levels (no output effect) while they are ineffectual in reducing regional unemployment.

Of course the conditions for Greek regional development may be more complicated and more demanding than one can find in developed economies where the effect of labor

\(^2\) From a review of the Greek incentive legislation over the past decades, we find that main regional incentive provisions started to be applied from 1972 onwards (LD 1312/1972, L 331/1974, L 289/1976, L 849/1978) and refer mainly to an extensive use of interest free loans for various manufacturing activities, and the provision from 1981 onwards (L 1116/1981, and L 1262/1982), of different investment grants to regional investing units, in alignment also with EU’s principles and requirements.(Consider for: L=Law, EL=Emergency Law, LD=Legislative Degree).

\(^3\) This is manifested administratively by the fact that there is only one governmental body, the Ministry of National Economy, which has the sole responsibility for both national planning and the formulation of the overall national policy.

\(^4\) Areas C, D, E are interchanging in various Laws. Here, the whole Area is taken to indicate the rest of the country except the Departments belonging to Area A and B. For a description of Areas see later.
Table 1.
Comparison of the User Cost of Capital of Various Regions to Region A
(% differences below Region’s A cost)

<table>
<thead>
<tr>
<th>Year</th>
<th>Area B</th>
<th></th>
<th>Area (C+D+E)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Equipment</td>
<td>Buildings</td>
<td>Equipment</td>
<td>Buildings</td>
</tr>
<tr>
<td>1973</td>
<td>24.6</td>
<td>24.6</td>
<td>51.0</td>
<td>47.8</td>
</tr>
<tr>
<td>1974</td>
<td>38.3</td>
<td>28.8</td>
<td>79.9</td>
<td>57.0</td>
</tr>
<tr>
<td>1975</td>
<td>38.3</td>
<td>28.8</td>
<td>79.9</td>
<td>57.0</td>
</tr>
<tr>
<td>1976</td>
<td>29.8</td>
<td>28.8</td>
<td>62.2(89.9)</td>
<td>57.0(81.8)</td>
</tr>
<tr>
<td>1977</td>
<td>29.8</td>
<td>28.8</td>
<td>62.2(89.9)</td>
<td>57.0(81.8)</td>
</tr>
<tr>
<td>1978</td>
<td>24.9</td>
<td>24.1</td>
<td>55.9(87.9)</td>
<td>50.7(78.8)</td>
</tr>
<tr>
<td>1979</td>
<td>24.5</td>
<td>23.5</td>
<td>55.1(85.8)</td>
<td>49.7(76.8)</td>
</tr>
<tr>
<td>1980</td>
<td>23.5</td>
<td>21.9</td>
<td>53.7(83.1)</td>
<td>48.3(74.4)</td>
</tr>
<tr>
<td>1981</td>
<td>24.3</td>
<td>22.4</td>
<td>44.9</td>
<td>86.8</td>
</tr>
<tr>
<td>1982</td>
<td>24.7</td>
<td>23.0</td>
<td>45.5</td>
<td>45.1</td>
</tr>
</tbody>
</table>

Source: Fiscal provisions given in the various Laws reported earlier in the first footnote, for the calculation of $c$ in Regions B and (C+D+E); Table (2), p. 66 (Anastassiou, [1]) for comparisons to Region A.

Notes: 1. For the calculation of the user cost the specification $c = (r + \delta) \frac{(1 - tz)}{(1 - t)}$ has been used, with $z = \sum_{i=0}^{n} \frac{d_i}{(1 + r)^{i}} + \lambda$ (see Anastassiou, [1]).

2. Numbers in parentheses are for Area E.

subsidization can be more immediate. Among the problems of potential Greek investors in locating or expending at the regional level, that have been indicated in a Greek interview study conducted by Kottis [6], are mentioned the shortage of skilled labor in regional areas, higher transportation costs, very poor infrastructure facilities, no serious provisions to cover higher costs of relocation, etc. Setting aside the macro problem of government expenditure policies one should indicate at present the importance of labor subsidies to cover the extra labor cost created for the absorption of skilled or unskilled labor. Regional unemployment subsidies may suffer from the problem of identifying the marginal workers to which they should be applied. They may also be politically unpalatable to some govern-

5 The regionally directed public works expenditures, important as they may be in providing the necessary background for further regional expansion, are not discussed at present given the limited purpose of the present analysis to concentrate on some micro-level policy considerations. One should indicate though that the use of macro-policy instruments for the solution of regional problems is severely limited by the existence of other policy goals. Macro-policies may be expected to have also different effects in different regions. Regional multiplier analysis, as part of regional economics, has been involved in explaining the effects of these expenditure policies. For further information see Archibald [3], Steele [9].
ments. Nevertheless, employment subsidies have been tried with varying degrees of success in various countries.

The percentage differences that have been found in the cost of the same investment good (either equipment or buildings) between Areas, indicate obviously and a possible shift of manufacturing investment to the regions. Using shift share analysis\(^7\) this is proved to be the case. Area A has decreased its investment while all other Regions experienced a greater growth rate of investment than the nation. Recalling the inoperative nature of investment allowances for marginal investment in Area A, these marginal projects cannot be prevented to realize in other than Area A regions. While incentives may not influence marginal choices they can, however, affect location decisions.

b) Investment Shift and Regional Unemployment

Since the shift of investment to the regions has been established one needs to examine whether this shift has contributed towards the solution of the regional unemployment problem. The answer to this question relates to the form of new companies located in developing Areas. If they were capital intensive in nature, little progress would have been expected towards the solution of the problem. On the other hand, labor intensive industries could have contributed more to the reduction of regional unemployment. Since the capital labor ratio is an indicator of the impact of investment on employment one can proceed in finding relevant capital-labor ratios in the different Areas and examine their change through the years to identify any effects of 'investment policies' on employment. Because it is clear, from the recollection of incentive measures used in Greece, that the policy-makers mainly aimed to solve the regional unemployment problem by inducing investment to the regions. That success needs to be seen.

As regards the capital-labor ratios, mainly for manufacturing investment in equipment, marginal values seem the more appropriate for present purposes. The investment shift should mainly be associated with new firms towards which regional policy is directed. These new firms are also the main source for the creation of new jobs. As Sant [7] has indeed indicated there is a relationship between the number of moves and the employment directly associated with these moves. Net investment then should enter the calculations of the capital-labor ratios. The difference of the capital stocks between two consecutive years will provide the relevant amounts of net investment attributed mainly to incoming new firms. Since no such data of capital stock at a regional level was available, we constructed these data\(^3\) using some broad assumptions and for a period corresponding to those years reported earlier in the shift-share analysis.

In Table (2) the calculated capital stock series (K\(_n\)) and the derived net investment expenditures (I\(_n\)) together with regional employment data for companies employing 20 persons and over (E\(_n\)) are presented. The employment data have been derived from official statistics [see National Statistical Service of Greece (NSSG), Annual Industrial Surveys] but are very limited in period. The derivation of negative net investment values for Area A and for the years 1976 and 1977 reflects probably the

\(^{3}\)The available regional data was very limited, so reference to only few years in the past is made. The results are presented below.

<table>
<thead>
<tr>
<th>Areas</th>
<th>G* Ratios(^6) for Investment in Equipment</th>
<th>G* Ratios(^6) for Investment in Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area A</td>
<td>-0.4910</td>
<td>-0.8418</td>
</tr>
<tr>
<td>Area B</td>
<td>1.1525</td>
<td>1.1283</td>
</tr>
<tr>
<td>Area (C+D+E)</td>
<td>4.3018</td>
<td>4.7125</td>
</tr>
</tbody>
</table>

\(^{6}\)G* = G\(_r\)/G\(_n\) is the relation between the regional (G\(_r\)) and the national (G\(_n\)) growth rates of investment for the period 1970-1980.

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**Note:** Area A refers to the Department of Attica (Athens-Piraeus and surrounding municipalities including the Deme of Lavrion). Area B refers to Departments of Thessalonika, Boeotia, Euboea, Corinth. Area (C+D+E) refers to the rest of Greece (all other remaining Departments).

\(^{7}\) We made use of the recursive formula K\(_t\) = I\(_t\) + (1 - δ)K\(_{t-1}\) (where I = gross investment, K = capital stock, δ = physical depreciation rate, assumed to be equal to 0.1). Also, we adopted the assumption that each Region followed for year 1970 (the first year of available gross investment data) the same distribution of replacement investment δK\(_{t-1}\) to that of the country.
deficiency of the method employed, although economically a negative figure is possible, supposing some degree of disinvestment or the selling of capital stock of Area A to Areas B and (C+D+E). Some other procedures used for a capital stock derivation had produced the same results.

Due to the very short employment series relevant to the investigated period, reference to a very limited amount of coefficients can be made. The results have also to be treated with caution due to some broad assumptions that had to be made. As it is evident from this Table, Areas B and (C+D+E) present higher capital-labor ratios than Area A, this reflecting the larger amount of capital per worker located to these developing Areas. But there is also a variation in the rates found for Area B and Area (C+D+E), where the coefficients in the latter Area for the last two years are smaller than in Area B, although a higher rate should have been expected given the larger and consistently increasing amounts of investment shift to the developing Area (C+D+E). This could be attributed to a low capacity utilization in Area (C+D+E) where possibly investment projects were made to take advantage of investment provisions without any real contribution to production. If one observes the changes of the incremental capital-labor coefficients in each of the Areas B and (C+D+E), one can see that, with the exception of 1975, the rates in each Area are increasing. This could indicate that mainly capital intensive industries were those that had moved to these Areas so that only a very small part of excess labor supply could be absorbed while the amount of capital per worker was getting larger. Investment policies then aiming to solve the regional unemployment problem had not succeeded in their goal and there was thus a waste of valuable capital resources.

The present results had already been indicated earlier, where it was mentioned that it is not the capital subsidies that can provide a solution to the regional unemployment problem, but rather policy-makers should aim at the provision of more labor subsidies. Without disregard to the more general Greek regional economic issues, an essential part of the regional incentive legislation ought to be

<table>
<thead>
<tr>
<th>Year</th>
<th>Area A</th>
<th>Area B</th>
<th>Area (C+D+E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K_t</td>
<td>I_tN</td>
<td>E_t</td>
<td>K_t/E_t</td>
</tr>
<tr>
<td>1970</td>
<td>13703.2</td>
<td>1116.2</td>
<td>7947.3</td>
</tr>
<tr>
<td>1971</td>
<td>15187.7</td>
<td>1484.5</td>
<td>8808.2</td>
</tr>
<tr>
<td>1972</td>
<td>17233.8</td>
<td>2046.1</td>
<td>10533.9</td>
</tr>
<tr>
<td>1973</td>
<td>18481.8</td>
<td>1248.0</td>
<td>11296.7</td>
</tr>
<tr>
<td>1974</td>
<td>20217.5</td>
<td>1735.7</td>
<td>162238</td>
</tr>
<tr>
<td>1975</td>
<td>20638.5</td>
<td>421.0</td>
<td>161825</td>
</tr>
<tr>
<td>1976</td>
<td>20499.8</td>
<td>-138.7</td>
<td>167372</td>
</tr>
<tr>
<td>1977</td>
<td>20385.7</td>
<td>-114.1</td>
<td>165800</td>
</tr>
</tbody>
</table>

Source: For capital stock, as discussed in previous footnote.

For employment, NSSG, Annual Industrial Surveys, Yrs 1974-1977, Athens
concentrated on the provision of measures able to absorb the excess labor in neglected Areas of the country.

5. Conclusion

Having explained the two main characteristics of regional labor markets, that of labor mobility and wage fixing, it was shown both diagrammatically and algebraically that the two main features of the regional problem are a persistent rate of regional unemployment and a deficient national production, i.e. production below the maximum attainable levels. The algebraic explanation indicated further a prescription for the solution of the regional problem, that of differentiated labor subsidies in amounts pertinent to investors’ cost calculations in their production-planning process, and not the provision of capital cost differentials. On the basis of these facts an evaluation of the Greek regional incentive policy was made to indicate the discrepancy between the regional incentive measures used and the above-prescribed conditions. More specifically it was shown that no proper consideration was given to the importance of labor subsidies as a means for the solution of the regional unemployment problem, while capital cost differentials existed to an extensive degree. A shift of investment then to developing areas was found, which could have mainly contributed to the provision of regional investment subsidies. But it was indicated that capital intensive industries were those that had caused the shift and thus investment incentive provisions did not succeed in resolving the regional unemployment problem; furthermore these provisions could have provided the basis for national production below the economy’s maximum attainable possibilities. The main conclusion is that a more efficient regional policy is needed regarding the provision of industrial incentives, consistent with some theoretical principles that have been well founded.

6. References