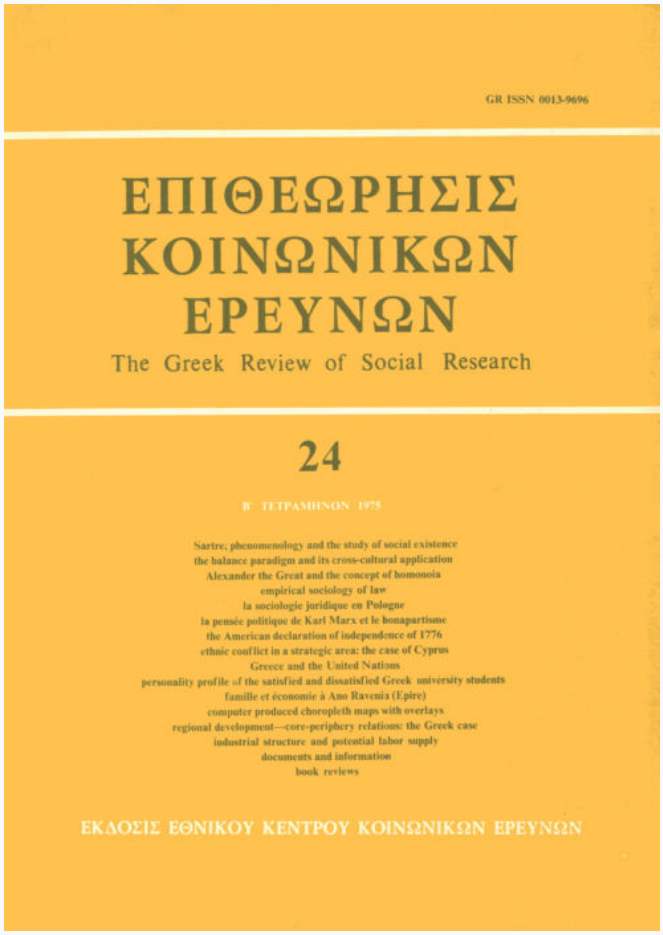
ePublishing

ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΤΕΚΜΗΡΙΩΣΗΣ
NATIONAL DOCUMENTATION CENTRE

The Greek Review of Social Research

Vol 24 (1975)

24 B'



Regional development-core-periphery relations: The Greek case

Mary Evangelinides

doi: 10.12681/grsr.437

Copyright © 1975, Mary Evangelinides

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0.

To cite this article:

Evangelinides, M. (1975). Regional development-core-periphery relations: The Greek case. *The Greek Review of Social Research*, *24*, 320–355. https://doi.org/10.12681/grsr.437

https://epublishing.ekt.gr | **e-Publisher:** EKT | **Downloaded at:** 12/10/2024 06:55:28

regional development-core-periphery relations: the Greek case

by

Mary Evangelinides

Ph. D. Candidate at Sussex University, England

Dissertation submitted to Sussex University for the M. A. Degree in Urban and Regional Studies

introduction

Contemporary regional growth theories tend to emphasize that the economic growth of a single region is usually traced to some natural and immobile resource for which an external demand exists. Some of these theories are concerned with supply markets and some with demand markets. There is another school of regional growth theories, which emphasize that investments to exploit natural resources are attracted to these resources and lead to the further expansion of productive activity in the region through the stimulation of local demand and the creation of substantial external economies. The latter school of regional growth theories assumes that the region's growth is in the long run made to depend on the extent of its participation in the rapidly expanding sectors of the total economy. The argument claims that the region's participation in the national growth also depends on the economies of location that are created there.

The theories concerned with natural and immobile resources as well as with the optimum location of the firm in an impersonal space are called «classical location theories» and they emphasize regional equilibrium. They have been formulated by people like von Thünen, Weber, Ohlin, Lösch, Alonso and others.[1]

Other theories formulated in terms of a general equilibrium model focus on the structural characteristics of a system of point locations and explain at the same time the patterns of these point locations at two separate periods of time. They are called «spatial organization theories.»[2]

There have been further elaborate attempts to deal with the dynamics of a system of point locations or regions, where interregional flows of labour and capital are looked upon as the principal mechanisms for reestablishing a balance that might have been disturbed. The theories concerned with the interregional

1. Cf. von Thünen, Johan Heinrich, 1895. *Der Isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie.* Berlin. Weber, Alfred, 1929. *Alfred Weber's Theory of the Location of Industries.* Translated by C. J. Friedrich, Chicago U. P., 1929. Lösch, A. *The Economics of Location,* New Haven, 1954, Yale University Press. John P. Friedmann and William Alonso (eds.), *Regional Development and Planning: A Reader,* MIT Press, Cambridge, Mass., 1964. Bertil Ohlin, *Interregional and International Trade,* Harvard Economic Studies, 39, Cambridge, Harvard UP, 1933.

2. Some major theoretical statements are: Walter Isard, 1956, *Location and Space Economy,* Cambridge, Mass., The MIT Press. Also cf. Edwin von Böventer, «Spatial Organization Theory as A Basis for Regional Planning,»*Journal of the American Institute of Planners,* Vol. XXX, No. 2 (May 1964), pp. 90-99, and Brian J. L. Berry, *Geography of Market Centers and Retail Distribution, Foundations of Economic Geography Series,* Englewood Cliffs, N. J. Prentice-Hall, Inc. 1967. See also John Friedmann, «A Theory of Polarized Development,» pp. 41-42, in *Urbanization, Planning and National Development,* SAGE Publications, Beverly Hills, London, 1973.

flows of labour and capital consider the compensatory flows of factor movements from «surplus» to «deficit» regions and they tend once more to revert to a general equilibrium model. They have been formulated by people like Richardson, who derived his theory from Harrod-Domar growth theory models, and Mrs. Lutz.[1]

Finally, the theories concerned with industrial complex analysis and «growth centers» have been formulated by people like Perroux, Hirschman and others, and they emphasize regional disequilibrium.[2]

None of these theories though explain regional growth as a function of changes in the economic and social structure of societies, nor do they emphasize the institutional and organizational framework of society and specifically the patterns of authority and dependency that result from the unusual capacity of certain areas to generate innovation and growth. Theories of polarized development are recent offshoots of theories of regional growth and tend to formulate their theory and hypothesis on the relations existing between core and periphery regions and have been formulated by people like John Friedmann, André Gunter Frank and Gunnar Myrdal.[3]

It is the purpose of this paper to present the theory of polarized development explaining the polarization effect mainly as a function of changes in the structures that inevitably limit a region's capacity for expansion; second as a function of the region's capacity for the continuous generation and absorption of innovations, and finally as a function of the institutional and organizational framework of society. The main argument will be that the dominant core and the dominated periphery together constitute a relatively stable spatial system in which the periphery is «colonized» by the core region in order to sustain the continued growth of the latter. «Space» is used here in the non-physical sense of a field of forces. It will mean energy levels, decision-making power, communication, flow of people, etc. An attempt will be made to establish a linkage between social change and spatial organization.

It is only through an historical, social, political and economic analysis that this perceived polarization can be explained and understood.

The problems of resources, stimulation of local demand, economies of location and the process of creation of external and scale economies will also be treated but they will be considered to be complementary and originating mainly from structural sociopolitical imbalances found in the national system.

It will be argued that classical regional growth theories are more applicable to advanced and integrated spatial systems like the ones existing in the United States, Western Germany and Sweden and that they offer little insight to the analysis of regional structures existing in the industrialising countries, like Greece, the Middle East and the Third World countries, where core-periphery relations are still predominant influences.

The case of Greece will be analyzed as an example of highly polarized regional development, which has its sources not on natural resources and other economic or ecological considerations but rather on institutional ones.

The general theory of polarized development suggested and formulated by Friedmann will be here presented in an attempt to explain and analyze the intense regional dualism existing in industrializing countries with special reference to Greece.

theoretical background

The General Theory of Polarized Development

Friedmann moved from a purely economic argument of regional development theory toward a linkage between regional interaction theory and the theory of social change. For the theory of social change Friedmann relied on a modification of Ralf Dahrendorf's analysis of change through conflict in an authority-dependency situation.[4]

Friedmann treats development as taking place through constant innovative forces arising from or injected into an existing «traditional» system. Innovation is interpreted by Friedmann to be the successful introduction of new ideas, articrafts or combinations and requires an innovating agent, that is—in the Schumpeterian sense—an enterpreneur.

1. Cf. H. M. Richardson, «Regional Growth» in *Regional Economics,* World University, Weidenfeld and Nicolson, London, 1969 and Vera Lutz, *Italy: A Study in Economic Development,* 1962.

2. Cf. François Perroux, (1) «La notion de pôle de croissance», dans l'*Economie Appliquée,* Nos. 1-2, 1955; (2) «Les points de développement et les foyers de progrès», *Cahiers de l'ISEA,* No. 94, novembre 1959; (3) «La firme motrice dans une région et la région motrice», dans l'*Economie du XXe Siècle,* Presses Universitaires de France, 1961. Albert Hirschman, «Investment Policies,» in *The American Economic Review,* September 1957, and *The Strategy of Economic Development,* New Haven, Conn., 1958.

3. Cf. John Friedmann, *Urbanization, Planning and National Development,* «A Theory of Polarized Developmen» in op. cit. André Gunter Frank, *Capitalism and Underdevelopment in Latin America,* Penguin Books, 1969 as well as *Latin America: Underdevelopment or Revolution,* Monthly Review Press, 1969. Gunnar Myrdal, *Economic Theory and Underdeveloped Regions,* Methuen and Co., Ltd., London, U. P., 1972 and *An American Dilemma,* 1944.

4. For a detailed presentation of the theory, see John Friedmann, «A Theory of Polarized Development» in op. cit. Cf. also Harold Brookfield's, «Notions of Inequality, Space and Polarized Growth» in *Interdependent Development,* Methuen and Co., Ltd., 1975.

As it was demonstrated above, Friedmann used Dahrendorf's conflict model of social change, in which the principal variable is the pattern of authority-dependency relationships that characterizes any organized system, and on which he developed and founded his general theory of polarized development.

As spatial systems are territorially organized systems of social relations, Dahrendorf's conflict model constitutes a promising start for formulating a general theory of polarized socio-economic spatial development. The general theory of polarized development states:

1. Development is characterized as an innovative process leading to the structural transformation of social systems and consequently of the spatial ones. The innovative process may be technical or institutional (social, economic, political and cultural); the cumulative effect of these innovations transforms the established structure of society by attracting creative or innovative personalities into the enclaves of accelerated change and by encouraging the formation of new values, attitudes and behaviour traits consistent with the innovation.

2. Friedmann maintains that there are certain conditions favourable to innovation and these conditions are usually present in large and rapidly growing urban systems, or at the points of highest potential interaction in a «communication field,» which is again to be found in large urban systems. Some of these conditions are the pressure of unprecedented problems resulting from rapid growth, high densities as well as the presence of culturally heterogeneous population groups in large cities. All the above pressures generate urgent demands which traditional mental attitudes and institutions cannot adequately solve.

3. He further claims that innovation is linked to the concepts of power and authority in territorially organized socioeconomic spatial systems. The conflict that may result from the efforts of innovating agents to legitimate their power is involving a wider conflict over the legitimacy of some or all authority-dependency relations within a spatial system. This conflict can have four possible outcomes: suppression, neutralization, cooption and replacement. Having once gained access to positions of authority, former counter-elites may either foreclose further innovative efforts or create a social environment capable of absorbing successive innovating groups into an adaptive system of authority-dependency relations.

4. He continues by saying that development, viewed as occurring through a discontinuous but cumulative process of innovation, will tend to have its origin in a relatively small number of centers of change located at the points of highest potential interaction within a communication field. Innovations will tend to spread downward and outward from these centers to areas where the probability of potential interaction is lower.

Following Friedmann's analysis, major centers of innovative change will be called *core regions*. All other areas within a given spatial system will be defined as *peripheral*. Core regions are territorially organized subsystems of society which have a high capacity for innovative change. Peripheral regions are subsystems whose development path is determined chiefly by core region institutions, to which they stand in a relation of substantial dependency. Core and periphery together constitute a complete spatial system. The domination of the periphery by its core is the result of earlier and critical innovations that were incorporated into the central authority structure of the system. The relations of core regions to their peripheries are following the pattern presented below:

i. Core regions impose a condition of organized dependency on their peripheries, by the penetration of the periphery by institutions that are effectively controlled by core region authorities. Local elites in the periphery may be suppressed, neutralized, coopted or replaced. Decisions vitally affecting local populations will henceforward be made by relevant core region authorities.

ii. Core regions consolidate their dominance over the periphery in a self-reinforcing fashion by six major self-reinforcing feedback effects parallel to but advancing on Perroux's polarization thesis:[1]

a. *Dominance Effect*, or the steady weakening of the peripheral economy by a net transfer of natural, human and capital resources to the core, essentially through the mechanisms identified by Hirschman[2] and which are accompanied by the

b. *Information Effect*, which is caused by the increase of potential interaction within a given core region resulting from its own growth in population, production and income, and the

c. *Psychological Effect*, that is the creation of conditions favourable to continued innovation at the core region.

d. *The Modernization Effect*, or the transformation of existing social values, behaviour and institutions at the core region in the direction of greater acceptance of and conformity with rapid cumulative change through innovation.

e. *Production Effects*, or the appearance of linked systems of innovations, growing specialization and increasing economic returns. This process involves scale and urbanization economies.

f. *Linkage Effects*, or the tendency of innovations

1. Cf. François Perroux, *La notion de pôle de croissance*, in op. cit. The above self-reinforcing feedback effects represent an advance on Perroux's and Myrdal's polarization thesis.

2. Cf. A. Hirschman, *The Strategy of Economic Development*, in op. cit.

to breed other innovations by creating new service demands as well as new markets for the services the core region is itself able to supply to other areas. However, the multiplier or linkage effects of certain innovations will be greater than for others.[1]

5. Introducing core region innovations into the periphery will augment the flow of information from the core to the dependent region. Individuals and groups most directly exposed to information originating in core regions will gradually awaken to the periphery's and their own dependency and powerlessness and will tend to emigrate to the core to be drawn there into the established structures of authority.

6. *Polarized Development in a Hierarchy of Spatial System*: Following always Friedmann's analysis we see that the core regions generally perform a wide variety of functions for their dependent areas. They organize the dependence of their respective peripheries through systems of supply, market, and administrative areas.

As centers of production and consumption, core regions organize their peripheries into sets of supply areas for further furnishing them the raw materials, food stuffs and semi-processed commodities they need.

As supply centers, core regions organize their peripheries into sets of market areas (through the establishment of regional sales and service offices or a «colonial» pattern of transport and communications services which generally serves the needs of the core region more than those of the periphery).

As centers of legitimate decision-making power, core regions organize their peripheries into sets of administrative areas for the purpose of securing central bureaucratic domination over them. The above polarization process, formulated by Friedmann, projects regional development theory into the altogether different area of «internal colonialism.»

For industrialising nations, the transformation of authority-dependency patterns in spatial systems is a fundamental condition of development and, consequently, also of sustained economic growth.

Core-periphery systems occur in «nested» hierarchies from the world level down to the very local scale of a city region. For any spatial system, a loose hierarchy of core regions may be identified in accord with the functional importance of each core. This hierarchy will tend to be asymmetrical, however. Because of the asymmetrical nature of their relationship to higher-order cores and their partial dependency on them, all lower-order cores are also peripheral to a set of dominant core regions. All propositions concerning core-periphery relations apply also to the hierarchical relations among core regions.

Friedmann concludes that up to a certain point in time, the self-reinforcing character of core region growth will tend to have positive results for the development process of the relevant spatial system eventually, however, it will become dysfunctional unless the spread effects of core region development to the periphery can be accelerated and the periphery's dependence on the core region reduced. The approach of this critical turning point will be registered in growing political and social tensions between core and periphery that are likely to drain core region strength and reduce its capacity for further development.

As argued by Friedmann, there are many interrelated spatial systems: the world, the multi-nation region, the nation, the subnational region and the province. Here we will concern ourselves only with the nation, the subnational region and the province.

The Contradiction of Expropriation/Appropriation of Economic Surplus

Another theorist, André Gunter Frank, has also attempted to analyze core-periphery relations but has focused mainly on the international level, that is the relations existing between the metropolitan country and the colonized country.[2] However, his model could be easily applied to the regional context.

Frank analyzes polarization and especially metropolis-satellite polarization in terms of expropriation/appropriation of economic surplus. He derives this from Marx's analysis of capitalism which identified and emphasized the expropriation of the «surplus value» created by producers and its appropriation by capitalists. Frank builds on the theory of Paul Baran, who emphasized the role of economic surplus in the generation of economic development and also of underdevelopment. Baran draws a distinction between «actual» economic surplus, which is actually saved and invested for further production and «potential» or potentially investible economic surplus which is not available to society because its monopoly structure prevents its production or, if it is produced, it is appropriated and wasted through luxury consumption. The income differential between high and low income recipients and much of the failure of the former to channel their income into productive investment may also be traced to the monopoly structure of capitalism.

1. The innovations that Friedmann refers to here are similar to the «so-called» industries motrices of Perroux and high linkage industries of Hirschman.

2. For a thorough presentation of Frank's theory, cf. his books, *Capitalism and Underdevelopment in Latin America*, in op. cit. and *Latin America: Underdevelopment or Revolution*, in op. cit.

The Contradiction of Metropolis-Satellite Polarization

Frank argues that the extremely contradictory character of progress under capitalism applies even to different regions of one and the same country. The comparatively rapid development of the towns and industrial centres is, as a rule, accompanied by decline in the agricultural districts.

Thus, the metropolis expropriates economic surplus from its satellites and appropriates it for its own economic development. The satellites remain underdeveloped for lack of access to their own surplus and as a consequence of the same polarization and exploitative contradictions which the metropolis introduces and maintains in the satellite's domestic economic structure. The combination of these contradictions, once firmly implanted, reinforces the processes of development in the increasingly dominant metropolis and underdevelopment in the ever more dependent satellites. His argument is that economic development and underdevelopment are the opposite faces of the same coin and that both are relative and qualitative, in that each is structurally different from yet caused by its relation with the other.

Frank further argues that the metropolis-satellite contradiction exists within countries, especially underdeveloped ones, among their regions and between rapid development of the towns and industrial centres and stagnation and decline in the agricultural districts. This contradictory metropolitan-centre/peripheral-satellite relationship, like the process of surplus expropriation-appropriation, runs through the entire world capitalist system in chain-like fashion from its uppermost metropolitan world center, through each of the various national, regional and local enterprise centres.

The satellite's domestic economy reflects the same capitalist structure and its fundamental contradictions that exist in the metropolis. Once a country or a people is converted into the satellite of a metropolis, the exploitative metropolis-satellite structure quickly comes to organize and dominate the domestic economic, political and social life of that people.

Frank's theory is here presented with certain qualifications. First it is probable that Frank understated the possibility that dualisms and imbalances in the world or in the national level might be unavoidable consequences of «development.» According to Friedmann's argument, for industrializing nations, the transformation of authority-dependency patterns in spatial systems is perhaps a fundamental condition of development, and consequently, also of sustained economic growth.[1] Second, it seems that Frank understated the fact that the failure of channeling economic surplus into productive investment cannot be traced solely to the monopoly structure of capitalism but to the structure of other socio-economic systems as well. There is historical evidence showing that feudal and mercantilistic societies had «potential» economic surplus, which was consumed or invested in non-productive assets, such as land, buildings, jewelry, luxury consumption and gold hoarding.

However, irrespective of the above minor qualifications, Frank's basic principle serves to illustrate the process by which the exploitation of the satellite region by the metropolis occurs by the expropriation and consequent unavailability to the satellite region of economic surplus and its appropriation by the core region or metropolis. According to Frank, there exists a chain-like fashion of exploitation which extends from the national metropolises to the regional centres (part of whose surplus they appropriate) and from these to local centres and so on to large landowners or merchants who expropriate surplus from small peasants or tenants, and sometimes even from these latter to landless labourers exploited by them in turn.

Cumulative Disequilibrium

Another economist, Gunnar Myrdal, also formulated a theory of regional polarized development in terms of a general disequilibrium model.[2] He used the notion of the «vicious circle» or «circular causation» and maintained that «once an exogenous change is injected into a system or into a region, this change does not call forth countervailing changes, but instead, supporting changes, which move the system in the same direction as the first change but much further. Because of such circular causation a social process tends to become cumulative and often to gather speed at an accelerating rate.» He further argued that «there is no tendency towards automatic self-stabilization in the social system. The system is by itself not moving towards any sort of balance between forces, but is constantly on the move away from such a situation.»

He maintained that if things were left to market forces unhampered by any policy interferences, industrial production, commerce, banking, insurance, shipping, science, art, literature, education and higher culture generally—would cluster in certain localities and regions, leaving the rest of the country more or

1. The economic development of post-war Italy and Germany are here relevant examples. Cf. Dr. St. Holland's, D. Phil. Thesis, *Regional Development in Theory and Practice—The Italian Case*, pp. 60-62, where he places particular emphasis on the role of labour supply in permitting «super-normal» growth in the more developed regions of Italy and Germany through raising their indigenous full employment ceiling and preventing cost-push inflation in the key growth initiating sectors of manufacturing.

2. Cf. Gunnar Myrdal, *Economic Theory and Underdeveloped Regions*, in op. cit., and *An American Dilemma*, in op. cit.

less in a backwater. According to Myrdal the power of attraction to-day of a centre has its origin mainly in the «historical accident» that something was once started there, and not in a number of other places where it could equally well or better have been started and that the start was met with success.[1] Thereafter, the ever-increasing internal and external economies, such as a working population trained in various crafts, easy communications, the feeling of growth and elbow room and the spirit of new enterprise, fortified and sustained the centre's continuous growth at the expense of other localities and regions where instead stagnation or regression became the pattern.

The above analysis is very similar to Friedmann's argument that «conditions favourable to innovation are usually present at the point of highest potential interaction in a 'communication field', which is to be found in large urban systems» as well as to Perroux's argument that «growth and development bring disequilibrium and that the implantation of a development pole generates a sequence of socio-economic disequilibria.»[2]

The Backwash Effects

Myrdal further maintained that «expansion in one locality has 'backwash effects' in other localities and that the movements of labour, capital, goods and services are usually the media through which the cumulative process evolves—upwards in the lucky regions and downwards in the unlucky ones and that the causes that prompt this cumulative process to evolve upwards or downwards are to be found first in the selectivity of migration.» Myrdal claims that migration is always selective with respect to the migrant's age and that the outcome of this selectivity tends to favour the rapidly growing communities and disfavour the others: furthermore, high fertility rates in poor regions add their influence to that of the net emigration in making the age distribution in these regions unfavourable. Second, the causes that prompt the cumulative process are to be found in the selectivity of capital, which contributes to regional inequality. According to Myrdal's analysis the banking system, if not regulated to act differently, tends to become an instrument for siphoning off the savings from the poorer regions, where there is a lack of new expansionary momentum, to the richer and more progressive-ones where returns on capital are higher and secure and where the whole «psychological» climate and businessmen's expectations[3] are conducive to more investment, growth and expansion. Third, the causes are to be found in the trade selectivity which also operates in favour of the richer regions and against the poorer ones, because the freeing and widening of the markets will often confer such competitive advantages on the industries in already established centers of expansion, which work under conditions of increasing returns, that even the handicrafts and industries existing earlier in the other (poorer) regions are thwarted. Finally, they are to be found in other «non-economic factors» that closely interact with the above economic ones and contribute to the process of regional inequality. According to his analysis, some of these «non-economic factors» reflect the poorer regions' inferior medical care and education and these in turn tend to produce less healthy and less efficient population: furthermore, the entire valuations system of the poor regions tends to produce such an imprint of poverty and backwardness in their population that it becomes even less susceptible to the experimental and ambitious aspirations of the more developed regions' population.

All the above frustrating effects of poverty become interlocked in circular causation with the biases inherent in the working of migration, capital movements and trade and all together interact and operate at the expense of the poor regions and to the benefit of the rich ones.

The «Spread Effects»

Myrdal claims that together with the backwash effects there are also certain centrifugal «spread effects» of expansionary momentum from the centres of economic expansion to other regions and that the whole region around a nodal centre of expansion usually gains from the increasing outlets of its agricultural products and is stimulated to technical advance; furthermore, there are centrifugal spread effects to localities farther away, where favourable conditions exist for producing raw materials for the growing industries in the centres, and that these spread effects might even spur the creation of consumer goods industries in the remote less developed localities (regions).[4]

Thus, according to Myrdal's analysis the spread effects of momentum from a centre of industrial expansion to other regions weave themselves into a cumulative social process by circular causation in the

1. In the case of Greece the fact that Athens became the capital of the new state in 1833 was a «historical accident.» Thereafter the process of upward circular causation was successfully triggered.

2. Cf. François Perroux, «La firme motrice dans la région», dans l'*Economie du XXe Siècle,* in op. cit.

3. This is similar to the «so-called» warranted or anticipated growth rate of Harrod, R.F., *Towards a Dynamic Economics.* Cf. «Fundamental Dynamic Theorems», pp. 63-100, Macmillan & Co., Ltd., London, 1960.

4. This analysis is somewhat similar to Mrs. Vera Lutz' argument about the creation of a «natural» demand for industrial products in the less developed regions through the joint effects of several processes. Cf. later this paper.

same fashion as the backwash effects in opposition to which they set up countervailing changes.

However, Myrdal stresses that in no circumstances do the spread effects establish the assumptions for an equilibrium analysis, and that ordinarily even in a rapidly developing country, if market forces alone were left to decide the outcome, many regions would be lagging behind, stagnating or even becoming poorer.

Myrdal concludes that the higher the level of economic development a country has already attained, the stronger the spread effects will usually be. The lower the level of economic development of a country, the weaker the spread effects will be. In other words, the free play of the market forces in a poor country will work more powerfully to create regional inequalities and to widen those which already exist.

Having presented above some of the main theories which analyze polarized development and core-periphery relations in a national system, we will now survey briefly the important 19th and 20th century historical background of Greece because during this period the country underwent a deep structural transformation of its social and institutional system, which resulted in socio-economic spatial transformation and polarization.

According to Friedmann, an «innovative process» can be either technical or institutional and is always conducive to structural and spatial transformations. In the case of Greece, as will be demonstrated below, the innovative process injected into the system in the 1820s was institutional.

historical background—the Greek case

Introduction

An analysis of the spatial structure and organization of Greece based on western classical location theories and models is hardly possible. Unlike other western European countries, which by 1780 had already entered into the modern industrial stage, Greece became an independent national state only after 1832 and joined the process of industrialization and «capitalistic» economy only after the second world war, in the 1950s with the assistance of the massive American Aid.

As is well known the Greeks had lived since the fifteenth century as a subject people in the Ottoman Empire distinguished not by their ethnic singularity but as members of the Eastern Orthodox Church. For 400 years Greece has remained a peripheral province of the Ottoman Empire, subject to its particular forms of decentralized administration and communal self-government.

After a period of eight years of hard war (1821-1829) fighting for its independence from the Turks, Greece emerged as a new «modern» highly centralized nation, adopting at the same time western political and economic institutions. During the 18th and 19th century Greece was infiltrated with secular and utilitarian notions of western culture while the great majority of its population was still essentially eastern and traditional in outlook and orientation. We will demonstrate below how the cumulative effects of these innovations that Friedmann formulates in his theory, namely the injection of western secular and utilitarian ideas into the Greek «traditional» socio-economic space, led to fundamental structural conflicts and to the spatial transformation of Greece's socio-economic system.

This sudden transformation of an essentially traditional agricultural society into one forced and shaped on the models of the prevalent western European societies, as France, England and Germany were at the time, marked and is still today evident in Greece's political, social, economic and spatial imbalances. The fact that the country was never allowed to pass through the stages of feudalism, mercantilism, industrialism and gradually to post-industrialism, as most western countries did, also contributed to the country's regional socio-economic dualism. Greece was forced to jump from a stage of an «eastern type of feudalism» with some aspects of mercantilism being present at the same time in it, into a «post-industrial stage,»[1] without getting a fair chance to industrialize and acquire an efficient and large enough middle-class, the Schumpeterian «innovative agents», that could lead the country into the path of a more balanced socio-economic development and growth.

Even though many European countries experience regional imbalances and inequalities, these are most characteristic of «developing» countries. Dual societies and economies exist mainly in Africa, Asia and Latin America,[2] where the process of development and modernization was not gradual and where core-periphery relations are still predominant influences. In these countries the innovative process is in full swing only in the large and rapidly growing points of highest potential interaction. Furthermore, the pattern of centre-periphery tensions does not show signs of decreasing or levelling down as is the case with United States, Germany and Sweden.

1. In 1972 the tertiary sector had a share of 51% in Greece's Gross Domestic Product.

2. It is shortly after his Venezuelan experience that John Friedmann formulated his theory of core-periphery relations. Myrdal also claims that the free play of the market forces in a poor country will work more powerfully to create regional inequalities and to widen those which already exist.

Greece's case is rather closer to the regional imbalances of the «third world» countries than to the ones experienced by England, United States, France and Central Europe.

Socio-Spatial Organization

During the Ottoman occupation (1453-1830) the pattern and organization of communities and towns in space[1] were very different from the present-day urban structure. Most of the communities were located on the mountains and islands in order to be safe and distant from the Turkish feudal lords and army's abuses. It was there in the mountainous regions that the first free Greek communities emerged. Later in the 18th and 19th century some of them developed into small-scale industry and cottage centres as well as trade centres.[2]

In the plains the population was mainly made-up of feudal serfs, who were subject to the Turkish feudal lords as most of the valleys and flat land were owned by the Turks. The Greek population there was always subordinate to the Turkish rule and got little or no chance to develop. They were living as kulaks, within the system of the Zatrouga type of family, prevalent in most South Slav countries of the time.[3] There were no important towns or communities in the valleys. These were only to be found in the mountains and in the islands.

The Aegean islands were very different from the rest of the mainland. On one hand they were free from any Turkish interference, due to their geographic isolation, and on the other hand because of the continuous Frankish presence there.[4] The Aegean islands had the opportunity to develop into Greek free communities having a system of western type of feudalism coexisting with a system of self-government similar to the one present in the mountainous villages (kefalochoria). The above system allowed the development of a rather urbanized society there made-up by a class of shipowners, merchants and rich land-owners.[5]

We thus see that the dynamic Greek space and society was rather located and organized mainly in the mountains (kefalochoria) and in the coastal periphery of the country.

This socio-economic spatial pattern in pre-modern Greece falls and fits exactly into the model that John Friedmann built up in an attempt to present the spatial organization of territories preceding the period of modern industrialism.[6] He says that «Economic growth was limited principally to a few major cities, strategically located on the coast, at the mouth of rivers, or at the crossing of important trade routes. The size of these cities was determined by the locally available food surplus or by the ability of urban populations to capture a fair proportion of the known world's trade. The primitive stage of development of land transportation tended to reduce the area surrounding the city which came under its immediate economic influence. The city-state was a common phenomenon and only a few times during the period under consideration were empires brought under a unified administrative system. The remainder of the settled area may be characterized as a feudal village or tribal economy with small local centers shifting in the case of nomadic tribes, more permanent in the case of settled peasant agriculture... evolving a self-contained and rugged life and remaining more or less isolated from urban influence.»

It becomes evident from the above description that when Greece entered its period of independence (1821) and when it became a new nation state (1832), the country was divided and organized in a communal regional system, with each region having a different identity, economy and stage of development. There was no unified national conscience as the country was made-up of a mosaic of ethnicities.[7] The mentality and interests were very parochial indeed.

1. During the 19th c., there were no urban cities in Greece. The only metropolitan city was Constantinople. Other big cities were located out of Greece, in Asia Minor (Smyrna) and in Egypt (Alexandria). Cf. B. Philias, *Society and Power in Greece, The False Urbanization 1800-1864,* B. Makryonitis and Co., Athens, 1974.

2. For a detailed description of 19th c. Greek spatial socio-economic organization see B. Philias, *Society and Power, etc.* in op. cit. See also John Cordatos, *The Social Importance of the Greek Revolution of 1821,* Epikerotita, Athens, 1974. John Campbell, *Modern Greece,* «The Emergence of the New State,» Ernest Benn Ltd., London 1968, and K.D. Karavidas, *Agrotica,* published by the Ministry of Agriculture, Athens 1931.

3. K. D. Karavidas in *Agrotica,* op. cit. describes the Zatrouga type of family as a rigid, paternalistic and at the same time communal social system.

4. During the 13th, 14th and 15th century most of the Greek islands were occupied by Venice and Genoa. Some of the islands remained under Venitian rule until the 17th c. and then passed under the Ottoman rule. Cf. N. Svoronos, «La domination franque» in «La Grèce Asservie», in *Histoire de la Grèce moderne,* Presses Universitaires de France, Paris, 1972.

5. Cf. B. Philias, «The Aegeopelagites Lords» in *Society and Power in Greece,* etc., in op. cit.

6. Cf. John Friedmann, «Regional Planning: A Problem in Spatial Integration» in *Papers and Proceedings of the Regional Science Association,* Volume 5, 1959.

7. During the Ottoman period there were many ethnic groups residing and gaining a living in the Greek territory. The population was made-up of a mosaic of ethnic groups, mainly by Greeks, Turks, Jews, Albanians, Serbs, Vlachs, Koutsovlachs, Sarakatsanides, the latter being mainly communities of trans-human shepherds. They were all subject people to the Ottoman Empire's particular form of decentralized administration and communal self-government. Cf. John Cordatos, *The Social Importance of the Greek Revolution of 1821,* in op. cit. and *History of Greece,* Athens, 1958. Also B. Philias, *Society and Power in Greece,* in op. cit, and John Campbell, *Modern Greece,* in op. cit.

Changes in the pattern of socio-economic spatial organization accompanied the transition of the country from a decentralized administration system to a highly centralized one.

After the revolution (1821-1828) and with the emergence of the new state (1832), we have the opposite phenomenon becoming now more and more evident in the Greek space. The communities in the mountains, as their only reason for location there was safety and isolation from the Turks, a condition that did not exist any more, were leaving the mountains for the plains and the provincial towns. The rich land-owners, merchants and educated élites left the provincial towns and islands and came and established themselves in the capital, Athens,[1] as it was only there that they could have access to the government, the court, the university, cultural life, ministries, banks, port facilities and all the other supplementary services. Athens as the seat of the administration of public affairs, presided over by bureaucrats and politicians, was now able to exert substantial pressures upon the life of rural populations.[2]

After the 1830s the towns attracted the rich and all the available capital which was now invested in land and trade, rarely in manufacture. The towns acquired the function and character of urban-trading centres; however, none of them became a centre of production.[3] There was no functional specialization in the city-hierarchy. Even though the leading class deserted the villages for the towns and Athens, the towns lived entirely from the resources generated in the villages, as Greece's economy remained mainly agricultural up to 1950. The landlords lived in the town but they still rented and had their fields cultivated by the peasants. Their main income was generated in the village. The towns lived parasytically at the expense of the village. The principle of A.G. Frank of expropriation / appropriation of economic surplus by the metropolis is dramatically relevant here.

After the 1850s the main focus of attraction and investment in land and commerce became Athens, which now acquired the metropolitan character and importance that previously was to be found in Constantinople, Smyrna and Alexandria. Greece became one unified market, a condition not existing in the previous period. Furthermore, as the natural consequence of a centralized nation was to have a strong capital, Athens became the administrative and cultural centre of the country.[4] Even though at the first 10 years of the revolution the Greek government was moving its headquarters in Peloponnesos from Argos to Epidaurus to Nafplion (see Map I), it finally decided in 1833 to make Athens the capital of the newly founded Greek state. As the prevalent aspirations of the time were highly influenced by European admiration of classical Greece, Athens was the only solution that could give Greece some respectability and part of its ancient glory. It is exactly the same principle that prompted the Italians to make Rome the capital of the new Italian nation-state.

Even though Athens in 1833 was a semi-urban town of a few thousand people, it gradually attracted to her all the aristocratic elements (phanariotes) from Constantinople, men of cosmopolitan culture and learning; rich merchant families from the islands; some of the military chieftains who had distinguished themselves in the Independence war; a growing class of shopkeepers and artisans serving the leading class and several thousand people performing personal services or being literally unemployed and making up the urban proletariat. Athens and its university became the cultural centre of Hellenism.[5]

This redistribution and continuous movement of population from villages to towns and then to the metropolis denuded and impoverished the periphery, caused the decline of all communities having important cultural and historical elements, created a huge growth pole in the Attica area, made Athens[6] a huge ugly monster where land speculation and lack of aesthetics is everywhere evident, created parasytic, stagnant towns all over Greece inhabited again by a migrant

1. Athens in 1853 had 30,000 people, in 1870 had 50,000 and in the beginning of the 20th c. had more than 200,000. From then on its expansion, as will be demonstrated below, continued accelerating. Cf. Bernard Kayser, *Human Geography of Greece*, National Centre of Social Research, Athens, 1968, p. 23 and c.

2. J. Friedmann in «Cities in Social Transformation.» *Regional Development and Planning: A Reader*, The MIT Press, 1964 says that cities cannot exert substantial pressures upon the provinces as long as the aristocracy, as in medieval Europe and in colonial Latin America, live on their estates and shun urban life, because then effective political power is dispersed and economic expansion drastically curtailed. Economic space must be combined with political and social space to become totally effective.

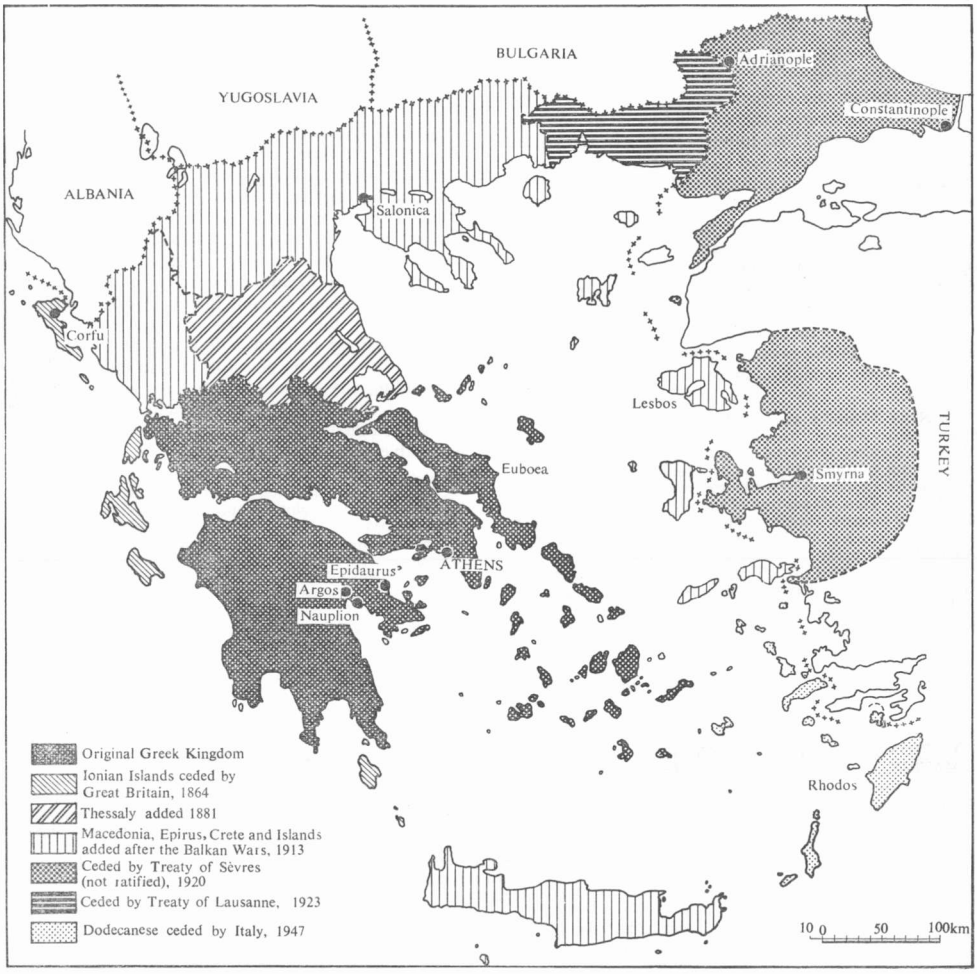
3. The process of urbanization and parasytic existence of the towns is described in detail by B. Philias in *Society and Power in Greece - The False Urbanization*, in op. cit.

4. This development in Greek space confirms Myrdal's argument that «if things were left to market forces unhampered by any policy interferences, industrial production, commerce, banking, insurance, shipping, science, art, literature, education and higher culture generally— would cluster in certain localities and regions, leaving the rest of the country more or less in a backwater and that the power of attraction to-day of a centre has its origin mainly in the 'historical accident' that something was once started there and that the start was met with success.» Cf. G. Myrdal, *Economic Theory and Underdeveloped Regions*, in op. cit.

5. For a short history of Athens' evolution, cf. John Campbell, *Modern Greece*, in op. cit. Cf. also B. Philias, *Society and Power in Greece*, in op. cit.

6. 25% of Athens population are newly arrived migrants. Cf. National Statistical Service of Greece, *Population Census 1961 and 1971*.

MAP I. *The Territorial Development of the Greek Kingdom, 1832 - 1947*



Source: John Campbell and Philip Sherrard, Modern Greece, Ernest Benn Ltd., London 1968.

population, which looks at Athens as a source for values, goals, imitation and income.

It finally created a population of nouveaux-riches where social mobility is evident,[1] social stratification weak and where people having lost their cultural origins and sense of aesthetics believe that what is new, modern, Athenian and «European» should be followed and imitated.

Even though the present condition in the Greek socio-economic space is chaotic, this social dynamism and mobility might prove to be a blessing in 100 years time provided its social and economic forces are now studied, harnassed, organized and the existing imbalances rectified. If, on the other hand, we consider Friedmann's hypothesis that high densities in large urban areas as well as the presence of culturally heterogeneous population groups—in the case of Athens the presence of large numbers of migrants—are conditions favourable to innovation and development, we might be able to acquire a more favourable approach towards the present imbalances and dualism in Greek socio-economic space.

1. Nicos Mouzelis and Michael Attalides in «Greece,» *Contemporary Europe, Class, Status and Power*, Weidenfeld and Nicolson, London, 1971 write that «although statistical evidence is very scant, in terms of some indices bearing upon social mobility Greece appears to be a relatively open society by Western standards... Thus, 40 per cent of the students at university are the sons of farmers, fishermen, miners, craftsmen, skilled and unskilled labourers, i.e. 'the lower urban and rural strata.'» Another study made by Alexander, *Greek Industrialists*, pp. 44-53, has indicated that 40 per cent of the more important Greek industrialists today were the sons of peasants, craftsmen and small shopkeepers. Cf. N. Mouzelis and M. Attalides, «Greece» in op. cit.

Urban and Regional Hierarchy

As it is shown in Table I and Map II the picture that emerges from the present urban structure in Greece is that of an «immature» regional structure, characterized by a low order of functional specialization, with many independent small communities spread out fairly evenly over the landscape. There are still many «gaps» in the structure of the communities, with Athens being the «primate» city,[2] Salonica the «regional city,» both growing disproportionately to the rest of the economy, Patras being the «provincial city,» and the rest being «local service cities» and in their large majority parasitic.[3] The above is a very crude description of the Greek urban hierarchy as further research about its economic and social dynamism or stagnation is required.

According to Friedmann «the various regions and cities in a national economy may be found at different points along the time axis of development... In a country having reached a low degree of economic maturity it might be possible to find cities and corresponding city regions which have attained a high level of technical and economic achievement and are yet surrounded by relatively primitive and often inaccessible rural economies.»

2. The above functional hierarchy of cities as well as the terms «primate,» «regional,» «provincial» and «local service» cities are based on John Friedmann's model of city-hierarchy in the United States. Cf. «Locational Aspects of Economic Development,» by J.R.P. Friedmann, pp. 215-221 in *Land Economics*, August 1956.

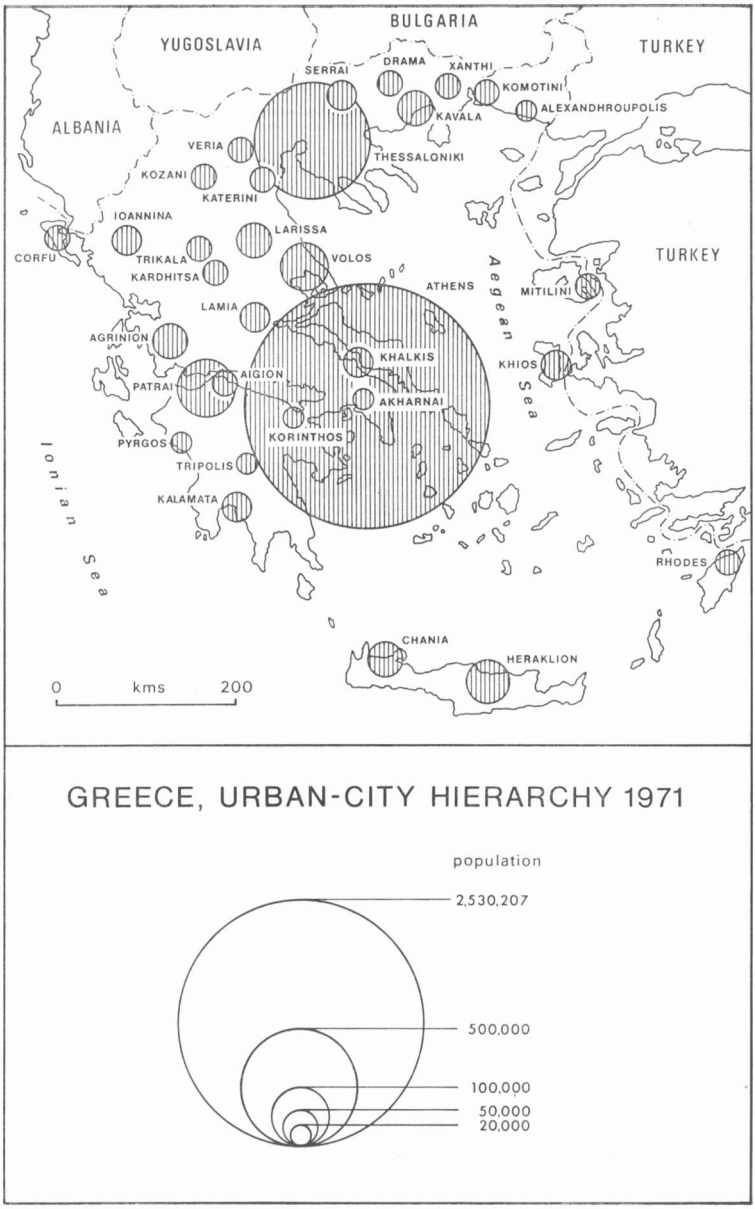
3. For a classification of cities cf. also Bert F. Hoselitz, «Generative and Parasitic Cities» in *Journal of Economic Development and Cultural Change*, April 1955, pp. 278-294.

TABLE I: *A Functional Hierarchy of Greek Urban Agglomerations with More than 40,000 Population 1971 (In Thousands)*

LOCATIONAL MATRIX	APPROXIMATE SIZE Population	*Agglom.*	MAJOR ECONOMIC FUNCTIONS
Primate City	2,540	Athens	Center of manufacturing and of specialized services (finance, publishing, sciences, arts, communications, fashions); area of greatest market potential
Regional City	537	Salonica	Regional service center, manufacturing, wholesaling, large department stores serving regional market; regional administrative center
Provincial City (sub-dominant)	121	Patras	Regional service center, manufacturing, wholesaling, regional capital
Local Service City (sub-sub-dominant)	43	Kalamata-Pylos	Provincial or local service center, often rural services; some manufacturing (rural and labor-oriented) provincial administrative center
	85	Heraklion	
	53	Chania	
	72	Larissa	
	88	Volos	
	40	Ioannina	
	46	Kavalla	

Source: National Statistical Service of Greece, Population Census 1971. Classification based on Friedmann's Functional Hierarchy of cities. Cities drawn from the southern regions of United States in 1950. Cf. «Locational Aspects of Economic Development,» in op. cit., p. 215.

Note: Even though Friedmann operated within a city-hierarchy in the United States, a country very different from Greece, in all aspects: size, economic development, social and political structure, it is believed that the criteria he used for his classification, namely, population size and economic functions of cities could be easily applied to classify the Greek urban-hierarchy.


BULGARIA
YUGOSLAVIA
TURKEY
ALBANIA
SERRAI
DRAMA
XANTHI
KOMOTINI
ALEXANDHROUPOLIS
KAVALA
VERIA
THESSALONIKI
KOZANI
KATERINI
IOANNINA
LARISSA
CORFU
TRIKALA
VOLOS
KARDHITSA
ATHENS
MITILINI
LAMIA
AGRINION
KHALKIS
KHIOS
AIGION
PATRAI
AKHARNAI
KORINTHOS
PYRGOS
TRIPOLIS
KALAMATA
Ionian Sea
Aegean Sea
RHODES
CHANIA
HERAKLION
0 kms 200
GREECE, URBAN-CITY HIERARCHY 1971
population
2,530,207
500,000
100,000
50,000
20,000

Map II

GREECE'S SEVEN ADMINISTRATIVE REGIONS BY LEVEL OF ECONOMIC DEVELOPMENT 1971

I. Attica and Rest of Central Greece and Aegean Islands
II Central and Western Macedonia
III Peloponnesos and Rest of Western Central Greece and Part of Ionian Islands
IV Thessaly
V Crete
VI Epirus and Rest of Ionian Islands
VII Eastern Macedonia and Thrace

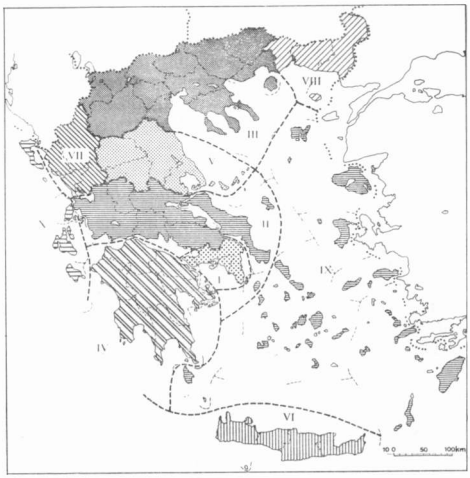
More Developed Regions
Intermediate Regions
Peripheral Less Developed Regions
Core Region
Peripheral Region

Map III

Map IV. *Administrative Regions*

I Attica /Rest of Central Greece and Aegean Islands
II Central Western Macedonia
III Peloponnesos /Rest of Western Central Greece and Ionian Islands
IV Thessaly
V Crete
VI Epirus and Rest of Ionian Islands
VII Eastern Macedonia and Thrace

Map V. *Statistical Regions*



I Greater Athens Area
II Rest of Central Greece /Euboea
III Macedonia
IV Peloponnesos
V Thessaly
VI Crete
VII Epirus
VIII Thrace
IX Aegean Islands
X Ionian Islands

Friedmann maintains that «many primate and even regional cities and city regions in developing countries have reached a much higher level of development than the rest of the country on which they feed and which continues in its economically backward condition. Primitive and advanced economies exist thus side by side and are in competition with each other.»[1] This is exactly the case in Greek socio-economic space.

Furthermore, it becomes evident from Map III, which shows the seven administrative regions of the country, that Thrace, Epirus, Ionian Islands, Crete and Aegean Islands form a circle around the Greek mainland and especially around the *core* region of Attica (Athens). The regions forming the circle will be called *periphery* and it will be shown below how their backward economy exists side by side and in competition with this of the core region of Attica. Map III also shows the regions' economic development: Attica /Rest of Central Greece and Central Western Macedonia are the more developed regions; Thessaly and Peloponnesos are the intermediate regions; Thrace, Epirus, Ionian Islands, Crete and Aegean Islands are the less developed ones. However, the division of the country in 1970 in the above seven administrative regions does not reflect their actual economic development. Note that the Aegean Islands have been incorporated under the rich Attica (Athens) region. As for the Ionian Islands these have been split-up half under the Peloponnesos region and the rest under the Epirus region. In strictly economic development terms the peripheral backward regions are made-up by Thrace, Epirus, Ionian Islands, Crete and Aegean Islands.

It is believed that the division of the country in the above ten statistical regions, established by the Na-

1. John Friedmann in «Locational Aspects of Economic Development» in op. cit., attempts to establish criteria for measuring the «maturity» of regional structures, pp. 218-221.

tional Statistical Service of Greece since 1940 for data collection, gives a more realistic picture of the country's regional economic development than its division in the above seven administrative regions.

In this paper special care was taken to present information and evidence according to the statistical division of the country in ten regions, whenever available. In the cases when this was not possible, information is given following the administrative division of the country in seven regions.

Regional and Local Government and Administration

As it was mentioned above during the Ottoman rule the governing system and regional administration of the country was a form of decentralized administration and communal self-government. It was actually a mixture of oriental regional decentralization and western-type mediaeval city-state system.

The decentralized regional administrative system that the Ottoman empire exercized from its capital in Constantinople was entirely different from the present-day highly centralized system with which the government in Athens administers the rest of the country. The Greek independent community was a functional element of the general socio-economic structure of the oriental type of production[1] and was characterized by self-sufficiency, self-consumption, a minimal monetary economy and a production geared mainly to self-consumption rather than the market.

A typical model of the self-governed Greek community was that of an assembly of the people who elected annually two councillors, who in consultation with the clergy regulated the internal life of the community, public order and worship, health and schools. They promulgated local market by-laws and arbitrated in internal disputes. Aggregate amounts of taxation or tribute demanded by the central Ottoman government in Constantinople were divided among the citizen body and the sum was collected.[2]

Changes in the pattern of government accompanied the transition of part of the Greek world from a peripheral province of the Ottoman empire to a small nation-state on the European model. It was first by Capodistrias, the President of the new Greek State, in 1828 that the processes of centralized administration were given an institutional form. Although the election of local councillors appeared to continue the tradition of local self-government the extraordinary commissioner (appointed by Capodistrias to administer each province) and later the Nomarch (the prefect) presided over the electoral committee, invalidating the candidature of persons uncongenial to the government and in some instances suggesting candidates and enforcing their election. The prefect (the provincial representative of the central government) had also a veto over budgetary and taxation decisions and in practice could effectively suppress any measure which displeased him and the government.[3]

Later on and until the present time a centralized and inflexible administration consolidated the changes already attempted by Capodistrias. In 1833 the state was divided into ten nomarchies (prefectures), 42 eparchies (sub-prefectures) and 468 demes (communes). Since then and up to the present time there have been several modifications to the system. The number and division of the country in different prefectures as well as the name given to them kept changing, but the underlying spirit and system of governing them remained the same.

Nomarchs (prefects) and eparchs (sub-prefects) were directly nominated by the central government. The demarch (mayor), too, was appointed by the government from a list of three candidates elected by a restricted number of the more highly taxed members of the demos (commune).

The governing of each prefecture was delegated to the nomarch (prefect), who was directly responsible to and under the Ministry of Interior. The rest of the functions and institutions, such as traffic, education, health, agriculture, industry, etc., were not incorporated under the authority of the nomarchia (prefecture), but came under the realm of authority of the other ministries.[4] Thus, we had no comprehensive local government at the level of the prefecture (county) or of the commune. The pattern that emerged was this of a highly vertically centralized government, while at the same time being horizontally divided and diffuse. In other words, there existed a highly centralized type of regional administration, where the different regions and prefectures had no authority to act whatsoever, all the instructions and decisions came from the central Ministry of Interior in Athens, while at the same time there existed a pronounced horizontal diffusion of functions and responsibilities amongst ministries at all levels, a situation that created a bureaucratic state and brought frustration, inefficiency,

1. B. Philias in *Society and Power in Greece,* in op. cit., says that «the oriental structure of production was characterized by an economy which was neither unified nor homogeneous; there was no monetary economy or specialization of labour,» p. 12.

2. There are many conflicting arguments on the subject. Philias and Cordatos, in op. cit., argue that the elected councillors were exploiting the people. On the other hand, Karavidas, in op. cit., argues that the system was democratic and fair and that the councillors and clergy were highly respected people.

3. Cf. John Campbell in *Modern Greece,* «The Emergence of the New State» in op. cit. Also N. Svoronos, «La Grèce liberée», dans *L'histoire de la Grèce moderne,* in op. cit.

4. For a detailed description of local government see M. A. Mathioudakis and B. K. Andronopoulos, *Decentralization and Self-Government, Historical Evolution-Present Situation* (in Greek), Pergamali, Athens, 1974, p. 25 and c.

irresponsibility and delay in the execution of affairs.

The above pattern of local and regional[1] administration and division was modelled on the French regional division of the country in departments, districts and communes. This system was first introduced in France in 1790 and was later used by Bavaria and other German states, in order to fight and weaken feudalism and local divisions and to unite the nation.[2]

It was this same philosophy that inspired the new Greek élites in their efforts in introducing a new administration system. Thus, the new state under the influence of the western concept of progress intervened in the affairs of villages in a manner which brought few improvements but disproportionate frustration. The closer the administrative supervision of the countryside, as far as the very difficult communications allowed, the more secure the government's control of the country and the more the consolidation of power by the core region towards the periphery.

Moreover, under the military régime (1967-1974), the officials of local government, i.e. the councillors and the mayor, were appointed by the central administration, thus weaving the last trait of local self-government and rendering government's control over the country even tighter.[3]

The reaction of individuals and factions in protecting their interests against the interference of government officials resulted in a search for protecting patrons in the core region (Athens) with political influence, a situation which inevitably weakened the traditional solidarity of the community, infiltrated and dominated Greek political life.[4] Furthermore, the very constitution of the demes (communes) added to this weakening of local institutions, as these were arbitrary administrative areas generally including a number of villages, often with a history of long-standing hostilities.

If we would like now to refer to the model brought forward by Friedmann, it becomes evident from the above presentation of the political innovation and change injected into the previous «traditional» system of governing the country, that the core region (Athens) imposed conditions of organized dependency on its peripheries, by the penetration of the periphery by institutions (prefectures and communes) that were effectively controlled by core region authorities (the ministries). Decisions virtually affecting local populations were henceforward made only by relevant core region authorities. The core region organized the dependence of its respective peripheries through a system of administrative areas, for the purpose of securing central bureaucratic domination over them.

As for the power game and conflicts that emerged out of the new situation in Greece there was on one hand neutralization of some of the traditional élites (such as the revolution's fighters, heroes and officers) and on the other hand cooption between the aristocracy and middle-class and a thorough merger of the two.

The process of cooption was the following: The conflicting interests of the new counter-élites (such as the engineers of the revolution,[5] the recently arrived king and his foreign advisors) and those of the traditional élites (such as the ship-owners, rich landowners, army's officers, etc.) were united and the conflicts compromised in order to preserve the interests and status quo of an élite class, which from now on ran the country in the way that best suited its interests. The rest of the population never participated in the political affairs and life of the country. Parliamentary life and government served only as a façade to support and promote the interests of the governing élite.[6]

During the 19th and 20th century whatever dualism or political parties arose in the country reflected the interests and the efforts of the two main middle-class parties to preserve their power and their complicated network of privileges and patronage in the government machine. It was perhaps this lack of people's participation in political life as well as their lack of political awareness and education—political life meaning for most of Greeks having an extended circle of patrons and connections in the core region

1. The notion of region and regional administration emerged in Greece only during the period 1970-1973 and it was then that the country was divided in seven administrative regions. Each region was divided in four to eleven prefectures. It was an attempt, for the first time in Greece, to introduce a rational comprehensive regional administrative system. See Maps III and IV. However, the regional governors still remained under the authority of the ministry of interior and central government control became even tighter. In 1973 the above system changed and the country was divided again in 51 prefectures. The prefect remained the central government's representative in the various prefectures. As for the functions of the regional governors, these were now carried out and performed from the different ministries in Athens. Cf. M. A. Mathioudakis and B. K. Andronopoulos, in op. cit., pp. 269-283.

2. Cf. M. A. Mathioudakis, in op. cit., p. 34.

3. Cf. John Campbell, «The Greek Countryside» in *Modern Greece,* in op. cit.

4. The pattern of patronage and privileges in Greek political life is analysed in detail by John Campbell, in op. cit.; by Friedl, E. 1962, *Vassilika: A Village in Modern Greece,* Holt and Rinehart, New York; by B. Philias in *Society and Power in Greece,* in op. cit. and by N. Mouzelis, «Greece» in *Contemporary Europe,* in op. cit.

5. The engineers of the Greek revolution were mainly Greek merchants and students living abroad (in Europe). They were highly influenced by the ideas of the 18th c. French Revolution.

6. The lack of people's participation in political life as well as the conservative and reactionary nature of most Greek governments and main parties are described in detail by B. Philias, in op. cit.; by John Campbell, in op. cit.; by John Cordatos, in op. cit. and by N. Svoronos, in op. cit.

(Athens)—that led to political apathy, cynicism and to the eight years of dictatorship (1967-1974).

There was only one interlude in the 1940s of a communist party acquiring power and a following and this «episode» further divided and caused a schism in the country between «communists» and «non-communists,» denuded the provinces and the periphery, and drove rural population to towns as well as abroad to Australia and America.[1]

When in the 1950s the country came under the American sphere of influence, there was an impetus in economic reconstruction, which was again centered around Greater Athens Area.[2] This new development created a profound socio-economic spatial dualism in the country, made Athens the metropolitan giant of all Greece and aggrevated even further the already existing imbalance. As will be demonstrated below this pattern accelerated in the 1960s and 1970s—perhaps with the only exception of Salonica region, which in the late 1960s developed into a counter-pole to Athens.

Despite the nominal efforts of all governments after 1960 to control Athens' expansion, which now started to spill over to Attica, Central Greece and Euboea, the trend did not reverse but rather accelerated.

Summary

We thus see that the outcome of the conflict related to the concepts of power and authority in the territorially organized Greek socio-economic spatial system resulted in the gradual cooption of the different élite groups and into the creation of an adaptive system of authority-dependency relations. The core region started organizing the periphery into dependency by steadily weakening the periphery's economy by expropriation of economic surplus, by a net transfer of natural, human and capital resources to it and by penetrating and transforming the periphery's social values, behaviour and institutions in the direction of greater acceptance and conformity with its own value system.

Also, as predicted by Friedmann's theory of core-periphery relations and Myrdal's theory of regional polarization, we see that the social change and «development» that occurred transformed the established socio-economic spatial structure by attracting creative or innovative personalities or simply the country's élites and consequently all economic activities, science, education and culture into the enclave of accelerated change, which was the new capital Athens. Thereafter, Athens became the point of highest potential interaction in the Greek «communication field,» the core region and the centre of the country, whose growth was sustained and fortified by ever-increasing internal and external economies at the expense of the rest of the country which remained in a backwater.

Furthermore, we see the civil war (1944-1949) producing a shock into the system and further transforming the existing spatial structure by driving rural people to towns.

Finally, in the 1950s, we have a «technical» innovation introduced into the system, namely American capital and rapid industrialization of the country, focused around Athens and further transforming the socio-economic spatial pattern of the country to the benefit of the *core* region and at the expense of the *periphery*.

regional economic growth and development

Introduction

After having demonstrated above how the Greek socio-economic space developed and how a system of core-periphery relations came about due to institutional changes in the country during the previous century, it will now be demonstrated how the core region (Athens) gradually became a «growth pole.» The models proposed by Friedmann and Myrdal were used in order to analyze the core-periphery relations in Greece. The model proposed by Perroux will now be used in order to analyze and explain the process of Greater Athens area becoming a «development» or «growth» pole.[3] However, we wish to draw attention to the fact that the analysis on Perroux's lines is only relevant in the Greek case as a complementary analysis to the already existing dualism in the country and not as the main and primary explanation of it. In other words, the economic effects of the «growth pole» or «polarization» process formulated by Perroux and Myrdal are here regarded as being superimposed on a socio-economic spatial system, which was already characterized by core-periphery relations. The attraction of Athens acting as an economic /industrial «growth pole» became only relevant in the

1. Cf. Bernard Kayser, *Human Geography of Greece*, in op. cit.

2. Cf. B. Kayser, in op. cit., also John Campbell, in op. cit. and Benjamin Ward, *Greek Regional Development*, Center of Economic Research, Athens, 1965.

3. By «growth pole» Perroux means «a pole which induces growth in one or more economic variables, such as population, income, production, a.o., but does not question or alter the existing socio-economic equilibrium and status quo.» By «development pole» Perroux means «the combination of social and mental changes in a population enabling it to increase in a cumulative and stable fashion its global real product.» Cf. M. Penouil, «Politique régionale et pôles de croissance», in R. Petrellas, *Le développement régional en Europe*, Mouton, 1971.

late 1950s, when Greece entered its industrialisation stage. Prior to that period Athens was still dominant, but only as an administrative and commercial center.

Pôles de croissance et la notion de développement

According to the theory formulated by Perroux, growth and development are never uniformly distributed in space.[1] They manifest themselves in certain points from where expansion or contraction effects may spread out. According to his theory a growth pole may consist of an economic unit or a group of economic units, a simple or complex one. It may be a firm, an industry, a combination of industries, which are considered to be dynamic and propulsive when they generate expansion effects to the rest of the region.

«Although Perroux is not very clear in his conceptualization of the terms 'dynamic' firms and 'leading' industries, it seems evident that the most remarkable characteristics of a 'dynamic propulsive firm' are that it is relatively large, generates significant growth impulses to its environment, has a high ability to innovate and finally belongs to a fast growing sector. The features of 'leading propulsive' industries are that they appear to be relatively new ones, operating at a technically advanced level in markets with high income elasticities for their products. Moreover, such industries exert a considerable influence on their environment through inter-industry linkages.»[2]

The theory of growth poles maintains that entrepreneurial innovation is a dominant factor in explaining the growth process, which takes the form of a succession of dynamic sectors (industries motrices) or poles (pôles de croissance), through time. A regional importance has been given to the pole concept in the relevant literature by emphasizing that growth is concentrated in various spatial loci as well as in certain leading and dominant industrial branches, which, as demonstrated above, are specializing in intermediate manufacturing rather than in basic industry or construction. The notion of economic dominance is closely related to that of development poles and is also related to the effects generated by a propulsive industry (industrie motrice) to the rest of the region.

Perroux maintains that the effects generated may be internal to the industry itself, i.e. its own growth generates increased investment, employment and distribution of factor payments, including profits which may be retained and reinvested. Its own growth also generates structural changes involving lateral or horizontal production increases, the so-called «Perroux effect.» The above process also generates external effects to the propulsive industry, i.e. vertically and horizontally or backward and forward linkage induced effects,[3] which may be analyzed within the framework of input-output matrices (or a Leontief-type matrix).

According to Hermansen[4] «an industry is said to exert a strong backward linkage effect if it has a high ratio of intermediary inputs delivered from other industries to its total production. Such an industry tends to dominate its input-delivery industries in the sense that it induces expansionary or stagnatory forces into them depending upon its own trend of development. According to Perroux such a backward linkage dominating industry can be said to be a 'key' industry in so far as it determines the amount of expansion induced in depending industries relative to its own expansion.[5] A forward linkage industry on the other hand tends to be dominated and to have a high ratio of intermediary deliveries to final demand. Thus, a forward linkage industry will depend on other industries for determination of its rate of expansion. However, as a producer of important intermediaries to other industries it will be able to induce expansion in these by transmitting innovations or effects of innovations forwards.»

In other words, the propulsive industry or industries (industries motrices) tend to increase the purchase of intermediary goods and services made by other firms, they also induce increases in other firms' investment and employment as well as in other firms' sale of final goods, at reduced prices, to other intermediary firms or to the final consumer.

According to the above analysis it becomes evident that we have the interplay of many different effects acting on the region. Hansen[6] maintains that «we have

1. Cf. François Perroux, (1) «La notion de pôle de croissance» in op. cit. (2) «Les points de développement et les foyers de progrès» in op. cit. (3) «La firme motrice dans une région et la région motrice» in op. cit. Cf. also Niles M. Hansen, «The Concepts of Development Poles and Development Axes» in *French Regional Planning*, p. 105-122, U. P. Edinburgh, 1968.

2. Quoted from Tormod Hermansen, «Development poles and Development Centres» in Kuklinski's *Growth Poles* and *Growth Centres in Regional Planning*, Mouton, 1972. Stuart Holland in *Regional Development in Theory and Italian Practice*, 1971 also argues on similar lines on the concepts of «dynamic» and «key» industries.

3. The concepts of backward and forward linkage induced effects have been developed by Hirschman in *Strategy for Development*, op. cit. Although Perroux does not employ these terms himself, it appears clear that the same notions play an important role in his theory and that he has been influenced by Hirschman's use of these concepts which were originally developed by Chenery and Watanabe (1957).

4. Cf. Tormod Hermansen, «Development Poles and Development Centres» in op. cit.

5. The concept of key industry was, however, rejected by Perroux (1961).

6. Cf. Niles M. Hansen, «Regional Economic Theory» in *French Regional Planning*, in op. cit., where he introduces the concepts of «Keynes multiplier,» «Scitovsky effect,» «Aftalion

the effects of the classic 'Keynes multiplier' based on increased marginal propensities to consume induced by income increases; the 'Scitovsky effect' relating to the interplay of prices among related sectors and enterprises; the 'Aftalion effect' involving increased investment resulting from the operation of the accelerator principle in connection with increases in final demand; there is also the 'psychological polarization effect' referring to the impacts on investment decisions of small and medium-sized firms induced by the creative activities of dominant propulsive sectors;[1] the 'agglomeration effect' brought about by the accumulation of complimentary activities around the propulsive industries as well as 'location effects' generated by the creation of new modes of transport and communication in the region.»

According to Perroux «supply and demand expand, new opportunities are now open to local producers. On the whole, the effects that the propulsive industry has in the region are positive. They bring about a total change in the region's socio-economic structure in such a way that the region's global real net product increases.» However, Perroux realizes the further effects that polarization has on the national space of a country and further comments that «growth is disequilibrium. Development is disequilibrium. The implantation of a development pole generates a sequence of socio-economic disequilibria. The pole tends to distribute salaries and additional economic revenue without necessarily increasing the local production of consumption goods; it tends to displace the labour-force and uproot it from its place of origin without necessarily providing a new social milieu for it. It concentrates within an area or a region, in a cumulative fashion, investment, traffic, technical and economic innovation without necessarily providing any advantages to the other areas out of the region, which are less developed or even retarded.»[2] Perroux concludes by suggesting that «the economic development of a nation should not be left to automatic, spontaneous market forces.» He further stresses that «in the present time the large industrial firms by using modern technology, which requires extensive fixed indivisible capital, render the market system imperfect and 'impure'.» He believes that «the market becomes inevitably arbitrary.»[3]

The Theory of Warranted and Natural Growth Rates

The instability and disequilibrium of growth in a national context have also been analyzed by Harrod in his theory of warranted (anticipated) and natural (potential) growth rates and have been employed by Holland in his analysis of regional disequilibrium and polarization.[4]

Harrod[5] maintains that once an initial upwards stimulus to the growth of the system occurs, i.e. when the natural rate of growth pushes up or in the case when Investment exceeds Savings, the reaction of enterpreneurs to the expansion on income will cause them to invest over and above that rate which they had anticipated would satisfy the expansion of demand for their products, while the multiplier effect of their investment will generate further demand reinforcing the increased excess of demand over and above their second-round anticipations. In other words,the natural rate of growth jumps up pulling up the warranted rate of growth in a self-reinforcing fashion. Inversely, in the event of an unexpected contraction, the reaction of enterpreneurs will be to cut back in second and third round investment in order to avoid being left with spare capacity on their hands. This reaction will ensure a further downwards movement in demand and investment. This theory is a behavioural theory of growth and considers the effects of divergence between actual and anticipated growth rates on the investment psychology and decision-making of firms. It also explains the way the economy moves from an equilibrium growth path into either cumulative expansion or contraction of a self-reinforcing kind.

Harrod's theory represents the national dimension of the cumulative self-reinforcing regional disequilibrium of Myrdal's and Holland's theories.

Having presented the above disequilibrium growth theories, we will now proceed in analyzing Greece's economic dualism and try to point out in what instances Greece fits the above models or theories and in what instances it does not.

effect,» «psychological polarization,» «agglomeration and location effect,» pp. 113-114.

1. The notion of «investment psychology of firms» is also used by Harrod in his theory of warranted and natural growth rates in «Fundamental Dynamic Theorems,» *Towards a Dynamic Economics,* pp. 63-100, but in a national and not in a regional dimension.

2. Cf. François Perroux, «La firme motrice dans une région et la région motrice», dans *L'Economie du XXe Siècle,* in op. cit. Even though Perroux mentions the negative effects that regional polarization might have on the national space, he does not extend his argument to Myrdal's «backwash effects» that the core region might generate at the expense of the less developed regions.

3. Perroux seems to be aware of the developing monopolistic nature and power of the big league firms, but does not extend his argument to include monopolistic practices and prices. For a fuller analysis of monopolistic practices of big «leader» firms, cf. Stuart Holland, «The Trend to Monopoly» in *Strategy for Socialism,* Spokesman Books, 1975.

4. Cf. Stuart Holland, «Interregional Factor Migration, and Keynesian Growth and Trade Cycle Models» in *Regional Development, etc.*

5. Cf. Harrod, «Fundamental Dynamic Theorems» in op. cit.

regional economic development—the Greek case

Background

In the 1800s the character of the Greek economy was on one hand agricultural and on the other mercantilistic. At that time we had two forces operating against the Greek economy. First, after 1815, when the Anglo-French wars finished and the sea circulation was once more free again and open to everyone, the Aegean islands lost their competitive advantage in the sea and their economic development was now hampered. Second, with the rapid industrialization of British and other European products, Greek products (such as textiles) ceased to be internationally competitive any more. Furthermore, because of a lack in roads and because of an insufficient domestic market the country did not attempt and could not industrialize. Thus, until the second world war the economy remained in a pre-urban state of mercantilism. The country's industrial production was limited to small shipbuilding, the processing of olives, and simpler consumer goods such as textiles and pottery. It was mainly Greek foreign commerce and the size of the merchant marine which were contributing to the country's gross domestic product.[1] All the economic surplus that the land-owners, the merchants and shipowners accumulated went into hoarding, conspicuous consumption and lavish living. The Protestant ethic of work, saving and investing in capital and productive goods was nowhere evident in Greek society. This trend and economic behaviour are still evident in Greek economy.

It was the massive American aid in the 1950s that was poured into the country in order to protect it from the so-called «communist threat»—according to the Truman dogma—that triggered the industrialization process. In this way the country was brought under the American political and economic influence.

After the 1950s the industrialization and investment in manufacturing and infrastructure started in the Greater Athens area and gradually extended to its larger region encompassing the whole of Attica, Euboea and Eastern Central Greece as well as part of Northern Peloponnesos, as the rest of the country was lacking the necessary infrastructure and services, such as roads, administrative services, banking, credit facilities and qualified trained personnel.

Greece is presently well past the beginning phases of economic development and would appear to have at least reached the Rostow's take-off stage, if not entered upon sustained growth.[2] Part of this good performance was the result of recovery from the disturbances of the civil war (1945-1949), part was due to American Aid, part was the result of the development mechanisms set in motion and successfully reinforced in the decade 1957-1966 and part was due to the inflow into the country of foreign currency in the form of emigrants' remittances and tourists' receipts.

However, despite substantial progress in the past, Greece's economic structure and character is still agricultural and commercial. As Table II shows, 40.51% of its labour force is still employed in the primary sector, 32% in the tertiary and only 25.60% in manufacturing.

TABLE II: *Economically Active Population Classified by Main Sector of Economic Activity*

Sector	Greece Total % 1961	Greece Total % 1971
Agriculture, Livestock, etc.	53.87	40.51
Extraction, Manufacturing, Construction	19.16	25.60
Trade, Transport, Services	23.62	32.00
Not Declared	3.34	1.88
	100.00	100.00

Source: Statistical Yearbook of Greece, 1971, 1973 p. 77.

TABLE III: *Gross Domestic Product by Economic Sector*

Sector	1957-60 %	1965 %	1972 %
Primary Sector	31.00	24.96	18.58
Secondary Sector	26.00	26.34	31.94
Mining		1.11	1.37
Manufacturing		16.52	20.14
Power		1.71	1.94
Construction		7.00	8.49
Tertiary Sector	43.00	48.69	49.47
Trade		10.85	10.70
Transport - Communications		6.90	7.70
Banking - Insurance		2.32	2.53
Dwellings		8.76	7.92
Services		12.71	12.93
Public Admin. - Health Defence - Education			
Other Services		7.15	7.69
Gross Domestic Product	100.00	100.00	100.00

Source: For the 1957-60 period, B. Ward, "Greece and Economic Development", in Greek Regional Development, p. 11, in op. cit. For 1965 and 1972, Statistical Yearbook of Greece, 1973, p. 360 "Gross domestic product and national income: 1965-1972."

1. Cf. John Campbell, «Economic Dilemmas» in *Modern Greece,* in op. cit. Cf. also N. Svoronos, *L'histoire de la Grèce moderne,* in op. cit.

2. Cf. Benjamin Ward, *Greek Regional Development,* in op. cit.

Even though there have been some structural changes in the country's economy, as Table III shows, and the secondary sector is in 1972 contributing 31.94% to the Gross Domestic Product as compared to 26.34% in 1965, and the share of the primary sector has diminished and is contributing in 1972 only 18.58% to GDP as compared with 24.96% in 1965 and 31% in the period 1957-1960, the service sector in the economy has expanded and is contributing 49.47% to GDP as compared with 43% in the 1957-1960 period.

Even though the country's GDP doubled between the period 1965 to 1972 with a growth rate of 6.2% per annum for the period 1950 to 1961 and with an increased annual growth rate of 7% for the period 1961-1971, there are still fundamental weaknesses in the country's economy at both the national and regional level.

Agriculture

Though Greek agriculture produces less than a fifth of the domestic product, 40% of the active population still is employed in the sector. The vast majority of just over a million Greek farms are under $12^1/_2$ acres (50 stremmata) and the landless agricultural population is small. Most of the land is not very fertile and yields of basic crops are low by western European standards. Productivity is further inhibited by fragmentation of the farms.[1] Though there is a government program for consolidation of these small units, very little consolidation has actually been carried out. There is a widespread feeling among agronomists that there is substantial underemployment in agriculture, though some conflicting evidence has recently been presented (by Papandreou, Pepelasis, Yannopoulos, Campbell)[2] as well as by the Federation of Greek Industrialists,[3] showing that there are acute seasonal shortages of labour in the agricultural areas due to mass emigration to the towns and abroad.

In structure and organization the sector is neither modern nor mechanized. It is subject as much to considerations of a family's subsistence needs and labour resources as to simply commercial interests and responses. Agriculture neither answers existing market demand effectively nor realizes its potential productive capacity. Agricultural exports are neither sufficiently secure nor varied. In addition, the policy of price support for wheat—mainly for political reasons—has prevented the proper development of valuable labour-intensive export crops, especially cotton, fruits and vegetables.[4]

Pesmazoglu[5] reports that there has been a marked reduction in the rate of increase in output and income from agriculture during the period 1963 to 1971, as Table IV shows, and that the target rate of 5.2% increase set in the 1968-1972 programme was two and a half times the rate actually achieved. He further maintains that «despite mass emigration from the rural areas the rates of increase of per capita income from agriculture declined significantly after 1967, as shown in Table IV.»

TABLE IV: *Average Annual Compound Rate of Increase in per Capita Incomes*

	Per Capita income *from agriculture* In constant prices	Per Capita income *from non-agr. activities* In constant prices
1963-66 (four years)	6.0	6.6
1967-70 (four years)	4.5	5.3
1968-71 (four years)	3.8	6.3

Source: John Pesmazoglu, "The Greek Economy", in Greece under Military Rule, in op. cit. p. 81.

Pesmazoglu further claims that the movement of income per capita certainly differed by crops and varying rates of emigration, with probably stagnant or slowly increasing per capita incomes from traditional crops such as tobacco, currants and sultanas and wheat.[6]

He further maintains that the decline since 1967 of the rate of increase in agricultural product cannot be attributed to unfavourable climatic conditions and that it is certainly the result of a complex set of factors. These factors are the following: a) «subsidies from the budget to promote changes in the structure of crops, after major increases until 1966..., declined in 1969

1. Cf. John Campbell, *Modern Greece,* in op. cit., p. 329, also K. Thomson, *Farm Fragmentation in Greece,* Athens, 1962 and B. Ward, *Greek Regional Development,* in op. cit. pp. 17-19.

2. A. Papandreou, *A Strategy for Greek Economic Development,* Centre of Economic Research, Athens, 1962, indicates that Greece may be facing a labour shortage by 1970. Also A. Pepelasis, *Surplus Labour in Greek Agriculture 1953-1960,* Centre of Economic Research, Athens, 1962. Cf. also George Yannopoulos, «Workers and Peasants» in *Greece under Military Rule,* Secker and Warburg, London, 1972, p. 121 and John Campbell, *Modern Greece,* in op. cit., p. 324.

3. Federation of Greek Industrialists, *Labour Market and Wage Structure in Greek Industry,* «Employment in Agriculture,» pp. 76-77, Athens, 1974.

4. The failure of agriculture in realizing its potential productive capacity is discussed by John Campbell, in *Modern Greece,* in op. cit., p. 332 and c. Campbell also reports that for a number of years since the war the government has guaranteed a minimum price for wheat. Cf. also Association of Greek Industrialists, «Employment in Low Productivity Sectors,» in op. cit., p. 74 and c. where the low productivity of agriculture and the structural problems in this sector are discussed.

5. Cf. John Pesmazoglu, «The Greek Economy,» in *Greece under Military Rule,* in op. cit., pp. 80-82.

6. The crops which dominate Greek agriculture are wheat, tobacco and olives. As for the main agricultural exports of the country these are tobacco, currants, sultanas, fruits and cotton.

TABLE V: *Economically Active Population by Region, and Main Sector as Percentage of Total—for 1961 and 1971*

Regions	1960 Prim.	1960 Second.	1960 Tert.	1970 Prim.	1970 Second.	1970 Tert.
More Developed						
Attica and Aegean Islands	20.2	31.4	48.4	12.0	37.0	51.0
W.C. Macedonia	60.0	18.5	21.5	44.1	26.1	29.8
Intermediate						
Peloponnesos	69.2	13.0	17.8	63.0	15.6	21.4
Thessaly	68.0	13.8	18.2	60.2	17.3	22.5
Peripheral						
Epirus	69.6	12.0	18.4	61.0	16.9	22.1
Thrace	77.0	10.4	12.6	70.1	12.0	17.9
Crete	70.0	11.0	19.0	63.6	15.4	21.0

Source: Center for Planning and Economic Research, 15 Year Plan, Census of 1961 and 1971.

and were reduced in 1970 to a level lower than that of 1966; b) the share of investment for agricultural development in total central government investment declined from 28% to 24%. Although expenditure for large-scale reclamation or irrigation projects continued to rise, there was a decline in essential supplementary spending to induce the necessary shifts and adjustments in production; c) the cancellation of agricultural debts in 1968 was not associated with any systematic policy designed to promote agricultural modernization and growth; borrowers who had settled their obligations before the announcement of debt cancellation did not benefit from it; d) the uncertainty with respect to the conditions under which a number of Greek agricultural products could be exported to European markets, after the suspension in 1967 of major parts of the Agreement of Association between Greece and the European Community. More generally the interruption of «harmonization» of agricultural policies with the community has been a serious setback to Greek agriculture... The traditional procedure of plot re-allotment and consolidation had long proved too slow and inadequate. Finally, the resumption in the last few years of mass emigration from the rural areas and the slowdown in agricultural production are becoming mutually determined processes, leading to agricultural stagnation. This is already pronounced in some of the main tobacco-producing areas in the north of Greece.»[1]

Regional Distribution of Agriculture

Table V shows that agriculture still remains the dominant activity of the peripheral regions of Greece. Furthermore, as is shown in Table VI, the peripheral regions are underrepresented in their share in total national population as well as in their share of gross domestic product. In 1971, the periphery had 18.5% of the total national population and a share of only 11.6 % in gross domestic product.

TABLE VI: *Distribution of Regional Population and Regional Distribution of Gross Domestic Product as Percentage of Total, 1961-1971*

Regions	1961 Popul. %	1961 GDP %	1971 Popul. %	1971 GDP %
More Developed Regions				
Attica and Aegean Islands	33.60	49.60	40.00	54.30
W.C. Macedonia	16.00	16.48	16.50	17.00
Intermediate Regions				
Peloponnesos	17.45	12.24	15.00	10.00
Thessaly	11.12	7.92	10.00	7.10
Peripheral Regions				
Epirus	5.77	3.44	4.90	2.80
Thrace	10.33	6.56	8.50	5.40
Crete	5.77	3.76	5.20	3.40

Source: Data calculated from Center for Planning and Economic Research, 15 Year Plan, Census of 1961 and 1971.

Another factor that operates to the detriment of the periphery is that the regional distribution of production of some basic crops shows that the more developed and intermediate regions (Attica, Central Greece, Macedonia, Peloponnesos and Thessaly) are producers of some importance while the periphery (Epirus, The Islands and Thrace) have actually little to offer except some oranges, wheat and a little tobacco.[2]

Furthermore, Campbell reports that «it is possible to identify an area extending from Attica north to Macedonia (i.e. the prosperous Athens-Salonica axis) as a zone of real demographic and productive increase... In these plains, particularly, the mechanization of agriculture has been possible and profit-

1. Cf. John Pesmazoglu, «Slow-down in Agriculture»—«The Greek Economy» in op. cit., pp. 80-82.

2. Cf. B. Ward, «The Regional Distribution of Economic Activity,» «Agriculture and mining,» p. 39, in op. cit.

able. With deeper ploughing, weed control and greater use of fertilizers, yields have increased. In many villages of this more fertile area the cultivated area per head of the country population is greater than elsewhere; and fragmentation of farm holdings, although only slightly less considerable than in other areas, is less crippling in the conditions of flat plainland.»[1] The above description by Campbell shows that the more developed and intermediate regions (Attica, Central Greece, Peloponnesos, Thessaly, Macedonia) are also more advanced and modernized in agricultural production than the peripheral regions (Epirus, The Islands, Crete and Thrace) (see Map III).

The fact that the peripheral areas produce a small proportion of the nation's agricultural product and furthermore have a low per capita productivity in agriculture (see Tables VII and VIII) is also a measure of the extent to which inhabitants of these regions are cut off from modern economic life.

TABLE VII: *Agricultural and Non-agricultural Gross Domestic Product by Region — for 1961 and 1971*

Regions	In Percentage of the total			
	1961		1971	
	Agricultural	Non-agricultural	Agricultural	Non-agricult.
More Developed Regions				
Attica and Aegean Islands	14	63	14	62
W.C. Macedonia	20	15	22	16
Intermediate Regions				
Peloponnesos	24	8	21	8
Thessaly	15	5	16	5
Peripheral Regions				
Epirus	6	2	6	2
Thrace	14	4	14	4
Crete	7	3	7	3
National Total	100	100	100	100

Source: Calculated from Centre for Planning and Economic Research, 15 Year Plan, Census of 1961 and 1971.

The above Table shows the small contribution of the periphery in both the country's agricultural and non-agricultural gross product. Furthermore, it is striking that there has been no relative progress whatsoever for the periphery during the 1961-1971 period. This is despite the fact that the periphery has experienced a mass emigration of 383,000 people in the 1961-1971 period, i.e. 78% of total national net mirgation, as is shown in Table XIX (page 352).

Thus, the peripheral regions' economy and employment are still mainly in agriculture. This agriculture remains traditional in character, with low

TABLE VIII: *Per Capita Agricultural Gross Domestic Product by Region for 1971*

Regions	1971 Per Capita Agricultural GDP (in drachmae)
More Developed Regions	
Attica and Aegean Isl.	44,595
W.C. Macedonia	42,857
Intermediate Regions	
Peloponnesos	30,117
Thessaly	36,842
Peripheral Regions	
Epirus	26,667
Thrace	30,396
Crete	28,220

Source: Calculated from Centre for Planning and Economic Research 15 Year Plan, Census of 1961 and 1971.

Note: The per capita agricultural GDP has been calculated by dividing each region's agricultural GDP by the region's number of economically active people in agriculture. The above per capita GDP also shows the regional productivity in agriculture.

productivity, while the structure of the Greek economy as a whole is shifting from the primary sector through the secondary to the tertiary stages of development (see Tables II and III).

Both the secondary and tertiary sectors are heavily concentrated in the more developed regions (Attica and Macedonia) (see Tables V and VII). It, therefore, becomes evident that this trend does not benefit the periphery but rather benefits the more developed regions and especially Attica (the core region).

According to the neo-classical equilibrium theory and analysis of labour migration formulated by Mrs. Vera Lutz,[2] outflow of under-employed or unemployed labour from agriculture should bring an automatic raising of land-labour ratios and productivity in agriculture as well as levelling of regional per capita income. The theory assumes that labour migrates from low-income to high-income regions and capital flows from high-income to low-income regions.

Mrs. Lutz applied this theory in her analysis of the dual economy of Italy in the 1950s, divided between a predominantly industrialized North and a predominantly agricultural South. This was a situation very similar to the present dualistic division of Greece between the core and the periphery regions as we have already described them.

Mrs. Lutz argued that emigration from the South should be continued to the point at which «natural» factor proportions were secured. These proportions would be achieved through the «natural» growth of the market for industrial products through the joint

1. Cf. John Campbell, «The Greek Countryside,» in op. cit., p. 323.

2. Cf. Vera Lutz, *Italy—A Study in Economic Development*, London, OUP, 1962.

TABLE IX: *Gross Domestic Fixed Asset Formation*
Current prices, million drachmae

Gross fixed asset formation (including ships)	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969[1]
	27,536	27,056	27,868	27,202	34,957	40,349	46,892	45,876	60,756	74,798
Gross fixed asset formation (excluding ships)	19,866	21,506	25,128	26,892	33,107	38,625	43,144	43,557	53,499	66,096
Building	8,823	9,377	11,116	12,279	14,934	16,666	19,063	17,841	25,200	30,292
Dwellings	5,730	6,158	7,468	8,099	10,011	11,893	13,288	12,092	16,911	20,948
Other building	3,093	3,219	3,648	4,180	4,923	4,773	5,775	5,749	8,289	9,344
Other construction and works	5,559	6,156	6,519	6,535	7,317	9,438	9,848	10,632	12,467	14,134
Transport equipment	1,415	1,688	2,288	2,264	2,971	3,136	5,005	4,590	4,066	6,401
Machinery and other equipment	4,069	4,285	5,205	5,814	7,885	9,385	9,228	10,494	11,769	15,269
Agriculture, animal breeding, fishing	3,490	3,696	3,481	3,847	4,331	4,808	4,830	5,541	6,451	6,952
Mining and quarrying	106	147	199	336	362	492	498	625	633	635
Manufacturing	2,039	2,588	3,419	3,509	4,660	5,778	5,813	5,461	6,828	7,512
Electricity, gas, etc	1,497	1 449	1,962	1,838	2,816	3,477	3,110	4,504	4,959	6,543
Transportation and communication[2]	3,782	4,233	4,761	4,902	6,344	6,893	9,061	9,055	9,889	13,197
Dwellings	5,730	6,158	7,468	8,099	10,011	11,893	13,288	12,092	16,911	20,948
Public administration	278	230	227	255	227	147	371	404	325	572
Other service industries	2,944	3,005	3,611	4,106	4,356	5,137	6,173	5,875	7,503	9,737
Private	13,297	13,709	16,665	18,713	23,825	27,949	31,456	30,060	38,485	47,416
Public	6,569	7,797	8,463	8,179	9,282	10,676	11,688	13,497	15,014	18,680

1. Provisional estimates.
2. Including a large share of construction expenditure.
Source: National Accounts of Greece, Ministry of Coordination and direct communication to the OECD. OECD Economic Surveys, Greece, February 1971, p. 65.

effects of 1) out-migration from the agricultural sector in the less developed region, which is supposed to raise land-labour ratios and thus output per head for the remaining working population in agriculture; 2) the maintenance of previous agricultural output levels with a smaller labour force will mean raised productivity, and the generation of a surplus of food products over local consumption needs; 3) the export of this surplus to the more developed regions will result in net savings in agriculture which can be invested either in improvements to techniques of production through mechanization, or in industry within the region, or both; 4) investment of the agricultural savings surplus in industry will have two-fold virtuous effects for regional agriculture through (a) increasing labour outflow from the sector through demand for more labour in regional industry, thereby further increasing agricultural productivity, and (b) increasing the demand for food in the expanded industrial workforce, where out-migrants from agriculture no longer produce food for their own consumption; 5) increased agricultural productivity will create in turn a «natural» demand for industrial products. This newly created «natural» demand for industrial products will now offer new opportunities for industrial investment in the underdeveloped South.

It follows from the above analysis that capital inflows from the developed North will start pouring into the southern region in order to act in such a way as to restore equilibrium into the system and eliminate the existing dualism between the North and South. This inflow of capital is expected to meet the newly created demand for industrial products, i.e. the demand generated by the sale of agricultural surplus made possible by emigration of excess labour and higher labour productivity in agriculture.

This theory has been authoritatively contested in the Italian case by Holland, Ackley and Spaventa, and Allen.[1] In the case of Greece the so-called «natural» factor proportions have never been secured through emigration. There has been no higher labour productivity in agriculture; no development of agricultural exports in the peripheral regions. The only thing that has persisted is emigration. There has been no «natural» demand for industrial products in the peripheral regions, either. As for new opportunities for industrial investment there, we will show below what a little share the periphery has in industrial production. Thus, the above theory is also contradicted by all the evidence we have already presented for the Greek case.

1. Cf. Stuart Holland, «Regional Under-development in a Developed Economy: The Italian Case» in *Regional Development in Theory and Italian Practice,* in op. cit. Gardner Ackley and Luigi Spaventa, «Emigration and Industrialization in Southern Italy,» *Banco Nazionale del Lavoro Quarterly Review,* June 1962. Kevin Allen and M. C. Maclennan, «Regional Problems and Policies in Italy» in *Regional Problems and Policies in Italy and France,* London, G. Allen and Unwin Ltd., 1970.

Industry

Another weakness of the Greek economy is that although in the period 1965-1972 the country's GDP doubled, per capita income increased and the country enjoyed and experienced a degree of affluence, its industrial sector is still characterized by small family businesses, high costs, old obsolete machinery (until recently protected by tariffs and severe import controls which blocked competition from abroad). Table IX shows that very little private or public investment in capital formation and in industry is actually taking place.

A multiplicity of small family firms, as is shown in Table X, contribute a substantial part of the national production. Unwilling or unable to obtain long-term credit to modernize their methods and reduce their costs, bound to a local circle of clients and protected from foreign competition, they are not equipped to sell their products abroad. In other words, industry is backward, inefficient and no scale economies can be achieved by them.[1]

TABLE X: *Distribution of Manufacturing Establishments by Region and by Size for 1970*

Regions	1-19 persons	20 and above
More Developed Regions		
Attica and Aegean Islands	52,887	1,688
W.C. Macedonia	21,733	525
Intermediate Regions		
Peloponnesos	15,558	231
Thessaly	10,791	139
Peripheral Regions		
Epirus	5,089	32
Thrace	8,736	95
Crete	7,082	65
Total Greece	121,876	2,775

Source: Industrial Census of 1969. Centre for Planning and Economic Research.

Table X shows that from the 124,651 industrial establishments in Greece only 2,775 (2.2%) are employing 20 persons and over and of these more than half (60.82%) are located in Athens and (18.91%) in W. Macedonia (Salonica). The periphery has a very small share (6.91%) of the larger establishments. It also becomes evident that the bulk of the industrial establishments (97.8%) are employing less than 20 people and that almost one-fifth of them are located in the periphery, where family firms and obsolete equipment are to be found.

The evidence we have from Gross Domestic Asset Formation for the period 1960 to 1972 shows the strong propensity to invest in construction (dwellings) and government investment in infrastructure, especially transport and communications.[2] The investment in dwellings has mainly favoured Athens, as there is a high concentration on upper middle-class apartment buildings there. This is hardly a leading industry in the Perroux sense of «industrie motrice» or in the Hirschman sense of high-linkage industry. A substantial amount of this capital invested in Athens' apartment houses is coming from the periphery where owners of large and medium land property invest whatever surplus they gain from agriculture into housing in Athens or Salonica. Here the basic principle, formulated by Frank, is in full swing—that is the process by which the exploitation of the satellite (or peripheral) region by the metropolis (or core region) occurs by the expropriation of surplus, its appropriation by the metropolis and its consequent unavailability to the satellite region.

On the other hand, the government's investing in road construction has contributed to the development of the Athens-Salonica axis, which runs along the core region (Attica), the intermediate region of Thessaly and terminates at the more developed region of W. C. Macedonia.

The structure of gross domestic asset formation also shows that the induced effects formulated by Perroux are only partly relevant to the Greek case and economy. What we have in the Athens Growth Pole is mostly Myrdal's «spread effect» induced by increased consumption and incomes and agglomeration effects of complementary industries, which are mainly light and service industries. There is little creation of intermediate industry promoting vertical and horizontal linkages in the Perroux-Hirschman sense.[3] Businessmen are not persuaded by the increase in the natural growth rate of the economy to invest more in the production of goods. Harrod's theory of «warranted» and «natural» growth rates is not fully relevant in the Greek case. Because of an inherent suspicion and dislike of Greek entrepreneurs in investing in capital goods, this is left to incoming foreign investment.[4]

1. Cf. George Coutsoumaris, *The Morphology of Greek Industry*, Center of Economic Research, 1963, Athens, also Howard S. Ellis, *Industrial Capital in Greek Development*, Center of Economic Research, Athens, 1964 and B. Ward, «Industry» in *Greek Regional Development*, in op. cit., pp. 44-52.

2. See Table IX. Cf. also *Greek National Statistics Yearbook*, 1973, p. 363, «Gross domestic asset formation for 1965-1972.»

3. The so-called «Industries motrices» of Perroux, or high-linkage industries of Hirschman.

4. John Campbell, «Economic dilemmas» in *Modern Greece*, pp. 319-320 says that «to create export industry and to expect an annual increment of 6 per cent to the GNP one must assume that there will be a decisive increase in private investment in industry and that much of this money will come from abroad.... and that fluctuations in the growth of private productive invest-

Another structural weakness in Greek industry is that it is mainly dominated by traditional industries such as food and textile industries. This pattern of dominance by textile and food industries combined with a relatively small contribution to GDP by manufacturing, taken as a whole, is typical of the developing countries. In the case of textiles classification is somewhat arbitrary since textiles could be a highly dynamic sector in modern manufacturing as it allows the transformation of natural fibre into compound natural and synthetic fibre products with modern production techniques.[1] However, hereinbelow textiles will be classified under «traditional» manufacturing.

TABLE XI: *Value Added by Selected Industrial Sectors as Percentage of Total for 1961 and 1971*

Industrial Sectors	1961 %	1971 %
Traditional Manufacturing		
Textiles	25.0	15.0
Food Industries	16.0	11.6
Non-metallic minerals	9.0	8.1
Modern Manufacturing		
Chemicals	10.6	8.9
Basic Metals	4.2	7.7
Metal Products	4.5	5.1
Machinery	1.5	2.2
Electrical Supplies and Machinery	1.9	6.7
Transport Equipment	1.0	6.3
Paper and Printing	2.6	5.1
Rubber and Plastic	2.4	3.7

Source: Percentages calculated from Statistical Yearbook 1973, pp. 200-201, Industrial Census 1971. For 1961 value added weights see B. Ward, "Greece and Economic Development," in op. cit., p. 13.

Table XI shows that the dominant industry is indeed textiles, with over 25% of value added in total manufacturing in 1961 and 15% in 1971 and then comes the food industry with 16% of v.a. in total manufacturing in 1961 and 11.6% in 1971. The remaining sectors are contributing to the value added in total manufacturing but to a lesser extent.

As becomes evident from Table XI, there has been some improvement in the decade of 1960s in the country's industrial structure and some shift towards the dynamic modern industries of metallurgy, electrical machinery, transport equipment, paper and printing, rubber and plastic. However, the leading industries remain those of food and textiles. As for the increased share of the new dynamic industries in the country's total manufacturing, this is mainly due to foreign investment (see Table XII).

TABLE XII: *Foreign Investment in Greek Industry per Sector as Percentage of Total Investment for 1970*

Industrial Sectors	1970[1]	1961-68 Average[2]
Food and Beverage Industry	2	4.6
Textiles	2	5.6
Clothing and Footwear	4	16.7
Wood and furniture	10	23.6
Paper and products	4	17.9
Non-metallic minerals	14	12.6
Chemical products	68	82.6
Metal products - Metallurgy	8	64.4
Electrical products and machinery	7	12.6
Transport equipment	13	81.6
Other	8	—

1. 1970 percentages estimated by P. Roumeliotis based on non-published data of the Bank of Greece and of the National Statistical Service of Greece.

2. Bulletin Economique pour l'Europe, vol. 23, No. 2, 972, cité par André Piatier dans «Les sociétés multinationales dans l'économie mediterranéenne», Mondes en Developpement, 2, Paris, 1973, p. 122.

Note: The discrepancies between the two percentages can be attributed to the fact that the statistics of the European Economic Commission reflect investment intentions (ex ante) and not realised investment (ex post). See Roumeliotis in op. cit. pp. 59-61.

Regional Distribution of Industry

As far as regional distribution of industry is concerned Tables XIII and XIV, calculated from the Industrial Census data of 1969 on employment and value added by main region and industrial sub-sector, show that the Periphery has a very small proportion of the country's industrial employment and its share has actually declined during the period 1963-1969. Table XIII also shows that regional industrial labour force is mainly employed in traditional manufacturing (10.9% of the national total), in mining (11.1%), utilities (9.6%) and to a lesser extent (5.6%) in modern manufacturing.

Table XIV illustrates even more dramatically the negligeable share that the periphery has in national value-added. Its share of n.v.a. in traditional manufacturing is only 3.6% and 0.60% in modern manufacturing. Regional value-added in total manufacturing is 2.13% for the year 1971.

Unfortunately, there are no regional statistics available for value-added in industry for 1961. However, judging from Table XIII, it becomes evident that there has been no progress in the periphery's share in national industrial employment or value-added. A regression has rather taken place.

On the other hand, the evidence we have from the Industrial Census of 1969 indicates that Athens has

ment depend almost entirely on the periodical enterprise of foreigners.» For a detailed account of foreign investment in Greece see Panayotis Roumeliotis, *Investissement direct international et Economie nationale—Le cas de la Grèce*, Centre de Planification et des Recherches Economiques, Athens, 1975.

1. In the Italian case, St. Holland classifies textiles under modern manufacturing, cf. his «Regional under-development, etc.» in op. cit.

the highest concentration of those industries considered by Kuklinski as «key» sectors[1] for simultaneously raising both regional employment and income.

TABLE XIII: *Industrial Employment—Periphery as Percentage of National Total*

	1963	1969
Traditional Manufacturing	*12.0*	*10.9*
Food, Beverages, Tobacco	21.0	17.3
Clothing	8.5	6.4
Wood and Furniture	15.0	15.0
Non-metallic minerals	11.4	12.0
Textiles	4.3	4.0
Modern Manufacturing	*5.7*	*5.6*
Paper and Printing	3.5	2.2
Chemicals, Rubber, Petroleum Prod.	1.4	3.1
Basic Metallurgy and Metal Prod.	9.7	9,6
Engineering (machinery and transport equipment)	6.0	6.0
Miscellaneous	7.7	7.3
Total Manufacturing	*8.8*	*8.2*
Mining	15.0	11.1
Power, Electricity and Gas	9:9	9.6
Total Industry	*11.2*	*9.6*

Source: Industrial Census 1969 made by Ministry of Coordination Data communicated directly by Center for Planning and Economic Research.

TABLE XIV: *Industrial Value-added: Periphery as Percentage of National Total*

	1971
Traditional Manufacturing	*3.60*
Food, Beverages, Tobacco	8.00
Clothing, Skins	1.40
Woodwork and Furniture	3.80
Non-metallic mineral products	3.40
Textiles	1.30
Modern Manufacturing	*0.66*
Paper and Printing	0.05
Rubber - Chemicals - Petroleum Products	2.40
Metallurgy - Metal Products	0.04
Engineering (machinery - transport)	0.80
Miscellaneous	—
Total Manufacturing	*2.13*

Source: Industrial Census 1969 by Ministry of Coordination. Data communicated directly by Centre for Planning and Economic Research.

As shown in Map VI, Athens and Central Greece have a very high concentration of the «key» sectors of engineering and chemical products, both of them showing the highest rates of growth of both product and employment. Salonica comes second in its share of those two «key» sectors. The periphery is entirely under-represented in them. The case of Salonica becoming a counter-pole to Athens because of the gradual concentration there of dynamic «key» industrial sectors has not been studied yet and requires further research.

Furthermore, the evidence we have shows that most of the recent years' increase in industrial production and exports for the period 1961-1971 was associated with modern manufacturing. Pesmazoglu maintains that «about one-third of the increase in industrial production during the 1961-1971 period and about three-quarters of the rise in industrial exports resulted from four leading industries: chemicals, basic metallurgical, transport equipment (shipyards) and petroleum products.» We have seen above what a negligeable role the periphery plays in these leading dynamic industries and how these are concentrated mainly in the core region of Attica / Central Greece, second in Peloponnesos (Patras) and finally in Macedonia (Salonica) region. Pesmazoglu also reports that «the increased activity in the leading industries is almost exclusively associated with ten firms.»[2] These firms are all established either in the Region of Athens /Central Greece, or in Salonica and Patras and are in their great majority multinational companies. None of them is located in the peripheral regions.

Holland[3] in his study of the Italian dualism maintains that «this disparate situation, with different types of firm concentrated in and serving effectively different types of regional market, provides a further dimension to the much advertised problem of interregional dualism,» and that «when different types of firm are located in different regions the oligopolistic competition process within sectors will reinforce the interregional dualism problem.» He employs the inter-firm distinction formulated recently by Averitt[4] between «centre» and «periphery» systems in the US economy. According to Averitt the «'centre' system is composed of firms which are large in size and influence, benefiting from management scale economies. ...The 'periphery' system is composed of relatively

1. Kuklinski has identified engineering and chemical products in his ECE study of industrial location as those industrial sectors showing the highest rates of growth of both product and employment and therefore «key» sectors for simultaneously raising both regional employment and income. Cf. A. Kuklinski, *Criteria for the Location of Industrial Plant* Economic Commission for Europe, 1966. Cf. also St. Holland, «Regional Underdevelopment in a Developed Economy: The Italian Case» in op. cit.

2. Cf. John Pesmazoglu, «Slow-down in Industrial Investment» in op. cit., pp. 82-83. According to a classification of the 200 leading companies in Greece, made by the Federation of Greek Industrialists, on the basis of the amount of their export activities, it appears that eight out of the first twelve leading companies are foreign or are financed from abroad. Cf. *Deltion of Fed. of Greek Industrialists,* No. 290.

3. Cf. St. Holland, *Regional Development in Theory and Italian Practice,* in op. cit., pp. 144-155.

4. Cf. Robert T. Averitt, *The Dual Economy: The Dynamics of American Industry Structure,* 1968, p. 108.

MAP VI. *Regional Distribution and Structure of Industry*
Location of the largest 100 industrial units and their branches on the basis of employment figures (maximum employment: 6,614 persons, minimum: 312)

▲ Leather Industries
△ Food Industries
◪ Tobacco Industries
▲ Footwear, Wood, Furniture, Printing, Miscellaneous

■ □ 1 5 Metal Products, Machinery, Electrical Machinery, Transport Equipment
▬ ⊠ 1 5 Rubber, Chemicals, Petroleum Products, Basic Metallurgy
● ○ 1 5 Textiles, Paper, Non-Metallic Minerals

1970 - Center for Planning and Economic Research

Scale: 1: 4,000,000.

small firms, which are usually dominated by a single individual or family. Its sales are realized in relatively restricted markets; its profits and retained earnings are commonly below those of firms in the centre system, and its long-term borrowing is difficult. Production techniques and marketing are rarely as up to date in the periphery system as in the centre system. The firms concerned are often, though not always, 'technological followers'. Centre firms are in a position to employ research, innovation and advertising, to allocate resources to themselves and the industries under their control. Unions in centre firms are alleged to aid them through putting pressure on key industry competitors to pay uniform wage rates which they can less easily afford.»

Holland concludes that «the result of such tendencies if unchecked by government policies may be a situation in which interregional dualism in the sense of effectively separate regional economies with different growth rates will be matched and reinforced by an intra-sectoral dualism, in which the different regional markets are composed of firms which are effectively different in structure, actual growth and growth potential,» and that «this combination of factors operating within and between firms will limit the effectiveness of government policy to stimulate growth in the peripheral areas through development incentives such as investment loans and grants, company and personal tax concessions, regional employment premiums and similar indirect measures designed to promote investment and expansion in the less developed peripheral regions.»

In the case of Greece it becomes evident that the regional distribution of manufacturing firms according to size (see Table X) interacts with the regional distribution of modern manufacturing (see Map VI) and that the resulting intra-sectoral dualism tends to reinforce the already existing interregional dualism.

Services

Here again the predominance of the core region Attica in respect to the periphery is evident. Table XV shows the disproportionate share of Athens in the service sector. This imbalance in the share of services can be easily inferred from the following percentage shares that Athens has in the total employment of the corresponding activities.

If we also consider the concentration of all government services in Athens the share of services for Athens will certainly be larger. If now we consider the share that the tertiary sector has in the country's GDP (48.69%), as well as the negligeable share of the periphery in that sector—some of the peripheral areas might have a somewhat large share in service employment but this is mostly due to low-productive

TABLE XV

Activities		Athens share in Total Employment - 1971 (in percentage of total)
Utilities		51%
Transportation		60%
Trade		41.6%
Gross	56.3%	
Retail	35.0%	
Banking, Insurance, etc.		64%
Services (other than Government)		44%

Source: George Chiotis, "Regional Development Policy in Greece" in Tijdschrift voor econ. en soc. geografie, Maart/April 1972.

personal services, like tourist services and small retail trade—we see how the process of the Myrdal «spread effect» works to the benefit of the core region and to the detriment of the periphery.

Regional Income

There are many economic indices available which point to the divergent regional development of the country. The most common one in economic literature is the regional income per head, which serves as an indicator of regional economic performance. Table XVI shows that Income per Head in the Periphery in 1961 was between 40 and 44 percent of the level of the core region Attica. In 1971, despite regional incentives for decentralization offered by the government, we still see that it has only risen between 42 and 47 percent of the level of the core region.

TABLE XVI: *Income per Head in Greece as Percentage of Attica Region*

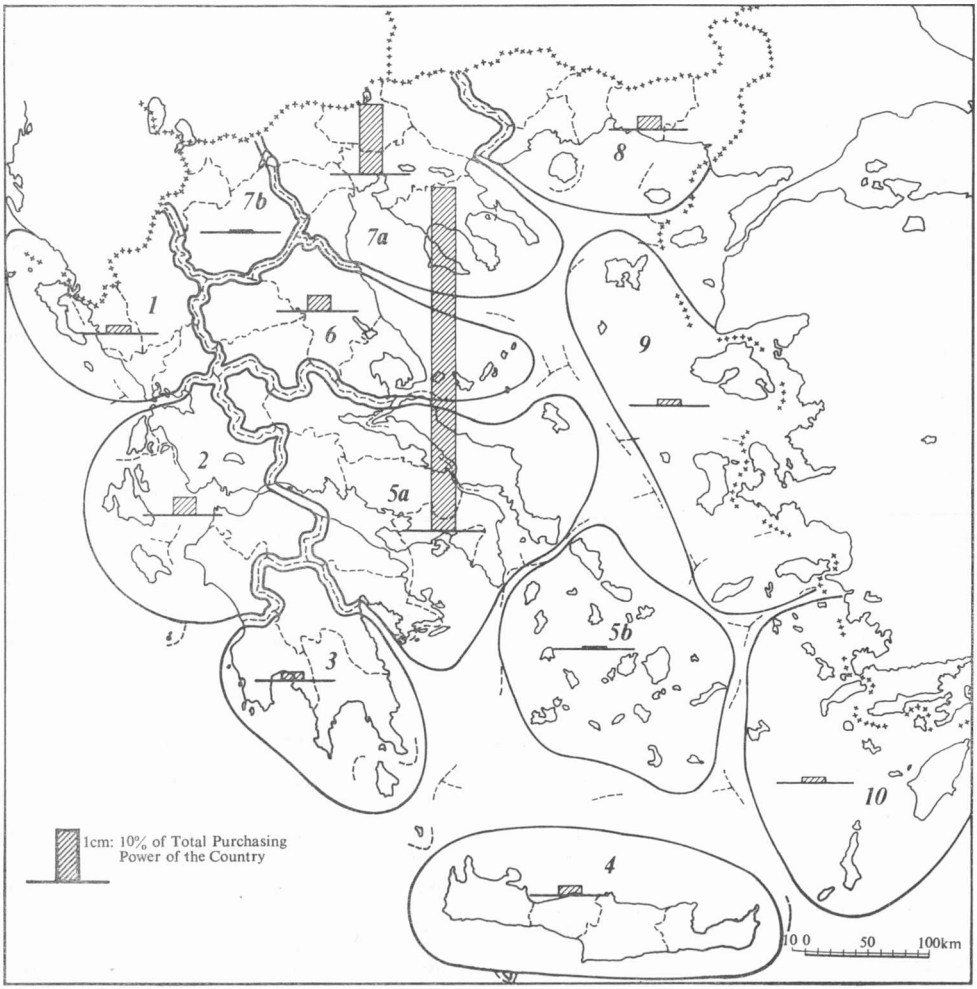
	More Developed Regions		Intermediate Regions			Periphery		
	Attica / Aegean Islands	W.C. Macedonia	Peloponnesos	Thessaly	Crete	E. Macedonia / Thrace	Epirus	Greece
1961	100	69	47	48	44	43	40	56
1971	100	76	49	52	47	47	42	59

Source: Centre for Planning and Economic Research— 15 Year Plan.

However, regional income per head is a rather misleading index and does not reveal the real difference in regional performance and prosperity. As Maph VII shows the disparity between percentage purchasing power of regions on country total for 1963 was enormous. It becomes evident from Map VII that even though regional product per head in the peripheral regions may be 40 or even 47 percent of the level of Attica region, the actual disparity in purchasing power may be ten times greater.

MAP. VII. *National Network of Urban Centers*

1963 Percentage Purchasing Power of Regions on Country Total : Percentage Population of Region × Indice of Purchasing Power per capita in the Region



Source: «A Spatial Study of the National Network of Urban Centers,» Centre for Planning and Economic Research, Athens, 1967, p. 20.

Here the argument of Frank that the core region expropriates the surplus created in the peripheral regions and consumes or invests it for its own benefit becomes dramatic. There is no data available for regional percentage purchasing power for 1971, but judging from Table XVI it becomes evident that the picture has not altered much. Furthermore, considering the multiplier effects[1] that income, produced in the periphery and spent in Athens region either on industrial investment or on consumption goods, can have on the core region's income, it becomes clear that Athens absorbs most of the country's surplus in one way or another.

The available data on total family income for the fiscal years 1963-1972, given by the Greek National Statistical Service, is broken down only for the Greater Athens area and for the Rest of Greece. In 1963 the declared family income for the Rest of Greece was half (51.6%) of the level of the Greater Athens region. For 1973, it rose to two-thirds (64.89%) of the level of Greater Athens region.[2] But this break-down of Greece's regions into Athens and the Rest of Greece is misleading because the inclusion of the more developed region of Salonica and of the intermediate regions of Peloponnesos and Thessaly into the Rest of Greece lessens the income disparity between Attica (the core region) and the peripheral regions.

There are other indices besides declared family income that give a picture of real income by region. Table XVII shows some characteristic indices of regional inequalities in living standards between Greater Athens region (the core region) and the peripheral regions of Thrace, Epirus, Ionian Islands.

1. Similar to the process of Myrdal's «spread effects.»
2. Cf. «Total family income declared, by source of origin. Total Greece, Greater Athens and Rest of Greece, 1963-1972,» in *Statistical Yearbook of Greece, 1973,* p. 332.

TABLE XVII: *Characteristic Indices of Regional Inequalities in Living Standards*

Indicator	Greece	Greater Athens	Thrace	Epirus	Ionian Islands
1. Per capita electric power consumption (1995):					
a. Total (kwh)	438	1,024	62	80	113
b. For domestic use (kwh)	128	387	18	28	42
2. Private cars (1965) per 10,000 inhabitants	113	327	21	18	36
3. Bath or shower (1961) (percent of total households)	10	30	2	2	6
4. Drinking water supply (1961) (percent of total households)	27	78	21	18	20
5. Inhabitants per:					
a. Doctor (1965)	708	307	1,835	1,740	1,377
b. Dentist (1965)	2,453	1,031	6,422	5,497	6,745
c. Hospital bed (1965)	169	79	505	466	166
6. Illiterates (1961) (percent of population)	17	10	30	22	25

Source: Statistical Yearbook of Greece, National Statistical Service of Greece. George Chiotis, «Regional Development Policy in Greece» in Tijdschrift voor econ. n soc. geografie - Maart/April 1972.

Did Regional Decentralization Incentives Benefit the Periphery?

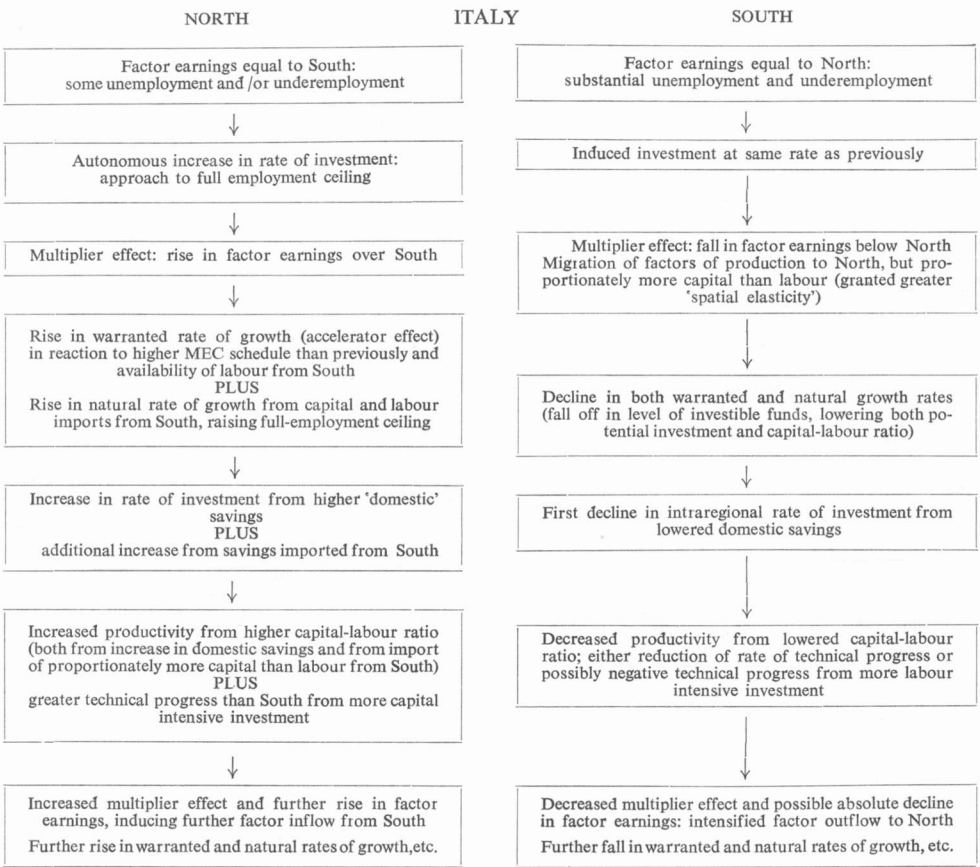
As shown in Table XVIII, regional incentives for the period 1960-1970 did not greatly succeed in reducing the share of agriculture in total regional employment in the periphery. Some peripheral regions, namely Thrace, still has 70% of its labour force engaged in agriculture. It also becomes evident from Table XVIII that the total net outflow of labour from agriculture, approaching 209,000 people, was not absorbed by industry or services (non-agricultural employment) within the donor region. On the contrary,

TABLE XVIII: *Employment in the Periphery by Main Sector 1960-1970 (In thousands)*

Peripheral Regions	Sector	1960	%	Change 60-70	1970	%
Epirus	Agriculture	151	69.6	— 46	105	61.0
	Industry	26	12.0	3	29	16.9
	Services	40	18.4	— 2	38	22.1
Total Epirus		217	100.0	— 45	172	100.0
E. Macedonia and Thrace	Agriculture	355	77.0	—128	227	70.1
	Industry	48	10.4	— 9	39	12.0
	Services	58	12.6	0	58	17.9
Total E. Macedonia and Thrace		461	100.0	—137	324	100.0
Crete	Agriculture	159	70.0	— 35	124	63.6
	Industry	25	11.0	5	30	15.4
	Services	44	19.0	— 3	41	21.0
Total Crete		228	100.0	— 27	195	100.0

Source: Data calculated from 15 Year Plan, Center for Planning and Economic Research.

FIGURE I: *Cumulative Regional Divergence Process*



Source: Stuart Holland, Regional Development in Theory and Italian Practice, in op. cit., Figure 6.

there was a decrease in the periphery's industrial employment of 1,000 people and a further decrease in the service employment of 5,000 people. The 209,000 people leaving primary employment in the periphery were not absorbed in non-agricultural employment within their regions. As is shown below they emigrated to Athens, Salonica or Germany.

Table XIX shows that while in the period 1960-1970 there was a total increase of 282,000 in non-agricultural employment in the rest of the country, the periphery experienced a decrease of 6,000 people in nonagricultural employment. It thus becomes evident that the peripheral regions did not contribute at all in the national increase of non-agricultural employment over this period.

TABLE XIX: *Increase in Employment and Migration from 1961 - 1971* *(in thousands)*

	More developed and Intermediate regions	Periphery	Greece
Increase in non-agricultural employment	282	—6	276
Interregional emigration	328	230	
Interregional immigration	558	—	558
International emigration	345	153	498
Net emigration	115	383	498

Source: Data calculated on the basis of the 15 Year Plan, Center for Planning and Economic Research, Migration figures communicated directly by the Center.

Furthermore, Table XIX shows that net emigration from the periphery totalled 383,000 people, which were more than double the natural increase of the region, which amounted to 159,000 people for the same period. It becomes evident that the periphery contributed most to the net emigration of the country, without at the same time succeeding in raising its productivity, its income and its share in the country's non-agricultural employment and product.

Table VII (page 342) shows the small contribution and the no relative progress of the periphery both in the country's agricultural gross product as well as non-agricultural gross product, for the period 1961-1971.

It could be argued that this outflow of agricultural labour from the periphery to the core region has contributed to the growth of Athens by raising its full employment ceiling. Stated in terms of Holland's regional application of Keynes-Harrod growth and trade cycle models,[1] the «natural rate of growth» in Athens was raised by labour inflow from the periphery, which in turn has affected the «warranted rate of growth» anticipated by Athenian businessmen and permitted an upwards virtuous spiral in which higher productivity allowed both high profits and a high rate of saving and investment. The above outlined process is very similar to the one outlined by Holland (see Figure I), in which he shows the divergence process between the more developed Italian North and the less developed South. In the case of Greece the interregional inter-reaction was between the core region (Athens) and the periphery. As for the autonomous increase in the rate of investment, this was the same for both countries, i.e. it was due to the injection of the Marshall Aid after the second world war.

The divergence process, outlined in Figure I, shows what would have happened in theory and was true up to the late 1960s. But the Greek economy is so inefficient structurally that the expansion of the core's economy was insufficient to absorb the periphery's unemployed workers, who finally decided to emigrate abroad (mostly to Germany).[2]

The extent of international emigration was such that serious shortages developed by 1970. In the summer of 1971, the Federation of Greek Textile Manufacturers officially requested the government to lift the ban on immigration from Asia and Africa so that they could employ Pakistani workers in Greek textile plants.[3] According to a report by the Federation of Greek Industrialists,[4] the number of foreign workers in Greece was estimated at the beginning of 1973 to be 25,000 to 30,000, i.e. the 0.8% of the Greek labour force. It was also estimated that there were 30,000 foreign seamen working on Greek ships. According to the same report, at the beginning of 1973 the Federation of Greek Industrialists informed the government that they were ready to absorb 10,000 more foreign workers if the supply of Greek workers were not sufficient. This is one of the anomalies that massive international emigration brought about.

While a high rate of savings and investment could allow an expansion of productivity in modern industry,[5] we have demonstrated above how little Greek investment was realized in manufacturing.

1. Cf. St. Holland, «Interregional Factor Migration, and Keynesian Growth and Trade Cycle Models» in *Regional Development, etc.*, in op. cit., pp. 47-62.

2. Holland later in his text also relaxes the assumption that his model can explain regional inter-reaction after the early 1960s in Italy and maintains that «it was partly the 'opening to the Left' of Italian politics in the early 1960's as well as the approach of the national economy to nominally frictional unemployment levels which permitted increased union pressure,... wage increases in excess of productivity increases,... promoting the first major national balance of payments deficit since the war.» Cf. Holland, op. cit., pp. 60-61.

3. Cf. George Yannopoulos, «Workers and Peasants» in *Greece under Military Rule,* in op. cit., p. 121.

4. Cf. Federation of Greek Industrialists, «Labour Market and Wage Structure in Greek Industry,» *Employment of Foreign Workers,* in op. cit., pp. 68-73.

5. Holland in his argument of sustained growth in the more

The second anomaly brought about by massive emigration was that part of the impressive growth of Athens' income and economic performance was not based on sound productive investment but was highly dependent on emigrants' remittances and tourists' receipts. In 1972 almost one fourth of the Current Transactions Account of the country's Balance of Payments was made up by emigrants' remittances. A sixth of the same account was made up by foreign travel receipts (see Table XX).

Most of this inflow of foreign currency was again spent or invested in Athens into the construction of dwellings, rather than modern industry, as well as in the consumption of goods and services. Here we also have the case of expropriation of surplus created in Germany and spent in luxury goods in Greece and particularly in the core region Athens.

This is in a few words how for 10 years Greece's economic boom and miracle came about based and dependent on invisible receipts which are highly sensitive, unreliable and subject to major international fluctuations. This is also the main reason why all Greek governments never bothered to stop emigration. It was helping to bridge the gap into their Balance of Payments Account.

Summarizing, we have demonstrated above that Greece's economy suffers from two main structural weaknesses. First, a traditional non-modernized, low productive agricultural sector. Second, in the industrial sector we have the predominance of traditional manufacturing as well as the existence of many small non-competitive tariff protected family firms, producing for a limited market with obsolete machinery and high costs. Both of these weaknesses in agriculture and industry are to be found mainly in the peripheral regions of the country where an interregional dualism is matched and reinforced by an intra-sectoral dualism.

We have also demonstrated that Greece's recent economic boom was mainly based on invisible receipts (i.e. emigrants' remittances and tourism), which stimulated consumption and construction rather than modern industry in the Greater Athens area. At the same time the periphery lost human and capital resources to the core and abroad without being able to improve its position and without sharing in the so-called «national economic affluence.»

developed regions maintains that «this would be particularly likely to the extent that the growth rate of the more developed region during the period of initial gain of portfolio capital from the less developed regions was sufficient to permit those entirely new plants which can embody major productivity and innovation gains» and that «it would be likely to be sustained to the extent that a fast rate of growth of demand permitted a fast rate of amortization of even the new innovating investment, with second round investment in further major innovations, with higher productivity gains.» Cf. his *Regional Development, etc.*, in op. cit., p. 59.

summary and conclusions

An attempt was made in this paper to demonstrate the process by which regional polarization and development occur in industrializing countries. The case of Greece was presented and analyzed as an example of highly polarized regional development.

In Greece the polarization process actually started in the 1830s with the emergence of the new modern Greek nation-state. It was the social change and «institutional» innovations injected into the system that transformed the «traditional» socio-economic spatial structure of the country by attracting innovative personalities; the country's élites; and consequently all economic activities; science; education; and culture into the enclave of accelerated change, the new capital Athens, which later became the core region while the rest of the country was left in a backwater. The core region started organizing the periphery into dependency by the gradual neutralization and co-option of the periphery's élites; by the creation of an adaptive system characterized by authority-dependency relations; and by the penetration and transformation of the periphery's social values and institutions in the direction of greater acceptance and conformity with its own value system.

The polarization process that started in the 1830s was later reinforced by the «technical» and «economic» innovations introduced in the 1950s into the system. The industrialization of the country was once again focused around the core region, Athens. But due to fundamental structural weaknesses in the country's economy, the so-called economic «miracle» of the core region was not based on modern dynamic industry and productive investment but rather on the «spread effects» of invisible receipts which in turn stimulated consumption and construction in the core region. At the same time the periphery sank deeper and deeper in backwater and stagnation and never participated in the core region's «miracle.»

It is believed that the above process of regional polarization and development is characteristic of most industrializing countries where core-periphery relations are still predominant influences.

TABLE XX: *Balance of Payments—Basic Global Data: 1969-1972*
(Based on foreign exchange statistics - Million U.S. dollars)

Category	1969		1970		1971		1972	
	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit
Current transactions								
Goods and services	1,050.2	1,677.5	1,225.1	1,974.5	1,455.1	2,264.9	1,870.9	2,844.1
1. Goods	530.3	1,433.6	612.2	1,704.6	624.8	1,945.2	835.5	2,441.3
2. Foreign travel	149.5	47.9	193.6	55.3	305.3	73.7	392.7	95.8
3. Transportation	214.0	30.2	276.9	42.0	369.2	62.8	433.5	77.7
4. Insurance premiums	1.8	9.7	3.5	9.7	3.9	8.5	3.2	11.4
5. Investment income	9.8	43.7	11.5	60.4	9.1	76.7	26.4	86.9
6. Government	44.1	67.1	40.9	45.3	41.0	34.7	48.0	47.2
7. Miscellaneous	70.7	45.3	86.5	57.2	101.8	63.3	131.6	83.8
Net balance of goods and services	—	627.3	—	749.4	—	809.8	—	973.2
Donations	279.4	1.4	346.4	1.5	470.8	1.9	572.1	3.5
8. Private (Emigrant remit.)	277.3	1.4	344.6	1.5	469.6	1.9	571.4	3.5
9. Official	2.1	—	1.8	—	1.2	—	0.7	—
9.1 Reparations, restitutions	1.8	—	1.4	—	0.9	—	0.4	—
9.2 Economic and technical assistance	0.3	—	0.4	–	0.3	–	0.3	—
Net donations	278.0	–	344.9	–	468.9	–	568.6	—
Net balance (1 through 9)	—	349.3	—	404.5	—	340.9	—	404.6
Movement of capital and monetary gold (net)	328.2	—	373.1	—	334.7	—	401.4	—
10. Private	270.7	48.5	365.4	47.6	382.7	58.4	645.1	75.2
10.1 Long-term capital	243.6	48.5	333.6	47.6	330.0	58.4	578.4	75.9
Capital under L. D. 2687/53	25.8	21.7	50.0	24.4	42.4	24.1	55.8	25.8
Suppliers' credits	28.6	—	51.2	—	35.5	—	131.5	—
Other loans by private corp.	71.8	11.5	114.9	7.2	74.8	12.0	68.7	23.6
Other loans by public corp.	29.7	7.7	13.7	7.8	28.3	11.5	122.4	16.7
Other private capital	87.7	7.6	103.8	8.2	149.0	10.8	200.0	9.8
10.2 Short-term capital	27.1	—	31.8	—	52.7	—	66.7	0.3
Suppliers' credits	26.8	—	31.4	—	51.2	—	66.7	—
Private barter	0.3	—	0.4	—	1.5	—	—	0.3
11. Central Government (Long-term)	54.9	34.3	30.4	34.5	17.9	43.4	17.8	43.1
Loans repayable in local currency	0.9	4.3	—	3.8	—	3.3	—	2.7
Loans repayable in foreign exchange	54.0	30.0	30.4	30.7	17.9	40.1	17.8	40.4
12. Central Monetary Institution	56.2	16.2	30.6	27.8	168.9	262.4	261.1	606.8
Participation in intern. organ.	—	—	—	10.6	—	—	—	—
Loans and credits	46.3	5.0	—	10.0	60.0	15.0	195.0	4.2
Other	—	—	14.2	0.3	57.5	36.4	41.4	61.5
Payments and clearing agreement	—	6.2	—	6.9	33.1	—	24.7	—
Official foreign exchange reserves	—	5.0	3.1	—	—	211.0	—	463.5
Monetary gold	9.9	—	13.3	—	18.3	—	—	37.6
13. Other Monetary Institutions	64.4	19.0	105.0	43.4	225.8	96.4	361.8	158.3
Loans and credits	11.7	2.3	18.7	2.9	45.2	6.4	64.1	6.6
Deposits under L. D. 2687/53	22.0	8.7	8.9	6.7	12.6	7.0	3.6	9.3
Other deposits	30.7	8.0	77.4	33.8	168.0	83.0	294.1	142.4
Creation of official reserves								
14. Non monetary gold	—	—	—	—	—	—	23.6	—
15. Allocation of SDRs	—	—	16.8	—	10.3	—	—	7.1
Errors and omissions	21.1	—	9.6	—	—	4.1	—	13.3

Source: Monthly Statistical Bulletin of the Bank of Greece, Statistical Yearbook of Greece, 1973, p. 365.

BIBLIOGRAPHY

G. Ackley and Luigi Spaventa, «Emigration and Industrialization in Southern Italy,» *Banco Nazionale del Lavoro, Quarterly Review,* June 1962.

Alexander, *Greek Industrialists,* Athens.

K. Allen and M. C. Maclennan, *Regional Problems and Policies in Italy and France,* London, G. Allen and Unwin Ltd., 1970.

R. T. Averitt, *The Dual Economy: The Dynamics of American Industry Structure,* 1968, p. 108.

B. J. L. Berry, *Geography of Market Centers and Retail Distribution, Foundations of Economic Geography Series,* Englewood Cliffs, N. J., Prentice-Hall, Inc. 1967.

E. van Böventer, «Spatial Organization Theory as a Basis for Regional Planning,» *Journal of the American Institute of Planners,* Vol. XXX, No. 2, May 1964, pp. 90-99.

H. Brookfield, «Notions of Inequality, Space and Polarized Growth,» *Interdependent Development,* Methuen and Co., Ltd., 1975.

J. Campbell and P. Sherrard, *Modern Greece,* Ernest Benn Ltd., London, 1968.

Center for Planning and Economic Research, *15-year Plan,* Athens, 1972 and *Spatial Study of the National Network of Urban Centers,* Athens, 1967.

G. Chiotis, «Regional Development Policy in Greece,» *Tijdschrift voor econ. en soc. geographie,* Maart /April 1972.

Clogg and Yannopoulos, *Greece under Military Rule,* Secker and Warburg, London, 1972.

J. Cordatos, «The Social Importance of the Greek Revolution of 1821,» *Epikerotita,* Athens, 1974 (in greek) and his 5 volume *History of Modern Greece,* Athens, 1957 (in greek).

G. Coutsoumaris, *The Morphology of Greek Industry,* Center of Economic Research, Athens, 1963.

H. S. Ellis, *Industrial Capital in Greek Development.* Center of Economic Research, Athens, 1964.

Federation of Greek Industrialists, *Labour Market and Wage Structure in Greek Industry,* Athens, 1974 (in greek) and Deltion No. 290, Athens (in greek).

A. G. Frank, *Capitalism and Underdevelopment in Latin America,* Penguin Books, 1969 and *Latin America: Underdevelopment or Revolution,* Monthly Review Press, 1969.

E. Friedl, *Vassilika: A village in Modern Greece,* Holt and Rinehart, New York.

John P. Friedmann and W. Alonso (eds.), *Regional Development and Planning: A Reader,* MIT Press, Cambridge, Mass., 1964.

J. Friedmann, *Urbanization, Planning and National Development,* SAGE, Publications, Beverly Hills, London, 1973, and «Regional Planning: A Problem in Spatial Integration,» *Papers and Proceedings of the Regional Science Association,* Vol. 5, 1959 and «Locational Aspects of Economic Development,» *Land Economics,* August 1956, pp. 215-221.

N. M. Hansen, *French Regional Planning,* U. P. Edinburgh, 1968.

R. F. Harrod, «Fundamental Dynamic Theorems,» *Towards A Dynamic Economics,* Macmillan and Co., Ltd., London, 1960.

St. Holland, D., Phil. Thesis, *Regional Development in Theory and Italian Practice,* University of Oxford, 1971 and *Strategy for Socialism,* Spokesman Books, 1975.

B. F. Hoselitz, «Generative and Parasitic Cities,» *Journal of Economic Development and Cultural Change,* April 1955, pp. 278 - 294.

W. Isard, *Location and Space Economy,* Cambridge, Mass., The MIT Press, 1956.

K. D. Karavidas, *Agrotica,* Ministry of Agriculture, Athens, 1931 (in greek).

B. Kayser, *Human Geography of Greece,* National Centre of Social Research, Athens, 1968 (in french and in greek) and *Economic and Social Atlas of Greece,* National Centre of Social Research, Athens, 1964 (in greek, french and english).

A. Kuklinski, *Growth Poles and Growth Centres in Regional Planning,* Mouton, 1972 and *Criteria for the Location of Industrial Plant,* Economic Commission for Europe, 1966.

A. Lösch, *The Economics of Location,* New Haven, 1954, Yale University Press.

Vera Lutz, *Italy: A Study in Economic Development,* OUP, London, 1962.

M. A. Mathioudakis and B. K. Andronopoulos, *Decentralization and Self-Government, Historical Evolution-Present Situation,* Pergamali, Athens, 1974 (in greek).

N. Mouzelis and M. Attalides, *Contemporary Europe, Class, Status and Power,* Weidenfeld and Nicolson, London, 1971.

G. Myrdal, *Economic Theory and Underdeveloped Regions,* Methuen and Co., Ltd., London, U. P., 1972, and *An American Dilemma,* 1944.

National Statistical Service of Greece, *Population Census 1961 and 1971,* Athens (in greek and english).

OECD Economic Surveys, *Greece,* Febr. 1971.

B. Ohlin, *Interregional and International Trade,* Harvard Economic Studies 39, Cambridge, Harvard UP, 1933.

A. Papandreou, *A Strategy for Greek Economic Development,* Center for Economic Research, Athens, 1962.

A. Pepelasis, *Surplus Labour in Greek Agriculture 1953-1960.* Center for Economic Research, Athens, 1962.

F. Perroux, «La notion de pôle de croissance,» *Economie Appliquée,* Nos. 1-2, 1955 and «Les points de développement et les foyers de progrés,» *Cahiers de l'ISEA,* No. 94, nov. 1959 and «La firme motrice dans une région et la région motrice», *L'Economie du XXe Siècle,* Presses Universitaires de France, 1961.

R. Petrella, *Le développement régional en Europe,* Mouton, Paris, The Hague, 1971.

A. Piatier, «Les sociétés multinationales dans l'économie méditerranéenne», *Mondes en Développement, 2.,* Paris, 1973.

B. Philias, *Society and Power in Greece—The False Urbanization 1800-1864,* B. Makryonitis and Co., Athens, 1974 (in greek).

H. W. Richardson, *Regional Economics,* World University, Weidenfeld and Nicolson, London, 1969.

P. Roumeliotis, *Investissement Direct International et Economie Nationale— Le cas de la Grèce,* Centre de Planification et des Recherches Economiques, Athènes. 1975.

Statistical Yearbook of Greece, 1971 (in greek and english), Athens, 1973.

N. Svoronos, *Histoire de la Grèce moderne,* Presses Universitaires de France, Paris, 1972.

K. Thomson, *Farm Fragmentation in Greece,* Athens, 1962.

J. H. von Thünen, *Der Isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie,* Berlin, 1895.

Alfred Weber's Theory of the Location of Industries, translated by J. C. Friedrich, UP, Chicago, 1929.