The Effects of the Greek Economic Crisis on Eating Habits and Psychological Attitudes of Young People: A Sample Survey among Greek University Students

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Abstract—The aim of this paper is to show the effects of the economic crisis and corruption levels of the Greek political system on the way young Greek people think and live today as well as on their academic progress. The results of a sample survey among 1350 students of the Universities and Technological Educational Institutes of Athens are analyzed. Exploratory factor analysis reveals four main effects: (a) Loss of confidence in state institutions, democracy values, political, judiciary, educational, health and security systems; (b) Psychosocial characteristics, lack of goals, prevailing sense of abandonment, widespread pessimism, negative beliefs, nihilistic approach to everyday reality and lack of self-confidence, negative influence of the economic crisis on the results of exams; (c) Substantial reduction in living expenses (especially for food, clothing, housing and entertainment); (d) Definite immigration plans by young educated Greeks and desire for postgraduate studies and settlement abroad. Cronbach’s α coefficients for factors a, b, c, d, are: 0.88, 0.72, 0.68 and 0.42 respectively. Logistic regression reveals the following significant predictors of lack of academic progress as a result of the economic crisis: negative psychological attitudes, loss of confidence toward state institutions, increased living expenses and strong desire for immigration. Also, a second logistic regression model reveals the following significant predictors of visiting a psychologist or a psychiatrist as a result of the economic crisis: job insecurity, sense of abandonment, pessimistic feelings, nihilistic feelings since there are no social values and strong desire to emigrate as a result of economic circumstances.

Index Terms—Greek debt crisis, sample survey, university students, logistic regression, loss of confidence in state institutions.

I. INTRODUCTION

THE Greek financial crisis has been the most important economic story of the year. For a review of the Greek crisis and a detailed discussion see elsewhere [1]-[4]. The cause of this crisis is the Greek sovereign debt of €350 billion and a budget deficit 15% of its annual GDP. The Boston Globe wrote on June 17, 2011:

Over the last decade, Greece went on a debt binge that came crashing to an end in late 2009, provoking an economic crisis. Over the next two years, Greece relied on bailout money from its richer neighbors and implemented austerity measures meant to cut its bloated deficit and restore investor confidence. But by June 2011 it found itself deep in a second recession, near the end of its cash and facing a political crisis, as anti-austerity demonstrations grew.

A. Causes of the Greek debt crisis

The crisis itself and its escalating nature are the result of steady deterioration of Greek macroeconomic indices during 2001-2009 to levels inconsistent with long-term European Monetary Union (EMU) participation as well as shift in markets’ expectations regarding the healthy state of the Greek economy [5]. Analysing the Greek debt crisis is important because of its contagion risk to other peripheral EMU countries, such as Italy or Spain, apart from the countries already facing similar debt crises, Ireland and Portugal.

The crisis that started in Greece has developed into a crisis of the Eurozone as a whole. De Grauwe and colleagues [6], [7] argue that the major responsibility for the debt crisis lies with the Greek authorities who mismanaged their economy, wasted public money when overpricing of certain projects, failed to stop tax evasion and deceived multiple parties about the true nature of their budgetary problems. At the same time, financial markets and Eurozone authorities are also responsible for letting the crisis evolve into a systemic crisis of the Eurozone.

Papadakis [8] says that the Greek fiscal crisis is the outcome of a combination of high debts and fiscal deficits and it was accelerated by the high degree of corruption of the Greek bureaucratic and political system. The level of corruption in the Greek political system has played a major role in generating the crisis and helping it expand. In the Greek democratic system, political parties have used patronage, subsidies, tax evasion and voters’ appointments in public sector positions as ways of gaining votes. In fact, the most common way of electioneering is tolerating tax evasion on a massive scale.

The Eurozone was designed to have a one-size-fits-all currency and interest rate. When Greece entered the EMU, banks were lending at a low interest rate because they just believed that Greece couldn’t fail to service its debt, it
couldn’t default. And so Greece was able to borrow money at almost the same low rate as Germany or France, even though it had a huge debt. When the global financial crisis occurred in 2008, the Greek economy simply couldn’t adjust. The fact that Greece had such a large government debt made it the first Eurozone country to suffer from the effects of the financial crisis. None of the international financial institutions or rating agencies (Standard & Poor’s, Moody’s and Fitch Ratings) succeeded to pick up on it. These financial institutions bear a fair amount of responsibility to the present Greek situation. For a detailed account of the causes, the wider implications of the global crisis in the Eurozone and Greece see [9]–[14].

B. The Greek fiscal crisis in numbers

Greece’s public debt was estimated at €320 billion in 2010, equal to 144% of its GDP. When Greece entered the EMU in 2001, the debt was 106.6% of its GDP, but the debt became larger because Greece was spending much more than its annual earnings, hence increasing budget deficit. The revised deficit was up to 13.6% of its GDP at the beginning of 2010. The fact that the Greek economy is mainly based on public sector means that governmental spending is inflexible causing major difficulties in cost-cutting. The principal money spender is the public sector absorbing 40% of its GDP, whereas tourism and maritime are the principal money incomes with 15% and 7% of GDP respectively. Over 2011 and 2012, €130-160 billion will be required for debt repayment [8].

C. Austerity measures to reduce the budget deficit

Greece has been in the middle of the ongoing debt crisis since November 2009. Although Greece is a country member of the Eurozone, its budget deficit and public debt were not sustainable without an austerity program. The Greek government happily accepted a rescue plan of €110 billion designed and financed by the European Union, European Central Bank and International Monetary Fund. A lengthy austerity plan and a fiscal consolidation plan have been put forward and are to be implemented in the next three years. The austerity plan includes tough adjustment by lowering public expenditure, gradually eliminating various subsidies (e.g. energy, housing, health, education), raising electricity rates, freezing public sector wages, capping pension payments and postponing social benefits [15].

D. Social consequences of the crisis

The unemployment rate in Greece is increasing fastly; in December 2010 it was 14.8%, in March 2011 it was 16.2% in April 2011 it was 15.8% and in May 2011 it was 16.6% with the number of unemployed being 786,459 in April 2011 and inactive people (i.e. unemployed who stopped seeking for a job through state agencies) to 4,365,072 people. The number of employed decreased by 240,567 persons compared with April 2010 (5.4% rate of decrease) and by 1,993 persons compared with March 2011 (a 0.05% rate of decrease) [16].

According to a wide string of surveys, an average six out of ten households in debt-ridden Greece have been affected by the crisis and the austerity drive launched by the government of the ruling socialist party under Prime Minister G. Papandreou in 2010, who won the elections in September 2009. Faced with cutbacks on salaries amounting to two salaries per year (13th and 14th salary given for Christmas and for the annual leave of the public employees) and reductions in pensions that reach up to 30%, increased unemployment rates, taxes and recession, a large part of low income and middle class households have difficulty keeping up with regular bills nowadays.

Greek people are more distrustful than ever toward the political parties and its ability to lead them out of the crippling financial crisis. Greeks fear that their children and grandchildren will not enjoy the acceptable lifestyle of their generation and Greece could sink in social unrest for years. Shops, small factories and manufacturing companies and other businesses are closing down fast in Athens, Thessaloniki and all other cities in Greece. The Greek Statistical Authority and the Greek Chamber of Commerce estimate that 22%-25% of shops have closed down, leaving thousands of unemployed workers to live on reduced state unemployment benefits. In Athens and in other cities, the signs “for sale” and “for rent” are visible in every street.

While social security contributions are among the highest in Europe, young low-income Greek people face the prospect of financial disaster in the short-term if there is not enough financial support from family and friends. A new generation of Greeks has appeared: the people who are working for €590 per month without any prospect of job security and dignified pension. Every day groups of homeless and hungry people search through leftovers in rubbish bins for food; suicides of poor people and bankrupt shop owners have also increased alarmingly. Only in the first six months of 2011 there were 97 suicides according to figures of non governmental organizations.

E. The present state of poverty in Greece

Large sectors of the Greek population are in a state of poverty, since they are not only in desperate need of the most basic facilities of a household but earn annually less than 60% of the median annual income of a Greek citizen [17]. This group comprises of pensioners, single mothers (or fathers), agricultural workers, former shop owners who lost their businesses, young students (mainly from poor households in the Greek periphery), immigrants, unemployed people and other marginalized groups. The uneven income distribution in Greece is represented by the dramatic figures of Gini coefficient which lie in the region of 0.51 to 0.56, meaning that large proportions of wealth are concentrated in the hands of few, who know how to evade taxes and live luxuriously, having generous bank accounts abroad [17]. The ministry of Finance announced recently (July 2011) that the Inland Revenue Agency has names of 14700 persons who owe the Greek state €38 billion. The state of corruption in Greece has paralyzed every aspect of the public and private sector in Greece.

Thus the present study’s aim is to examine the effects of this crisis on psychological attitudes and eating habits of young people. We have conducted a quantitative analysis of our results based on exploratory factor analysis, logistic regression and univariate analyses and we conclude by interpreting the results.
II. Methodology and Statistical Analysis

A. Sample and Questionnaire

We carried out a sample survey among a random sample of 1350 young Greeks in Athens, Greece. There were 571 men and 779 women. The mean age was 23.4 years (SD=3.8). Sixty six percent were students from four Universities in Athens and Piraeus, 16% students from Universities of mainland Greece outside Athens and Piraeus and 18% non-students. The questionnaire consisted of the following sections: (a) demographics, (b) ethnicity, (c) educational level and parental profession, (d) effects of the economic crisis on (d1) disposable monthly income, (d2) expenses for daily meals, entertainment, rent, clothing and general shopping, (d3) psychosocial characteristics, (d4) degree of confidence toward political, judicial, educational, security and health systems, (d5) degree of academic progress, (d6) way of planning the future. Among the participants, 1185 were of Greek origin and 157 non-Greek origin, mainly economic immigrants in Greece from the Balkan countries. A pilot study in a sample of 30 was carried out first and the wording of some questions altered accordingly.

B. Exploratory Factor Analysis

We performed Exploratory Factor Analysis (EFA) with the 1350 questionnaire responses to identify the effects of economic crisis on young Greeks. The extraction method was Principal Component Analysis. Effects are grouped into four factors (confidence, psychology, living, planning) since eigenvalues exceeded 1. The selected factors accounted for 44% of the total variance. The Kaiser-Meyer-Olkin value was 0.81 indicating the appropriateness of using the technique for factor analysis. This appropriateness was further supported by the significant result from Bartlett’s test of sphericity ($\chi^2 = 6593.45; p < 0.0001$). Cronbach’s $\alpha$ coefficients were: confidence $\alpha = 0.88$; psychology $\alpha = 0.72$; living $\alpha = 0.70$; planning $\alpha = 0.43$. Factor loadings for each item in the factors are showed in Table I.

C. Univariate Analyses

We consider the sums of responses to items of the questionnaire belonging to the four factors which were identified through EFA: confidence, 7 items; psychology, 6 items; living, 5 items and planning, 2 items. We examined through independent t-tests the mean differences of these four sums between people who have positive and negative responses to the important question: do you panic for the lack of jobs as a result of the economic crisis? Results are shown in Table II. Also, we used $\chi^2$ tests (in SPSS 18.0) to examine the associations of certain items in the questionnaire (demographics, confidence, psychology, living, planning) with the items $Q_1$: Do you panic as a result of the economic crisis?; $Q_2$: Do you feel that as a result of the difficult psychological and economic conditions which the economic crisis has imposed, you did not have satisfactory academic progress?; $Q_3$: Did you visit last year a psychologist or a psychiatrist, as a result of a psychological problem? Results are shown in Table III.

D. Logistic Regression

1) Model 1 with depended variable “lack of academic progress as a result of the economic crisis”: We carried out logistic regression with dependent variable the lack of academic progress as a result of economic crisis of the students and independent variables items related to psychology, confidence, living and planning to assess the influence of the variables determined by EFA on the likelihood that respondents would report that they had a problem with their academic progress. The model contained eight independent variables (lack of job security, lack of goals, sense of abandonment, nedative attitudes, monthly income, age, lack of entertainment, sense of no value for academic degree). The fullmodel containing all predictors was statistically significant $\chi^2(15,1252) = 211.05, p < 0.0001$, indicating that
The model as a whole explained between 16% (Cox and Snell $R^2$) and 22% (Nagelkerke $R^2$) of the variance in academic progress status and correctly classified respondents who reported and did not report a problem with making academic progress as a result of the economic crisis than those who had a sufficient monthly income. Similarly, respondents who did not have goals in their life as a result of the economic crisis were over 2 times more likely to report lack of academic progress than those who had goals in their life. The odds ratio of 0.942 for age of students was less than 1, indicating that for every additional year of age of students, respondents were 0.942 times less likely to report lack of academic progress as a result of the economic crisis, controlling for other factors in the model.

2) Model 2 with dependent variable “visit to a psychologist or a psychiatrist because of psychological problems generated by the economic crisis”: Similarly with Model 1, we carried out logistic regression with dependent variable the visit to a psychologist or a psychiatrist because of psychological problems generated as a result of economic crisis of the students and independent variables the items related to psychology, confidence and planning to assess the influence of the variables determined by factor analysis on the likelihood that respondents would report that they have visited a psychologist or a psychiatrist. The model contained five independent variables (lack of job security, sense of abandonment, high degree of pessimism, desire to emigrate, sense that everything is trivial and there are no social values). The full model containing all predictors was statistically significant, $\chi^2(9,1281) = 146.01$, $p < 0.0001$, indicating that the model was able to distinguish between respondents who reported and did not report a visit to a psychologist or a psychiatrist. The model as a whole explained between 11% (Cox and Snell $R^2$-squared) and 22% (Nagelkerke $R^2$-squared) of the variance of the dependent variable and correctly classified 89% of the cases. The Hosmer and Lemeshow test resulted in $\chi^2(7,1281) = 8.44$, $p = 0.29$, indicating a good fit. As shown in Table IV, seven of the independent variables made a unique statistically significant contribution to the model (lack of job security, lack of goals, sense of abandonment, nedative attitudes, monthly income, age, sense of no value for academic degree). The strongest predictors of reporting a problem with making academic progress were monthly income and lack of goals, with corresponding odds ratios (OR) 3.082 and 2.419. This indicated that respondents who did not have a sufficient monthly income were over 3 times more likely to report lack of academic progress as a result of the economic crisis than those who had a sufficient monthly income. Similarly, respondents who did not have goals in their life as a result of the economic crisis were over 2 times more likely to report lack of academic progress than those who had goals in their life. The odds ratio of 0.942 for age of students was less than 1, indicating that for every additional year of age of students, respondents were 0.942 times less likely to report lack of academic progress as a result of the economic crisis, controlling for other factors in the model.
unemployment rose to 16.6% of the economically active population in Greece, according to the Greek Statistical Service [16]. Forty percent of young people 15-25 years of age are unemployed. Three lessons must be learned from the Greek debt crisis (a) The Greeks must elect new politicians whose main characteristic must be their non-corrupted personality; (b) The government must make special laws for reducing the great degree of income inequality that exists in Greece. The rich people must pay their taxes the same way as the average Greek citizen pays; (c) The foreign nations are not going to essentially help Greece pay its debt. The Greek people must learn to enjoy life only with their own money and not with loans from the bank.

From the initial EFA, Cronbach’s α coefficients were all satisfactory, except for the last one with value 0.43. All item loadings were above 0.5. The univariate analyses tested the difference in the degree of confidence, psychological attitudes, living standards and planning for the future of students who answered yes or no to the question: do you panic for the lack of jobs as a result of the economic crisis? We observed that all tests give statistically significant answers at the level of significance 0.01%. This has the following interpretation: Students who answered yes to the above question, have less confidence, feel more insecure regarding job prospects and psychological strength to face them, spend less per month and plan with more determination to emigrate than the students who have answered no.

The χ2 tests of association are all statistically significant and have the following interpretation: The questionnaire items are associated with the three important situations of students: feeling panic because of the catastrophic effect of the economic crisis on their lives, visiting a psychologist or a psychiatrist to take advice as to how to cope with the adverse psychological effects and planning to emigrate in order to find a securer job. Finally, two logistic regression models were employed, both with good fit and statistically significant Cox and Snell, Nagelkerke and Hosmer and Lemeshow criteria. From Table IV we conclude that there is a statistical significant relationship of most predictors with the dependent variable. However, the 95% CI for odds ratios are asymmetric and have large length. It is advisable to use bootstrap methods [19] to find confidence intervals with shorter length.

Limitations of the present study are that the sample was not representative of the whole student population because the sample survey has not been carried out in every Greek University. A future questionnaire must also include more non-Greek students, so it will be a thorough cross-cultural study of the effects of the economic crisis and must contain questions regarding the beliefs of Greeks in order to establish whether the economic crisis had some influence on the basic values of students.

As a final concluding remark we would like to stress that Greeks always find the strength and the will to adapt to difficult situations and survive, as history shows. It is our personal belief that the spirit of resisting difficulties will prevail and will rescue the Greek people during this economic typhoon.

REFERENCES


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TABLE IV
LOGISTIC REGRESSION RESULTS

<table>
<thead>
<tr>
<th>Predictors</th>
<th>p-value</th>
<th>OR</th>
<th>95% CI</th>
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<tr>
<td>Lack of job security</td>
<td>0.006</td>
<td>1.60</td>
<td>1.15-2.23</td>
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<td>Lack of goals in</td>
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<td>2.42</td>
<td>1.77-3.31</td>
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<td>Sense of abandonment</td>
<td>0.037</td>
<td>1.61</td>
<td>1.03-2.52</td>
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<td>Monthly Income</td>
<td>0.0001</td>
<td>2.39</td>
<td>1.52-3.71</td>
</tr>
<tr>
<td>Sense that everything is trivial and there are no social values</td>
<td>0.0001</td>
<td>1.99</td>
<td>1.39-2.84</td>
</tr>
<tr>
<td>Age</td>
<td>0.005</td>
<td>0.94</td>
<td>0.90-0.98</td>
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<tr>
<td>No value of Academic Degree</td>
<td>0.0001</td>
<td>1.74</td>
<td>1.32-2.30</td>
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