The Socio-economic Aspects of the Hellenic Education System: Research Approaches to Monitoring Student Population socio-economic status

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Περίληψη

Στο άρθρο αυτό, το οποίο βασίζεται σε δειγματοπηπτική μη παρεμβατική ex-post έρευνα, ανιχνεύεται μέσα από εικοσιδύο μεταβηητές η κοινωνικο-οικονομική προέθευση μιας κοινωνικής "κοορτής" (cohort) που εστιάζεται στους πρωτοετείς φοιτητές της τριτοβάθμιας εκπαίδευσης κατά το ακαδημαϊκό έτος 2002-03. Μέσα από την κοινωνικοοικονομική καταγωγή της υπό εξέταση "κοορτής" προσδιορίζονται οι ιδιαιτερότητες της επιθεκτικής θειτουργίας του εκπαιδευτικού μηχανισμού που ομαδοποιούνται σε τρεις άξονες. Ο πρώτος αναφέρεται στον τρόπο πρόσβασης της νεοθαίας στην ανώτατη παιδεία, ο δεύτερος αφορά στον προσανατολισμό των πανεπιστημιακών σπουδών και ο τρίτος επικεντρώνεται στον τρόπο χρηματοδότησής τους. Στην έρευνα γίνεται προσπάθεια να επισημανθούν οι παράγοντες που προκαθούν στρεβθώσεις στη σύζευξη της εκπαιδευτικής και επαγγεθματικής πυραμίδας. Προκειμένου δε να αποφευχθεί ο κίνδυνος αναγωγής ενός πολυδιάστατου θέματος σε επίπεδη ανάγνωση ορισμένων διακριτών σχέσεων, προτείνονται μέτρα και τίθενται ερωτήματα-νύξεις για να διερευνηθούν συστηματικά και διεπιστημονικά ορισμένα παθογόνα θέματα της εκπαιδευτικής και κοινωνικής δυναμικής.

Abstract

The educational system of a nation is closely bound up with

contemporary social, political and economic conditions. In attempting to appreciate and evaluate the education system, it is necessary to know something about the socio-economic trends and conditions which have determine its evolution. In this article, through an ex-post sampling research we pursue to reveal the socio-economic status and background of students in institutions of higher education. Determining the above cohort characteristics, we explore some contradictory aspects of our educational system. These are grouped into three clusters. The first one is referred to accessibility rate in Institution of Higher Education, the second one concerns the traditions and generic orientations of the academic studies and third one is focused on the public expenses for the education as percentage of G.N.P.

In this research, an attempt is also made to determine the factors (drives) that distort the correlation between the education and labor market pyramid. In addition, we try to avoid any deduction logic which transform the treatment of a multidimensional subject to a generic discussion in order to investigate systematically and interdisciplinary some specific "pathogenic" themes of our education system.

1. Introduction

The Greek education system (Lovett T. 1988), has demonstrated from it's early beginning, some structural characteristics:

- 1. Centralism in decision making procedures
- 2. Structure and orientation that mainly focus on generic academic education
- 3. Unrelated links between the education and the work-force system.
- Endemic lack of resources (infrastructure, materials, personnel, methods and processes) at the expense of the educational system quality. (Kazamias A.M.: 1975)
- 5. Contradictory and sever antithetical educational reforms of modernization where the later recalled the previous. These reforms constituted and shape the modern "Sisypheio Syndrome" 1

of our educational system. The occasional, casual and short-term

^{1.} Sisyphos was a mythical person derived from ancient Greece. He was punished by the kind of

reformatory approach of educational modernization undermine the long-term structural didactic remodeling and reengineering.

The above characteristics that compose the Greek reality constitute both endogenous and exogenous depended variables of the our educational system that 1) accelerate 2) intensify and 3) hold over periods the pathogeny of our educational system.

Finally, the up-to-date "education fully passionate" (Berger P.L.: 1981) phenomenon of the last 20 years is approached in the frame of four dimensions.

The first refers to the nature of the Greek state (political dimension).

The second concerns the nature of the Greek social-economical formation (social stratification and economic classes).

The third is related with educational "culture" and our system value (code of ethics)

The fourth refers to the "Sisypheio Syndrome" of reformatory trends that besiege our educational system

2. Research Protocol and Research Methodology.

- The research Aim: Data capture, analysis, synthesis and draw conclusions and suggestions on the socio-economic status and backgrounds of freshmen in the higher Hellenic education tiers for the academic year 2002-2003.
- 2. The Sample frame The sample derives from population of successful candidate students in Greek Universities located in Attica prefecture. The data captured through 400 questionnaires which were distributed to the students during their registration period. Finally, only 278 questionnaires became acceptable for further statistical analysis and process. The acceptance level of the suitable questionnaires approaches 70%.
- **3. The Questionnaire structure**: 22 socio-economic variables are investigated in a 4-page questionnaire.
- **4. Research Period**: Fall semester 2003, during the freshmen registration to institutions of Higher Educations located at Attica prefecture.

god Zeus to push a rock up to hill, and when he achieved his mission, the rock was rolled down to the starting point and Sisyphos ordered to do the same thing endlessly. The term "Sisyphio Syndrome" is equivalent to philosophical term of "the phenomenon of polynomy" and "contradictory reformation procedures"

- 5. Research Approaches: The in-sight investigation of generic tendencies that prevail in higher education tiers by gathering evidence about the the socio - economic status and backgrounds of freshmen "cohort"
- 6. The Sample Unit: The first-year student at institutions of higher education for the academic year 2002-2003 in academic departments of Attica prefecture.

3. The Hellenic Educational System Generic trends and Attitudes.

The Hellenic higher education tier as an ideological leverage of social growth of new ways of thinking behaviors and ethics appears a set of symptoms that provides the training system with uncommon characteristics. These symptoms focus on: a) the evolution of teaching staff and student population for the two decades, b) the orientation of academic study mainly in five scientific fields (humanities, applied sciences, health sciences, engineering, business-economics) and c) the socio-economic status of the student body. Further investigation on these elements will occur by analyzing the data our questionnaire concerning a) the accessibility in Institution of Higher Education b) the traditions and generic orientations of the academic studies and c) the economic aspect of the education system and more specific the public expenses for the education as percentage of G.N.P.

3.1. Accessibility in Institution of Higher Education

We first focus on youth mobilization towards higher educations level and the accessibility rates in academic institutions over the last decades.

Table 1, presents basic data on Student Population in Greek universities during six decades period

Table 1: Evolution of Student Population 1955-2000

YEAR	STUDENT POPULATION
1955/56	19.864
1965/66	58.000
1975/76	117.246
1985/86	178.545
1995/00	195.351

SOURCE: STATISTICS OF EDUCATION (N.S.S.G.) Statistical Analysis is ours, based on DSSOM s/w package

MODEL:

LINEAR REGRESSION

NUMBER OF PERIODS (decades):

5

Regression Function Coefficients:

Coeff.		Value	St. Dev.	T-Ratio	
 Ir	ntercept	-27.654,5	14.316.028	-1.932	
Dep-1(T	IME-DECADES)	47.151,9	4.3s16.445	10.924	
Coefficient of Determination R-Squared =				97,5 %	
F-Value				119.329	
TIME	Actual (Y)	Predicted	Error	ST. Error	
'50s	19.864.00	19.497.40	366.60	0.03	
'60s	58.000.00	66.649.30	-8.649.30	-0.63	
′70s	117.246.00	113.801.20	3.444.80	0.25	
'80s	178.545.00	160.953.10	1 7 .591. 9 0	1.29	
'90s	1 9 5.351.00	208,105,00	-12,754.00	-0.93	

Based on the above analysis the student population for 2000-2010 approach the number of 255.256 ± 52.849 students. In this figure we will add a number of 130.999 students-call "professionals" who have exhausted the regular time period of their studies and haven't graduated yet.

Up-to date, the 'professional' student population, is estimated to be 47% of the regular student corps.

In addition, if we add on the regular student population a percentage of $25\%\pm5\%$ of Greek students study abroad, we conclude that the accessibility rates in academic institutions over the last decades are fifteen times (15x) higher than they used to be in early 1970s.

Concluding, in Greece exists a paradox phenomenon where more and more people get access to institutions of higher education but still the productivity rate in work-force section of the economy remains either stable or declines steadily. (Poulantzas N., 1990: 290-95)

The main reason for this, is the lack of links between education and the knowledge/skills demanded in labor market

In **Table 2**, we analyze the Hellenic education system on a basis of two dimensions.

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The horizontal one is structured into three generic levels: a) Primary (Dimotiko) education tier b) Secondary Education tier (Lykeio) and c) Higher Education (AEI,TEI) tier.

The vertical one is organized in faculties, departments, and specializations on specific scientific fields (humanities, law, engineering, health sciences etc)

The three generic horizontal educational tiers built up a pyramid which is closely related to the hierarchical structure of the jobs and occupations in the labor market

In Greece, the social post war-model concerning both the social status and the social mobility among socio-economic classes built up on the level of education a person has. This evidence in combination with the highly expenses studies at academic institutions in early 1950s created a exclusive mechanism so that students derived from low socio-economic classes was not able to have access in all the scale of educational pyramid.

Through our research we found out that the exclusive character of the educational system has been diachronically contracted. The student population has been drastically increased and it originates from all the social classes, lessening the social selectivity of our educational system.

As far as the vertical dimension of the system concern such as faculties, departments, specializations etc it causes disturbances in the jobs balance, resulting in surplus of unnecessary professionals in certain sectors and deficits of vital specialties in some other sectors of labor market

The unbalance between supply and demand of specialties enlarges from: Firstly, the lack of orientation and guidance of young persons in the age of study at the primary and secondary educational level and Secondly, the non-existence of horizontal educational mobility, that could be strengthened through interdepartmental synergy.

Table 2: Greek Education System: Vertical and Horizontal Organisational Dimensions

Labour market

GENERIC (Horizontal dimension-educational tiers)

1. Higher Education

Postgraduate studies(Universities, TEI- Hellenic Open University) - Hellenic Open University

Universities

Conventional – Technological Education Institutes (TEI)
Vertical dimension (faculties-departments-specializations):

- 1. Humanity Studies Law Political-Social Science
- 2. Applied Sciences
- 3. Engineering
- 4. Health Sciences
- 5. Economics-Business admin.

2. Secondary Education

Lykeia:

TEE:

- Musical

B and A Level

- Ecclesiastical (self sufficient and autonomous)

C and B Level

- Physical Education Schools B' grade

- Special A' grade

IEK

GYMNASIO:

(General, Musical, Ecclesiastical, Physical Education, Special) compulsory education

3. Primary Education

Source: Ministry of Education - Analysis and presentation is ours

By investigating the data questionnaire concerning variable V16: Preferences towards specific faculties of studies, we examine the rationales and motives for student population choosing specific academic departments. The data of **Table 3**, reveal that the 75% of the students of our sample frame questioners are labor-market oriented since they link the education "added value" to work-force achievements.

Decision-making Rationales and Motives

%

CLUSTER #1: Exogenous variables

- > Better labor market conditions and advancements
- > Keeping on genealogical traditions
- Better career paths, recognition

75%

- > Accessibily entrance examinations
- socio-economic prestige and status
- ➤ challenging jobs

CLUSTER #2: Endogenous variables

- > self-actualization
- ➤ achievement

25%

➤ self-esteem, competence

Source: Our Questionnaire -Variable V16: Preferences towards specific faculties of studies Rationales and Motives

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3.2. The traditions and generic orientations of the academic studies

The second cluster focuses on the academic studies orientations.

Analysing data in **Table 4**, we explore the orientation tendencies of our education system.

In the decade 1955-1965 there was an over-representation and strong preferences towards the faculties of literature, law, philosophy humanities in general and a relatively low-lying orientation towards faculties of engineering and applied arts. This tendency, in decade 1985-1995, has been softened.

Table 4: Students Preferences in Institutions of Higher Education: by type of scientific domain and level of qualifications sought

Ratio: \rightarrow YEARS 1955/1965 1985/1995 (Preference ratio: (No. of Entrants in Faculties of AVG. = 5 \pm S.D.=1,2 AVG. =2,5 \pm S.D.=0,5 Scientific Domain I:

Humanities, Legal, Social Sciences etc)		
То	то	то
(No. of Entrants in Faculties of Scien-		
tific Domain IV:	1	1
Engineering and applied sciences)		

Source Ministry of Education- Office of Statistical data-Analysis is ours (where: AVG= parameter of central tendency, S.D.= parameter of standard deviation, and Preference=No. of students which has chosen and nominated the specific faculty as a first choice.)

However, there are some basic conclusions can be drawn from data of **Table 4** and similar researches.

Firstly, the student population keep attracting by faculties of humanities, law, literature etc with Valance coefficient statistically significant and greater than valance coefficient of faculties in engineering and applied arts. This tendency diachronically declines since the valance coefficient for scientific domain V: economics-business administration and scientific domain IV engineering increased by 37,5% and 24,3% respectively.

Secondly, the composition and distribution of student population to academic faculties with emphases in humanities and liberal arts remained steady at the duration of postwar period. Since 1980 the tendency is the valance coefficients (Table 5) between humanities/liberal arts and engineering/applied arts to be equalize

Nevertheless, on cross-checking the data of **Table 6**, a significant number of academic education candidates selected and nominated, in their checklist, faculties and departments extremely Low" demanded in the labor market. As a result, the "supply to demand" ratio in the labor market jobs balance tend to be worsen over the last two decades. That perhaps implies:

- 1. lack of guidance and counseling services for the academic education candidates.
- 2. entrenchment of the education system and its displacement from socio-economic "process"
- 3. inelastic, traditional social perceptions create a social "image" and status where the archaeologists, professors, the schoolteachers keep composing the ideal "nuptial" target for the Greek mothers, even though these occupations face the more serious unemployment.

Table 5

SCIENTIFIC DOMAIN	EC	EDUCATION SYSTEM			MARKET
	PLACES	CANDIDATES	Valence (*)	DEMAND	SUPPLY
LITERATURE	1.167	35.784	31	50	585 (12 TO 1)
CLASSICAL STUDIES ARCHAEOLOGY	1.204	48.615	39	40	568 (14 TO 1)
EDUCATION- TEACHING	759	65.436	86	51	795 (17 TO 1)
PHILOSOPHY, PSYCHOLOGY	595	23.582	40	37	458 (12,5 TO 1)

Source: Data from Ministry of Education- Office of Statistical data and Ministry of labor-programme STAGE 2002-2003 -Analysis is ours

Further investigation in **Table 5** results that, the labor market tendencies are contradictory with those that dominate education system. New working classes- called "knowledge workers" with high specialization in applied sciences and technology are deployed in the labor market having good working conditions and high incentives. On the other side, people remained constantly to the traditional generic academic occupations revive conditions of insecurity and low entrance rate in the labor market.

At this point we will investigate the social background the professions and the education level of the parents' student. **Tables 6 and 7** depicts the selectivity character of our education system for various social tiers with criteria such as:

Firstly, the parents' professions and social class of the student corps (**Table** 6) and

secondly, the parents' schooling of the student population (Table 7).

By examining Table 7, we conclude that the students accessibility rate in academic or technological institutions of higher education is diffused in the whole spectrum the social classes

^(*) valence = the degree of attractiveness figured it out by divide the number of candidates with the available places for the particular faculty)

Table 6:PARENTS' PROFESSIONS breakdown by Vocational Categories for AEI and TEI Canditates

Academic Higher Institution (AEI) (%)		PROFESSIONS	Technological Educational Institutions (TEI) (%)	
FATHER	MOTHER		FATHER	MOTHER
1,5	0,4	Chief Executive Officers	0,9	0,0
21,0	18,0	Entrepreneurs-skilled specialists	9,5	7,5
29,0	25,0	Office staff-sales people	25,5	23,0
17,5	4,7	Services-sales people	15,5	7,0
4,0	0,7	Agriculture, fishery, livestock-farming	6,5	4,0
16,0	3,0	technical professions	32,5	4,5
0,2	0,0	unskilled workers - small business admini- stration (SBA) officers	3,0	4,0
2,6	0,0	Military-public order services	1,5	0,0
4,5	2,2	Retired- out of labor market	2,2	2,1
3,7	46,0	Self-employed	2,9	47,9

Source: Variables V17 & V18: PARENTS' PROFESSIONS breakdown by Vocational Categories, Our Questionnaire

From the social point of view as far as parents' profession concern it appears that the student population derives, (in his majority) from all the social tiers.

The parents' professions that dominate academic institutions (AEI) of the higher education are:

Office staff-sales people	29%.
Entrepreneurs-skilled specialists	21%.

On the other hand, parents' professions that dominate technological institutions (TEI) of the higher education are:

technical professions	32,5%.
Office staff-sales people	25,5%.

On the above analysis, the main deviation focuses on parents' professions concerning the working class of 'Entrepreneurs-skilled specialists' (doctors, lawyers, journalists etc) or, even chief executive officers in public and private sector. This deviation is calculated as a proportion (ratio): ["upper" to "lower" social class! (Poulantzas N. ,1990: 50-57) student's parents as far as academic and technological institutions of Higher Education concern.

For last decade of 2000s the ratio is

 \Box [A.E.I. / T.E.I.= (AVG. =2, ±S.D. =1,0) To 1]

While for the previous decades the ratio was:

$$\Box$$
 [A.E.I. / T.E.I.= (AVG. =5, ±S.D. =2,0) To 1]

It is obvious that the social discrimination of education mechanism at the expense of the lower social classes is diachronically blunted. Simultaneously, the education system becomes more and more "open" to all spectrum of social classes.

The x^2 chi-square test between the TEI-student population and AEI-student population was found statistically significant as far as PARENTS' PROFESSIONS concern [x^2 =111,39, ρ <0,00001]

Also, The x^2 chi-square test between the TEI-student population and AEI-student population was found statistically significant as far as PARENTS' SCHOOLING concern [x^2 =86,02,p<0,00001]

However, the parents education level that dominates in AEI and TEI student population is the "Upper Class Secondary Level or equivalent Technical Vocational Lykeio).

The percentage of this schooling tier ranks between 27%-35% of the total education levels.

Table 7: PARENTS' EDUCATION for AEI and TEI Canditates

Academic Higher Institution (AEI)		PROFESSIONS	Technological Educational Institutions		
	(%)		(TEI)	(%)	
FATHER	MOTHER		FATHER	MOTHER	
6,9	3,0	POSTGRADUATE	2,0	1,0	
23,0	20,0	ACADEMIC INSTITUTIONS-AEI GRADUATES	13,0	8,0	
10,0	8,0	TECHNOLOGICAL INSTITUTION GRADUATES-TEI	6,0	6,0	
27,0	38,0	UPPER SECONDARY EDUCATION GRADUATES- LYKEION	30,0	35,0	
13,0	10,0	LOWER SECONDARY EDUCATION GRADUATES -HIGH SCHOOL	16,0	13,5	
18,0	18,0	NON-HIGH SCHOOL GRADUATES	31,0	32,0	
2,1	3,0	PRIMARY SCHOOL GRATUATES	2,0	4,5	

Source: Variable V20: Parents' schooling, Our Questionnaire Indeed, the parents education level for AEI students is ACADEMIC INSTITUTIONS-AEI or TEI GRADUATES with percentage 29,9% and above The corresponding percentage for TEI students approaches 17%.

3.3. The economic aspect of the education system: the public expenses for the education as percentage of G.N.P.

In the Greek economy, with Rostowæs criteria (Rostow, 1961:4-11) in mind, we may allocate the 'take-off' period 2 to that between 1909 and 1939. During that period large urban centers were formed, industry received a considerable boost, and land and sea communications were developed. However, this progress of the Greek economy was interrupted in the 1940s by the World War and the Civil War, industries, houses and roads were destroyed. Greece prepared for a new take-off' in the 1950s. Its G.N.P. growth rate from the mid-1950s to 1978 averaged 5 per cent. Per capita income in the mid-1950s stood at \$ 239 and by 1978 it reached \$3,016. Despite this significant progress there has been less change in the basic structure of the economy. In particular, agriculture remains a weak sector of the Greek economy. While it employs 28,5 per cent of the working population it only contributes 17,9 per cent to G.D.P. Indeed beautiful Greek landscapes may have inspired romantic vision but they have hardly contributed to the development of a strong economy. More that 70 per cent of Greece is covered by mountains and eroded valleys. The productivity of Greek industry is also below the average productivity of the economy. Whereas 30,2 per cent of the working force is employed in industry, the contribution to G.D.P by this sector amounts to only 19.4 per cent. The reason for this low contribution must be attributed to lack of planned large scale industry, technological inefficiencies and to the low educational level of the labor force. The Greek balance of payments structure presents a fundamental difficulty for the countryæs efforts for growth. In spite of remarkable improvements in invisible' receipts from shipping, tourism and investments from immigrants, the current account is in chronic deficit. It was also noted that, despite the growth of general and technical education in the last ten years, the structure and quality of the Greek labor force lagged substantially behind that of Western developed countries. Among the several reasons for this phenomenon was the absence of vocational training. Therefore, the main goals of a national educational plan should be a) the modernization of the educational process and programs b) the coordination of vocational with general education and c) the channeling of students into technical and scientific branches of study.

One of the fundamental national aim for education, is the provision of equal opportunity for access to all levels of education for all Greek citizens, and its policy is based upon a)the creation of the necessary infrastructure for innovation, a sound basis for educational change, and b)restructuring the administrative network and the decentralization of public services.

In comparison EEC countries and Greece as far as education system concern three facts emerge. First EEC countries and Greece belong to the same economic stages of development. Both are in the stage of high mass-consumption. The EEC society accepts the further extension of advanced technology for a highly skilled and differentiated labor force. The present need for Greece is to improve its technology and to produce more goods (in quantity and quality) while simultaneously minimizing unnecessary waste. The latte requires changes in education and effective administration. Secondly, in both societies economic plans are related to the educational system as the policy makers see education as an investment. In reality educational development depends upon funds. The promotion of educational systems leads to educational development and, in turn, educational developments strengthen economic growth by increasing scientific and technological capacity and by forging a skilled labor force.

Referring back to the third tendency characterizing our education system we focuses on the the economic aspect of the education system mainly in financial budgeting of institutions of higher education..

The huge expansion in the student population for the last three decades that was mentioned before (**Table 1**) does not keep pace with the budgetary policy. Indeed, the public expenses for the education in Greece are 3,5% of the GNP, which are the lower all over Europe.

Considering, the public education as an "open system" to all social classes mainly to 'lower classes, the highest proportion of financing education burdens concern families that are not economically privileged

The fact that many academic and technological faculties "are downgraded" due to exclusive labor market mechanism toward 'well-known departments and specializations (new technologies, medicine etc) the education system is structured on two distinctive classes. The first one concern the "proletarian faculties characterized by low standards of: a) entrance requirements and b) education quality with weak labor market achievements. The second one concern "noble faculties of high quality perspectives

The accessibility rate to any of these education classes depends on:

- 1. the family income
- 2. the cost of preparation in fee paid private lessons center

- 3. the parents social status and
- 4. other exogenous social variables ("image" "traditions" "values" "visions")

Examining **Table 9**, we point out that the "noble faculties offer limited places, attracts a large number of candidates and have high valance coefficient On the contrary the "proletarian faculties as "a mass production factories" have very low valance coefficient they do not cover the education needs of their candidates neither their prospect integration in the job market.

As a matter of facts, most candidates turn mainly into certain departments, which they believe, that these faculties can drive them to a better professional achievements.

So, the conclusion is the following: Even if the number of the offered places in both education classes will become equal to the number of the candidates the need of an evaluation system characterized by validity and reliability will continue to exist, so that the best candidates can be selected and placed to the appropriate faculty.

Table 9: "HIGH" DEMAND vs. "LOW" DEMAND FACULTIES (using as criterion the faculty valence coefficient)

FACULTIES	FIRST CHOICE Faculty Nominations By candidates	PLACES	CANDIDATES	Valence coefficient (2) / (3)			
(1)	(2)	(3)	(4)	(5)			
Academic Edu	cational Institution	ns(AEI)- facu	Ities of "HIGH DEI	MAND"			
ARCHITECTUREEMIT MEDICINE-ATHENS	945 611	135 201	20.607 18.835	7X 3X			
Technical Edu	cational Institutior	ns(TEI)- facul	ties of "HIGH DEN	/IAND"			
INFORMATICS ATHENS MARKETING	1091 550	165 165	15.656 15.046	6,6X 3,3X			
Academic Educational Institutions(AEI)- faculties of "LOW" DEMAND"							
HISTORY-SOCIAL ANTHROPOLOGY	54	139	11.748	0,39X			

NATURAL ENVIRONMENT	45	90	11.494	0,5X
EDUCATION (NURSERY)	78	166	12.167	0.47X
		utions (TEI) - facultie		-,
recilincal Educatio	mai motiti	utions (TED) - faculti	SOI LOW D	LIVIAIVD
HYDRAULIC WORKS	15	240	8.997	0,06X
AGRICULTURAL &	18	180	7.721	0.1X
Animal Husbandry.	10	100	7.721	0,17
FOREIGN LANGUAGES APPLICATIONS	25	142	7 182	0,17X

Source: Ministry of Education- Office of Statistical data - YEAR 2003,
THE DATA PROCESSING IS OURS

4. Conclusions and Recommendations

The low industrial growth rate, the structural weaknesses of the Greek economy, the twisted and unbalance relations between labor-market and education pyramid, the demographic characteristics of the working and educational workforce, the hydrocephalous growth of Athens and Thessalonica and the worse bilateral relationship between the education system and the labor market contributed to the creation of two social economic characteristics: a) the youth

Unemployment and b) labor-market disturbances in job balance

The labor-market disturbances can be translated as surpluses of employees trained in

low-demanded scientific domains and important shortages of employees specialized in "vital" for the country expertise.

A turning point of this upward trend can be achieved with:

The incorporation of guidance and counseling programs in the secondary education level with regard to: a) the tendencies in the job market. b) the supply and demand of specialties in the job market. c) the checklist of the "vital" for the economy jobs, specialties and occupations. d) the occupations and "openings" in which the organizations plan their employment in the next five-year period. Finally, more and more people, with mainly rural orientation, are prompted by the transformations of socio-economic base in industrialize and the retail-services sector of the economy. Thus, this mobile social structure phenomenon imposes a level of intensive specialized highly

skilled education as a passport of social integration and a "ticket for professional career and achievements.

On the other hands, considering the low budgets for the institutions of the higher education, we proposed some methods of financing the academic studies for "lower socio-economic" class students which are :a) the increase in the number of scholarships b) the establishment of student loans .c) the establishment of "fees" of registration, based on the familial income. This norm, is estimated to reduce the number of "professional" students who "stagnate" in AEI and TEI faculties over a long period of time. d) part time employment for students with low level income (in library, accounts department, European Community Programs e.t.c.).

In addition, to make the Greek academic institutions more effective and responsible to society, we must effect a number of internal changes in their administrative structure: a) they need a large democratic basis at the lowest level of participation and an efficient and flexible top-management b) assuming that the universities are large scale and expensive organisations, their leadership should be assumed by persons with academic and administrative abilities, experience and techniques and they must be appointed for a period of more than five years c) the introduction of modern work methods and techniques and the establishment of 0 & M units for each academic institution is a clear necessity d) as the university administrative system is a part of public administration, then its improvement implies a reorganization of the wider Greek administrative system.

Finally to improve the quality of university education: a) Infrastructures (classrooms and libraries) should be adequately supplied b) the ratio of lacademic staff to student population! should be improved. c) development of strategic plans for academic internationalization must be improved It should included a) networking European and International dimension in the program of studies, teaching course subjects in English, b) increase of student exchanges, c) increase of staff exchanges.

d) increase of attractiveness of studies (methods of teaching, teaching materials, didactic training of new academic staff, etc.) e) development of student abilities and skills to be able to compete in the global environment.

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