UNIWERSYTET ŁÓDZKI

Katedra Międzynarodowych Stosunków Gospodarczych

POLSKA NA RYNKU WSPÓLNOTY EUROPEJSKIEJ

GOSPODARKA ŚWIATOWA NA PROGU XXI WIEKU

Redakcja naukowa

Janusz Bilski
Agnieszka Kłysik-Uryszek

Tom II

ŁÓDZKIE TOWARZYSTWO NAUKOWE
2005

ŁÓDZKIE TOWARZYSTWO NAUKOWE
90-505 Łódź, ul. M. Skłodowskiej-Curie 11
tel. (42) 665 54 59, fax (42) 665 54 64
http://www.ltn.lodz.pl e-mail: ltn@ltn. lodz.pl

Recenzent: dr hab. MARIA GRETA

Opublikowano zgodnie z oryginałami dostarczonymi przez autorów

Wydanie I
Nakład 150 egz.
Druk: Triada, Łódź, ul. Limanowskiego 147/149

ISBN 83-87749-85-0

SPIS TREŚCI

Grigorios Gikas[*]
Pericles Tangas[**]

The Role of Education in Development: The Case of Epirus, Greece[1]

Introduction

The development of the periphery does not depend simply on the existing material infrastructures but also, to a great extent, on the skills of its labour force. As Adam Smith wrote two centuries ago, "the person who was educated spending a lot of labour and time can be compared to one of these expensive machines". Since then, the importance of education in the increase of wealth has been emphasized by many economists. It is generally acknowledged that the existence of strains and inelasticity in the offer of specialized human resources impedes development, resulting in a low development rate of GDP, low productivity and competitiveness.[2] Under the current circumstances, the solution to the development problems of the periphery depends greatly upon the acquisition of better trained manpower with social education, solid cultural background and broad knowledge on which to base not only the production but also the implementation of new knowledge, methods and technologies. The operation of regional tertiary educational institutions does not only help in this

---

[*] Associate Professor, Epirus Institute of Technology
[**] Associate Professor, Epirus Institute of Technology

[1] This research was supported by the European Union (European Social Fund, 75%) and the Hellenic Ministry of National Educational and Religious Affairs (25%) in the framework of the Operational Programme II for Educational and Initial Vocational Training, ARCHIMIDES project.

[2] As Igoumenakis explains, "The labour market in the periphery is as a rule underdeveloped, while the limited supply of labour is usually unable to satisfy the demand for specialized executives and labour force. This fact is undoubtedly a restraining factor for the development or growth of regional economy which is not easy to overcome". N. Igoumenakis, "Regional tourist development and labour market", *Proceedings of the conference on Regional development and Labour Market* (Athens: Institute of Technological Education, 1997).

direction but also prevents the human and scientific capital from deserting the periphery, thus contributing to its economic development and social progress.

Regional disparities: a review

Even economies with a high rate of development exhibit regional disparities in the distribution of wealth. The formation of regions with low population and limited economic activities[3] stems from the cumulative influence of economic factors such as differences in social infrastructure, cost of transportation, availability of labour force and capital, as well as historical, climatic, cultural and political variables.

"It is easy to acknowledge regional problems but it is difficult to define them", Robson states.[4] Perhaps the difficulty does not simply lie on pinpointing and specifying these problems but also on their interpretation and, ultimately, their solution. Regional problems of this kind are manifested in geographical disparities in the development rates and the level of production, income and employment, frequently accompanied by a movement of labour force and sensitivity to the fluctuations of the global economic circumstances.[5] Therefore, the issue of the interpretation of the way regional disparities are formed becomes of paramount importance, in conjunction with the regional policy aiming at influencing the territorial distribution of economic activities, so as to mitigate geographical disparities of this kind.

The debate on the issue of regional disparities has been influenced by two main positions.[6] The first claims that disparities tend to decrease as a result of the function of the automatically balancing mechanisms of the free market, while the other contends that disparities tend to become more intense unless there is a state intervention which is necessary in order to confront them.

The prevalent model among the theories of the automatic balancing of regional disparities is the neoclassical, which regards the growth rate of the

---

[3] Gemptos P.A., "Universities and Regional Development" (*Economikos Tachydromos*, 25 June 1991).

[4] Robson P., *The Economics of International Integration* (London: Allen & Unwin, 1987).

[5] Potamianos G., "The regional problem in the Process of the Integration of E.E.C." in P. Roumeliotis (ed.), *Integration of E.C. and the role of Greece. Utopia and Reality* (Athens: Papazisis Editions, 1983), p. 419.

[6] Myrdal Cf. G., *An International Economy* (London: Routledge & Kegan, 1956); G. Myrdal, *Economic Theory and Underdeveloped Regions* (London: Duckworth, 1957); Nicol W. and Yuill D., *Regional Problems and Policy in: The European Economy* (Oxford: Oxford University Press, 1982); Robson P., *The Economics of International Integration*, 3rd edition (London: Allen & Anwin, 1987).

product as a function of the development rate of capital and labour inflows. According to that, the regional differences in development are explained by means of the differences in capital and labour reserves. State intervention is not necessary because the final balance between regions will occur automatically, as capital will move towards the areas of labour force reserves and labour towards the areas of capital accumulation.

The other approach supports the need for state intervention for the correction of disparities. According to this view, the automatic balancing of disparities is not possible and, essentially, the imbalance stems from the function of the mechanisms of the free market itself. In the framework of this thought, two main approaches need to be mentioned. According to the first, scale economies cause the accumulation of capital and labour in the areas of rapid development, abandoning the rest. The disparities result from the imperfections of the system of the free market. The "polarization" of the development is due to processes of "causal accumulation"[7] or poles of development. The second emphasizes the key role of industry in the creation of multiplying results of development.

The relationship of structural problems (and indirectly of regional disparities) was part of K. Marx's analysis of the asymmetry of the capitalistic system. The experience acquired from the evolvement of the capitalistic form of production supports the positions claiming that asymmetric development is an organic consequence of the basic laws governing the movement of capital.[8] Market economy is by its nature opposed to the transfer of resources from rich to poor areas. When something like that is observed, it is simply a temporary correcting measure, so as to retain the flexibility of the movement of capital between fields and geographical areas, according to the differentiation of profit percentages. The dominance of the logic of profit is ultimately expressed through the juxtaposition of the principles of productivity and equality in the geographical scale of the integration of the production process.

Human capital and development

Large-scale realignments occur on a daily basis in global economy, leading to a new division of labour. All countries and regions seek their place in this new division of labour that will allow them not only to enjoy the fruits of their own effort but, more importantly, to create the necessary conditions for further development. This endeavour is conducted under conditions of relentless

[7] Myrdal G., *Economic Theory and Underdeveloped Regions* (London: Duckworth, 1957).

[8] Perroux F., "Note on the Concept of Growth Pole" (*Economic Appliquee*, no 1-2, 1955).

competition and becomes more difficult due to the countries' domestic regional problems.

The competitiveness of a country or region is defined on the basis of the performance of its economy in the international markets, as well as in the domestic market. Each region takes part in this competition with its own unique characteristics, i.e. with its strong and weak points, which depend on the technology it uses, the magnitude of the production units, the educational level of the labour force, and the rate at which the country renews its mechanical equipment and substitutes functions of machines for functions of labour.[9] In other words, a region enters the competition track with its own "historical personality", with all the structural characteristics it has inherited from its own particular background. For this reason, it appears on competition track with some strong and some weak points.

The prospects of a region for economic development are considerably influenced by the natural resources it is endowed with and also the human resources it possesses (i.e. the number of its inhabitants and the level of their skill and specialization). In other words, the economic growth and development depends on the increases in capital reserve and the productivity with which labour and capital produce goods and services. In financial analysis, capital reserve signifies man-made capital: machines, buildings and infrastructures (man-made capital), as well as the training and experience of the labour force (human capital). Economists have defined the human capital as the value of the knowledge, experience and skills of the labour force, which just as man-made capital, increases productivity and income. Of course, in the world of human resources, what is of paramount importance is not only the number of inhabitants and the level of their specialization in labour but also their cultural perceptions, their attitude towards labour and their desire for progress; in other words, the whole nexus of the inter-dependence between civilization, tradition, morality, as well as racial segregation or cohesion. Therefore, the nature and character of the human resources of a region or a country are critical determining factors of its economic structures and differ significantly from one area to another. No one denies today anymore that the investment in human capital is as important as the investment in natural capital.[10] Besides, the investment in organized research is a means to acquiring new information and a source of new specialties and skills, as well as new materials, methods and techniques that promote and alter the

---

[9] Bradley S. and Taylor J., *Human Capital Formation and Local Economic Competitiveness* (Lancaster: Lancaster University, 1994).

[10] See: Schultz Th.W., "Investment in Human Capital" (*American Economic Review*, 51, January 1967), p. 17.

opportunities for investment in soil, man, buildings and mechanical equipment. But technological changes also represent an investment among other things in the technical ability of man as well. Consequently the investment in human knowledge is a necessary condition for expanding the opportunities for investment in material capital.

The issue of human resources and their role in the development of an economy, whether one refers to a country or a region, has two sides: on the one hand the examination of the availability of human resources, and on the other the problem of the way these resources are to be used.

The role of education in modern society

In modern society factors such as capital and labour do not have the same gravity anymore. The ability to adapt and the development dynamics of an economy depend on the extent to which the regions will have the structural characteristics that will allow them to manage the strategic element of knowledge and technology successfully, either in the form of production of these elements or even in the form of fast exploitation and adjustment to the needs of the production process. Consequently, the implementation of knowledge in production has changed the socio-economic system profoundly. Knowledge is the most important economic factor and a main element of productivity. This great change consists in the fact that knowledge multiplies the efficiency of labour and triggers off more intense development rates of productivity. The businesses, organizations, regions and countries that will adapt and become dominant in various fields of knowledge will possess the comparative advantage in the future.

As a result of all the above, the issue of education has become more thought-provoking than ever before. This happens because it is widely acknowledged nowadays that education is directly connected to labour and productivity. At the same time uneasiness is increased and it becomes a solid conviction that insufficient education is a restraining factor for development. It should also be stressed that the more specific inter-relations between education and economic development are relatively hard to determine. This is naturally a two-way relationship, since on the one hand the course of the economy influences the function and organization of education, while education on the other, with the creation of a competent human capital increases the productive potential of society.

Education as an institution promotes dialogue and the exchange of ideas, the formation of values and the socialization of people, while it also provides the professional qualifications required by the labour market. Some political

scientists regard it as a precondition for political democracy. Generally, as basic aims of education we can mention:[11]

The systematic introduction of the young generations to the ideals of life, the values, principles and rules of a society which at the same time ensure the reproduction of economic life.

The development of critical thought and the space for free choice on the part of students; these are factors leading to an improvement of the terms of function of the social system.

The socialization of people: through a common educational experience, it is often believed that people of a different social, racial and linguistic background can be encouraged to adopt a common perception of the world. In regions that have different population, as for instance in Thrace (northeastern Greece), education plays an important role in the achievement of greater national unity.

The above-mentioned general aims of education are adjusted depending on the developments in the social and economic environment. One of the main findings of the analysis of the developments in production and labour is the determinant role of new technologies, which are undoubtedly the dominant variable in the new international economic order. Despite the fact that technology (and knowledge in general) has always been one of the main elements of the production process, its modern development – information technology – is differentiated because knowledge-as-information, apart from being an economic source, constitutes in itself a product which generates at the same time new knowledge and is also a process of organization of production and the social relationships associated with it. The whole spectrum of the factors transforming the hierarchy of competitive advantages today revolves around the element of technology, know-how, human capital, as well as the knowledge and the new types of infrastructure that are usually combined with these elements. These developments result in the proliferation and the radical differentiation of the type of knowledge that is necessary for the professional and social life.

Thus, formal education is no longer sufficient for the whole duration of life. The rapid development of science and technology render the graduates' knowledge obsolete in the various scientific fields. Indeed, in Engineering it is estimated that the half-life[12] of the knowledge acquired up to a certain point (for instance until graduating from University) is 5-7 years, in Informatics 1-2 years,

---

[11] See also: Zolotas X., "Epilogi Keimenon apo to Ergo tou" (A Selection of Texts from his Work) (Lambrakis Journalist Organization, 1996), pp. 209-221; Langrish J., *Wealth from Knowledge* (London: Macmillan, 1972).

[12] Half-life: the time corresponding to the depreciation of half of the knowledge acquired.

in Business Administration 5-8 years, in Hospital Medicine 3-5 years, in Physics and Economics 8 years and in Biotechnology 5-6 years.[13] The depreciation of the knowledge capital of labourers leads to a reduction of their productivity. According to the report of I.R.D.A.C. "the useful knowledge has a half-life of about ten years, if the knowledge capital is depreciated in this case at a rate of 7% a year (a percentage which is a lot higher than the percentage of the recruitment of new graduates), causing a respective reduction of the effectiveness of the labour force".[14] The formal academic certificates of knowledge do not respond to the high training specifications and the modern needs of international competition. Consequently, life-long education and training of employees is an undeniable need. We need a completely different educational system that will follow man "from birth to death" and will integrate adult education and social training. In the rapidly changing, globalized environment of today and tomorrow, it is necessary for people to have access to educational institutions throughout the whole of their lives.

Tertiary institutions and their importance in development

Tertiary institutions influence the function of an economy to a great degree. In the first place, these institutions are centres where knowledge and specialty of a higher level is acquired, in such a way as to facilitate the changing needs of modern society, while at the same time developing through this knowledge the productive, consuming and aesthetic abilities of anyone wishing and having the potential to acquire this knowledge. Tertiary institutions have the obligation to conduct scientific research for the creation of new knowledge replacing the existing that has become outmoded due to developments or to complement and expand further the existing knowledge. In addition, they retain and cultivate the necessary contacts with the relevant institutions from other countries, so as to convey and adjust the knowledge and technology developed abroad to the local conditions and, eventually, to produce the required educational and research personnel. Tertiary institutions can provide many future employees with a first contact with the new techniques to be used in job posts. In addition, educational bodies and research institutions can often play an important role in the creation of a centre of specialization for a new industry before it becomes dominantly applicable. Some economists believe that an improved allocation of educational services could be a great force for the

[13] Bonikos D., 1994.

[14] Report of I.R.D.A.C. (*Industrial R&D Advisory Committee* of the European Commission), 1990.

achievement of a more fair allocation of income,[15] as well as for mitigating regional disparities.

For many decades in Greece there was a concentration of tertiary education in the two big urban centres, Athens and Thessaloniki. After 1981 the tendency to create new faculties was intensified and a great number of new regional Universities and Technological Institutes were created, with new and specialized Departments (Appendix, table 1). At the same time the first post-graduate programmes of studies began to be set up. In the 1990s they were increased, while in the period 2001-2004 their number rose excessively. So in 1993 there were just 51 post-graduate programmes in the whole of Greece, in 2002 they became 233, while in 2005 they approximated 500. The number of postgraduate students followed a corresponding development.

Table 1.

Data about Greek Universities

1.			City	Start	Departments	Entrants 2003/4	Population 2001
2.	University of Athens	1	Athens	1837	29	7 125	
3.	National Metsovian Polytechnic		Athens	1836	9	1 530	
4.	Economic University		Athens	1920	8	1 445	
5.	Panteion University		Athens		8	1 685	
6.	Agricultural University		Athens		6	440	
7.	Harokopeion University		Athens		3	140	
8.	Higher School of Fine Arts		Athens		1	100	
9.	University of Piraeus	2	Piraeus		9	1 770	3 162 000
10.	University of Macedonia	3	Edessa	2003	1	55	25 000
		4	Naousa	2003	1	61	22 000
		5	Thessaloniki	1958	8	1 055	
11.	Aristotle University of Thessaloniki		Thessaloniki	1925	38	7 005	709 000
		6	Serres	1985	1	80	56 000
		7	Veria	2003	1	60	48 000

[15] Gillis M., Perkins H., et.al., *Ecomomiki tis Anaptyksis* (Economics of Development), A', trans. by O. Gravanis and N. Stamatakis, ed. by J. Tsekouras (Athens: Typothito 2000), p. 412.

	University of West Macedonia	8	Florina	1989	3	335	17 000
12.		9	Kozani		1	105	48 000
13.	University of Patras	10	Patra	1966	21	2 955	165 000
		11	Ioannina	1964	14	2 315	70 000
		12	Agrinio	1989/ 1992	2	190	54 000
14.	University of Ioannina						
		13	Komotini	1974	7	1 650	53 000
		14	Xanthi	1974	5	670	52 000
		15	Alexandroupoli	1985	4	515	53 000
15.	University of Thrace	16	Orestiada		2	260	22 000
		17	Rethymno	1973	9	1 295	32 000
16.	University of Crete	18	Irakleio	1973	8	745	138 000
17.	Polytechnic of Crete	19	Chania	1975	4	390	53 000
		20	Mytilini	1986	6	695	36 000
		21	Chios	1985	3	300	23 000
		22	Samos Karlovasi	1987	3	315	10 000
		23	Syros Ermoupoli		1	65	14 000
		24	Rhodes	1986	3	505	55 000
18.	University of the Aegean	25	Cos	2005			15 800
		26	Volos	1988	11	855	114 000
		27	Larisa		2	115	124 000
		28	Trikala	1993	1	95	52 000
19.	University of Thessaly	29	Karditsa	1993	1	30	38 000
20.	Ionian University	30	Corfu	1985	4	345	41 000
	University of the Peloponnese	31	Tripoli	2003	3	210	29 000
		32	Nafplio	2003	1	70	17 000
		33	Sparti	2003	1	70	18 000
		34	Kalamata	2003	1	70	46 000
21.		35	Korinthos	2003	1	70	27 825
22.	University of Sterea Ellada	36	Lamia	2004	1	72	43 650
23.	Total				246	37 858	

The establishment of a tertiary institution in a less developed region can provide many important benefits to this area, such as:[16]

- exploitation of inactive scientific resources
- reduction of emigration
- retainment or/and attraction of scientists of high prestige
- boosting of domestic demand
- redistribution of income through the social demand for education and the expected social mobility.
- modernization of businesses
- technological development of the greater area
- increase of productivity
- cultivation of a new perception of the economic behaviour of citizens
- development and decentralization of the periphery as well as balanced distribution of people and activities within the Greek state.

The establishment of regional institutions of higher education, apart from its important contribution to the development of these regions satisfies also a claim for equal opportunities, emanating from the principles of a liberal parliamentary democracy. The presence of the higher institutions allows the inhabitants of these areas to enjoy the benefits of science and art in equal terms as the citizens of big cities, where Universities are usually concentrated. The satisfaction of this claim demands an effective operation of regional institutions and their appropriate support, so that they may become competitive.

Naturally, all the possible benefits from the establishment of a regional institution of higher education require a series of presuppositions. The State and the region must take into consideration the fact that higher institutions are not a "money machine" to be exploited simply for increasing consumption and invoking investments and development. The Greek periphery does not only have a geographical distance from the centre but is also financially disadvantaged. For the essential contribution of these institutions to the development of a region, a rational plan of organization is a matter of priority. The fact that Departments are scattered in various cities causes many administrative and functional problems. The "desertion" that is observed in these areas during the months that students are absent verifies their short-term contribution. The regional institution of higher education should be perceived as a long-term pole of development and not as a short-term means of exploitation. The integration of a regional tertiary institution into a plan of a more general development of the greater area should

[16] Panousis Cf. J., I Aniparkti Symvoli ton Ellinikon Panepistimion stin Elliniki Economia. I Periptosi tou Panepistimou tis Thrakis (The Inexistent Contribution of the Greek University to the Greek Economy: The Case of the University of Thrace) (*Economikos Tachydromos*, 1991).

be long-term, generous and emancipated from petty, vested interests of a trade-unionist character.

The capacities of the human capital are not a gift of nature but a creation of investments of serious resources and effort. It is a fact that the economy provides higher educational institutions with resources and the institutions in their turn channel resources in the area where they operate. The unemployment increase of the graduates (educated persons) poses the dilemma whether increasingly more resources should be provided for the expansion of the educational system, since so many of the graduates remain unemployed. The excessive demand for higher education is a result of a failure of the market: because people are not informed about the tendencies of education, they expect greater benefits from the investments in education than the latter is able to provide. The social problem of the graduates' unemployment is also aggravated due to the lack of correspondence between programmes of study and labour market.[17] Unemployment agencies are crowded on a daily basis with university graduates (some of them among the "first", i.e. possessing excellent academic qualifications) in Mathematics, Physics, History, etc. At the same time, there is a great demand for accountants, computer programmers, etc. Under these circumstances, graduates are eventually forced to be employed in jobs that are irrelevant to their educational level and background.

The case of Epirus and Western Greece

As it was analysed above, Greece followed, inevitably, the centralized model of development, so until 1964 the country had only two Universities: in Athens and Thessaloniki. In 1972 a few small technological institutes were founded in experimental form and after a number of transformations they have now approximated Universities in terms of equivalence. After 1981, and more intensely after 1999, the reverse tendency began: a multitude of Universities and Technological Institutes were established across the country. In most of the areas tertiary educational institutions are now the "heavy industry".

In the framework of "Archimedes" project a research which is co-funded by the European Union (75%) and the Greek State (25%) is conducted for the period 1 March 2004 - 31 August 2006 at Epirus Institute of Technology. In order to reach valid results the primary research is conducted not only in

[17] "Attuning the curriculum to the future regional demand for labour... must be the starting point". Hyz A., Gikas G., "Regional Development in the European Union and the Problem of Interregional Migration", *Proceedings of the conference "Procesy Integracyjne w Gospodarce Swiatowec: Polska w Unii Europejskiej"*, Vol. 1, (The University of Lodz, 2003), p. 58.

Preveza,[18] but also in other regions that have faculties of Technological Educational Institutes or Universities, and more specifically: Kalamata (in Peloponnisos), Igoumenitsa (in Epirus), Kastoria and Florina (in West Macedonia).[19] The collection of data was carried out by using questionnaires, the total number of which is approximately 2500. Based on that approach, data of economic as well as of social nature have been collected.[20]

The questionnaires that were compiled concerned the two principal teams that are involved with the function of tertiary institutions. In that of demand (students) and the corresponding of offer (businesses, municipalities, communities, prefectures, empirical societies, etc.) mapping is believed to have been complete, since the views of all those involved have been recorded.

At the same time, the development rate of the local economy was correlated, after taking into account all the multiplying outcomes (improvement of infrastructures, construction of medical care units, cultural expenses, etc.). This long research is expected to contribute to the estimation not only of the benefit and the cost (the deducible cost of the non-function of this model was also estimated), but also of the limits of this policy.

From the analysis of temporary results it becomes evident that the country has not turned accidentally towards creating one tertiary educational institution after the other, of public character,[21] in order to support the periphery, since viable industrial development proved to be impossible and the sector of services (mainly of tourism) is facing serious imbalances. In the period 1920-1980 the periphery was drained of all material and human resources. After 1999 the reverse course began in an extensive way: the only remaining solution was the development by means of "planting" tertiary institutions throughout the country. Since the population of the country is now mainly in the capital city and the other big cities, the main mass of students comes from them. As a result, the upper and lower middle classes, besides the working class, subsidize the development of the periphery. In this sense, the collective unconscious is gratified for the economic squeeze that the periphery suffered from the urban centre, while "regional" development is also achieved.

---

[18] A city in Epirus, opposite Aktio, 5 km away from Nikopolis, which was founded by Augustus after his victory over Antonius and Cleopatra.

[19] In other words, the greatest part of the west axis of the country is covered.

[20] More than 35 persons – mostly professors of tertiary institutions – have participated in the research.

[21] Private tertiary education is prohibited by the Greek constitution. This has repeatedly become an issue of controversy between the Greek governments and the European Commission.

However, the limits of this policy are simply both restricted and insufficient in themselves to drag an aged population, with poor infrastructures, into development. As a consequence, taking into account the more general economic problems the country is facing, this policy seems to be in need of serious support from all the factors involved in regional development in order to become viable. It should also be mentioned that local communities appear to be concerned about the future of the tertiary institution in their area. Apart from the fact that these institutions are one of the greatest employers in their regions – such as that of Epirus – and that they boost local economic activity in diverse ways, the questionnaires also reveal an emphasis on the change of mentality and cultural activity that is brought about by the student population in the small cities where Departments have been established.

At a national level, similarly, it should be emphasized that this policy has also succeeded to a considerable degree in keeping the youth of the country within the borders, thus redeeming the loss of human capital and financial resources to foreign countries and institutions that have often been questioned in terms of the status of the academic studies they offer. It is believed, however, that if the Laboratories of Liberal Studies[22] are officially recognized by the Greek state and/or the establishment of private universities is ultimately permitted, regional tertiary institutions are going to face a serious crisis and some of them may even cease to operate. In this case, the small number of regional Departments that will survive will probably rely on attracting students from the greater area in which they operate, as the majority of students coming from the big urban centres will be discouraged to abandon the amenities of Athens or Thessaloniki and spend a lengthy period of their lives in less developed regions -- and Departments -- with barely sufficient infrastructures, having to get accustomed to a totally different lifestyle, pursuing an educational career with dubious results.

Conclusions

The Greek periphery has been struggling during the past years to escape from economic and social decline and organize (or re-organize) its social and financial structures. The creation of tertiary institutions has definitely contributed to the improvement of the economic and social conditions in the regions where these institutions were established. In addition, the human and scientific capital of the periphery has remained in these areas and found

[22] A great number of private "Laboratories of Free Studies", collaborating with foreign Universities, operate in Greece.

employment that is equivalent to their educational status and interests. It therefore seems that the tendency of the population to move to the big cities, draining the periphery from life, activity and resources has already begun to change, as the existence of the student population has "grafted" local life in the small regional cities with fresh ideas, changing their mentality and also influencing their lifestyle. Small changes can often pave the ground for bigger ones. In order for these to happen, however, the development of the Greek periphery needs also the following: firstly, an extensive network of infrastructures that would create the necessary conditions for the boost of economic and social activity; secondly, the dissemination of knowledge in the periphery, and especially the exploitation of the new specializations that are required by businesses. Finally, the role of institutional and social mechanisms and networks that are part of a region's historical and cultural character is pivotal in the formation of the context of values and the background in which interaction and co-operation will take place in the local community. Taking into consideration all these matters, it becomes evident that the operation of institutions of higher education in the periphery can contribute in multiple ways to the overall improvement of life in the less developed regions of the country. If all of the factors involved co-operate for the common cause of regional development, the country will definitely attain a more balanced status in the years to come.

Bibliography

Bradley, S. and Taylor, J. Human Capital Formation and Local Economic Competitiveness. Lancaster: Lancaster University, 1994.

Gemptos, P.A. "Universities and Regional Development". Economikos Tachydromos, 25 June 1991.

Hyz, A., Gikas, G. "Regional Development in the European Union and the Problem of Interregional Migration". Proceedings of the conference "Procesy Integracyjne w Gospodarce Swiatowej: Polska w Unii Europejskiej", Vol. 1. The University of Lodz, 2003.

Igoumenakis, N. "Regional tourist development and labour market". Proceedings of the conference on Regional development and Labour Market. Athens: Institute of Technological Education, 1997.

Langrish, J. Wealth from Knowledge. London: Macmillan, 1972.

Myrdal, G. An International Economy. London: Routledge & Kegan, 1956.

Myrdal, G. Economic Theory and Underdeveloped Regions. London: Duckworth, 1957.

Nicol, W. and Yuill, D. Regional Problems and Policy in: The European Economy. Oxford: Oxford University Press, 1982.

Panousis, J. "I Aniparkti Symvoli ton Ellinikon Panepistimion stin Elliniki Economia. I Periptosi tou Panepistimou tis Thrakis" (The Inexistent Contribution of Greek Universities to the Greek Economy: The Case of the University of Thrace). Economikos Tachydromos, 1991.
Perroux, F. "Note on the Concept of Growth Pole". Economic Appliquee, no 1-2, 1955.
Potamianos, G. "The regional problem in the Process of the Integration of E.E.C.". In Roumeliotis, P., ed. Integration of E.C. and the role of Greece. Utopia and Reality. Athens: Papazisis Editions, 1983.
Report of I.R.D.A.C., 1990.
Robson, P. The Economics of International Integration, 3rd edition. London: Allen & Anwin, 1987.
Schultz, Th.W. "Investment in Human Capital". American Economic Review, 51, January 1967.
Tsekouras, J., ed. Ecomomiki tis Anaptyksis. From Gillis, M., Perkins, H. et.al., Economics of Development, A', trans. O. Gravanis and N. Stamatakis. Athens: Typothito, 2000.
Zolotas, X. "Epilogi Keimenon apo to Ergo tou" (A Selection of Texts from his Work). Lambrakis Journalist Organization, 1996.

Summery

The Role of Education in Development: The Case of Epirus, Greece

We live in the age of specialization, rapid technological progress and the dominance of scientific research. In this age, the critical mass for production is not natural resources, labour and capital, but knowledge and information deriving from research. The use of technology and scientific analysis is the comparative advantage in this competitive period. Therefore, progress and economic prosperity for an area and its citizens follow a different route from the one we have known in the post-war period.

In this general framework, the function, organization and development of regional tertiary educational institutions are very important issues. The purpose of this paper is to analyze the relationship between education and economic development and assess the socio-economic influence of tertiary educational institutions on the regional economy of Greece, with special reference to Epirus Institute of Technology. Finally, the paper proposes policies aiming at a balanced and sustained regional development.