



## **Full Length Research Article**

### **EMPIRICAL RESEARCH OF THE RELATION IN TEACHING ECONOMICS BETWEEN SECONDARY AND HIGHER EDUCATION**

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#### **ABSTRACT**

The aim of this paper is to study the relation of the course 'Principles of Economic Theory' of Lyceum (secondary education) with the curriculum of Accounting Departments in Greece. An empirical research is realised to students of three Accounting Departments in Greece, in order to study this relation. Information and comments regarding the course and the curriculum of the Departments are given simultaneously with the statistical analysis. The analysis concludes that there is a strong relation between the course and the curriculums.

#### **INTRODUCTION**

One of the important issues that the ministry of education, the academic society and teachers are facing is that of relation in teaching courses between secondary and higher education. In Greece, the senior class in secondary education (Lyceum) is considered to be a preparation for students' exams to access higher education. For more than a decade, students who wish to study in economic and administrative departments follow the course of 'Principles of Economic Theory' in Lyceums. The aim of this paper is to study the use of the course 'Principles of Economic Theory', to students of Accounting departments in Greece. For the purpose of this study, an empirical research was conducted among students of three accounting departments in Greece; Kavala, Piraeus and Patras. It must be noted that the literature review in the subject is almost inexistent. The optional course 'Principles of Economic Theory' is addressed to students who are registered in technological direction and especially in the scientific field of economics and administration. The course, as stated by the authors of the text edition, aims to introduce to students the basic mechanisms of the market and several and important economic notions.

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In this course, an introduction to the notion of interest, the rate of interest, Gross Domestic Product (GDP), the elasticity of supply and demand and the equilibrium price is made. The teaching hours of the course are two per week. The curriculum of the three Accounting departments (Kavala, Piraeus and Patras) have no particular differences. There are thirteen accounting departments in Greece. Microeconomics, Macroeconomics, Mathematics for Economists, Private Economic, Information Systems, Economic Studies, Principles of Business Administration, Statistical Methods, Accounting Applications and Information Systems in Accounting are taught in all three departments. In this paper we analyze the aforementioned use of the course 'Principles of Economic Theory' students in higher education, with the conduction of an empirical analysis in Greece. In section 2 the methodology of the empirical analysis is indicated, with the results of the statistical analysis to presented in section 3. Final, section 4 concludes.

#### **MATERIALS AND MOTHEDES**

The study was conducted in Greece from November 2014 to January 2015 by the Department of Accounting and Finance of the Eastern Macedonia and Thrace Institute of Technology. The data were collected using a structured questionnaire containing 28 questions. The questionnaires were distributed

randomly to students of the three departments in the cities of Piraeus, Patras and Kavala, Greece. The students were asked to complete the questionnaires anonymously and return them. The 28 questions were divided into three sections. Section 1 consisted of five questions related to demographic data. Section 2 consisted of thirteen questions regarding their opinion on the course 'Principles of Economic Theory'. Section 3 contained ten questions regarding their understanding of economic notions in their departments and the use of knowledge from Lyceum. The purpose of each section is to document and analyze the students' perception regarding the specific course. The questions were of mixed type, meaning the students had to choose from specific answers and fill in their perspective of a certain question. The collected data were analysed using descriptive statistics and the program SPSS v18.

## RESULTS

The number of students who responded to our questionnaire was 307 (valid questionnaires), 130 study in Kavala, 97 study in Patras and 80 study in Piraeus. The population is heterogeneous distributed regarding gender, since the percentage of women surpasses that of men. The majority of the respondents are female (60.6%), which is representative of the mass of students in these departments (see, Table 1).

The majority of students in the city of Piraeus and Patras origin from the regions of Attica, Central Greece and the Peloponnese. The majority of students in Piraeus comes from Attica region (23.16%), while students in Patras come from the Peloponnese region (23.19%) and in Kavala, origin from the region of Eastern Macedonia and Thrace (33.2%) which means that most of the students are local population. Almost all of the respondents (94.92%) have chosen to study 'Principles of Economic Theory' in Lyceum. The respondents are students of all semesters. The survey involved students who are in all possible years of studies. It must be pointed out that in higher education in Greece, students have the right to study more than four year if they do not pass the courses successfully during their four years studies. The majority of students are in their third year of studies (29.37%), followed by the four year studies (23.15%), see Table 2. Most of them have successfully passed more than half of the courses in their departments. The students' opinion regarding the text edition of 'Principles of Economic Theory' is quite good, since 45.27% of all departments agree that it is well written. However, almost 40% of all students consider that the text edition is moderate (see Table 3). The majority of students are satisfied with the teaching hours per week (two) of the course 'Principles of Economic Theory' (60.9%), while 39.1% are not satisfied with the teaching hours, as they believe that more teaching hours are needed.

**Table 1. Gender and Department**

	Piraeus		Patras		Kavala		All three Dep.	
	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)
Gender								
Male	35	11.40	39	12.70	47	15.3	121	39.4
Female	62	20.20	41	13.4	83	27	186	60.6
Total	97	31.60	80	26.05	130	100	307	100

**Table 2. Year of studies**

Year	Piraeus		Patras		Kavala	
	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)
1	0	0	1	0.56	1	0.56
2	13	7.34	4	2.26	17	9.60
3	33	18.65	19	10.72	52	29.37
4	24	13.55	17	9.60	41	23.15
5	20	11.30	19	10.73	39	22.03
6	6	3.40	11	6.20	17	9.60
7	1	0.56	8	4.53	9	5.09
Total	97	54.80	80	45.20	177	100

**Table 3. Students' opinion regarding the text edition**

	Piraeus		Patras		Kavala		All three Dep.	
	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)
Very bad	4	1.31	2	0.65	0	0	6	1.96
Bad	8	2.60	5	1.63	8	2.61	23	6.84
Not bad/not good	33	10.75	37	12.05	61	19.87	131	42.67
Good	56	18.24	28	9.12	55	17.91	139	45.27
Very good	6	1.95	7	2.28	6	1.95	19	6.18
Total	97	34.85	80	25.73	130	42.34	307	100

**Table 4. The use of the course in university lessons**

	Freq.	Perc. (%)
Yes	233	75.9
No	74	24.1
Total	307	100

Almost all of the respondents (91%) declare that they do not suggest any changes in the way of teaching the course. This is because the text edition follows a simple approach of the contents and achieves an understandable and easy learning for students. The remaining 9% of the respondents replied that they would like to increase the teaching hours, increase the number of examples in classroom, to correlate more with accounting notions and use actual data in examples. 75.9% of the students of all departments believe that the course of 'Principles of Economic Theory' is very useful for their studies in higher education (see, Table 4).

The majority of the students, almost 40%, respond that the course of 'Principles of Economic Theory' in Lyceum has helped them enough during their studies. On the other hand, 27.68% believe that it was not very helpful and only 1.13% believe that it was of great good. Students who take the course of 'Principles of Economic Theory' are taught basic economic notions, like those of interest, the rate of interest, Gross Domestic Product (GDP), the elasticity of supply and demand and the equilibrium price is made. The questionnaire of our study contained questions, in order to study whether the students believe that they have understood these notions.

**Table 5. Compatibility of the course with the curriculum**

	Piraeus		Patras		Kavala		All three Dep.	
	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)	Freq.	Perc. (%)
Not at all	14	4.56	5	1.63	2	0.65	21	6.84
Little	32	10.42	14	4.56	31	10.09	77	25.07
Very	41	13.36	50	16.29	58	18.9	149	48.55
Very much	10	3.26	11	3.58	39	12.7	60	19.54
Total	97	31.6	80	26.06	130	42.34	307	100

**Table 6. Passed exams in specific lessons**

	Macroeconomics		Microeconomics	
	Frequency	Percentage	Frequency	Percentage
Yes	247	80.46	151	49.19
No	60	19.54	156	50.81
Total	307	100	307	100

**Table 7. Compatibility of the course with specific courses**

Lesson	Frequency	Percentage
Civil Law	5	1.64
International trade	4	1.31
Macroeconomics	61	19.87
Microeconomics	72	23.45
Monetary	15	4.9
Human Resources Management	10	3.26
Finance	10	3.26
Not replied	130	42.31
Total	307	100

According to 48.55% of the respondents, there is a compatibility between the course 'Principles of Economic Theory' and the curriculum of the three departments (see Table 5). The lowest percentage (6.84) declare that there is no compatibility. The knowledge that they gained by the course is indifferently (48.02%), while it is very good for the 25.42% of the respondents. It must be noted that none students responded that they obtained very good knowledge by the course. Moreover, when the respondents were asked to choose the compatibility of the course between Microeconomics and Macroeconomics, 78.18% chose Microeconomics and 27.12% chose Macroeconomics. Almost 82% declare that they have understood the differences between macro- and micro-economics. When the respondents had to reply whether they have successfully passed Macroeconomics and Microeconomics, almost 80% have passed macroeconomics, but only 49% microeconomics (Table 6). Moreover, regarding the compatibility between the course 'Principles of Economic Theory' with specific courses the responds are shown in Table 7. It is remarkable, that almost half of the respondents did not respond to this question.

Regarding interest and the rate of interest, the majority (41.04%) responded that the course was indifferently helpful in understanding these notions, while 24.1% believe that it helped them a little. Regarding the notion of GDP, the majority (35.5%) responded that the course was indifferently helpful in understanding these notions, while 28.66% believe that it helped them a quite enough. The notion of elasticity of demand and supply is a notion which they understand very well (32.9%) and moderate (31.27%). Understanding the equilibrium price is moderate (26.06%) and very good (34.02%).

## Conclusions

The statistical analysis of the empirical data indicates that the course 'Principles of Economic Theory' is useful as it introduces the basic notions of the economic science to students of secondary education and it correlates with a significant number of courses in the Accounting Departments. The basic concluded remarks are that the course is compatible with Microeconomics and Macroeconomics courses and that it

is useful to students to understand basic notions of economics in accounting departments.

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