«ΣΠΟΥΔΑΙ», Τόμος 54, Τεύχος 3ο, (2004) / «SPOUDAI», Vol. 54, No 3, (2004), University of Piraeus, pp. 9-36

INTEREST RATE VOLATILITY AND ITS EFFECT ON UNEMPLOYMENT IN EUROPEAN UNION AND THE UNITED STATES

By

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«Τις σοφός και επιστήμων εν υμίν; δειξάτω εκ τής καλής ανατροφής τα έργα αύτού εν πραΰτητι σοφίας. Ει δέ ζήλον πικρόν έχετε και εριθείαν έν τή καρδία υμών, μή κατακαυχάσθε και ψεύδεσθε κατά τής αληθείας. Ουκ έστιν αύτη ή σοφία άνωθεν κατερχομένη, αλλ' επήγειος, ψυχική, δαιμονιώδης· όπου γάρ ζήλος και εριθεία, εκεί ακαταστασία και πάν φαύλον πράγμα. Ή δε άνωθεν σοφία πρώτον μεν αγνή έστιν, έπειτα ειρηνική, επιεικής, εύπειθής, μεστή ελέους και καρπών αγαθών, αδιάκριτος, ανυπόκριτος».

Ίακ. γ΄ 13-17

Abstract*

In a market oriented economy, the increase in (industrial) production will increase demand for labor and unemployment will decline. The same will happen with an expansionary monetary and fiscal policy. The risk is expected to have a positive (workers will supply more labor) or a negative (firms will demand less labor) effect on employment. Here, a simple expectations-augmented Phillips curve, combined with the equation of exchange and through an IS curve, gives the optimal unemployment rate. A GARCH (p, q) process is used to determine the risk (measured with the volatility of the real interest rate) in our economy. The results show that the EU country-members are different from each other and distinct from the U.S. market-oriented economy. Consequently, the current European Union is not working as a free mar-

* An earlier version of this paper has been presented at the EEA Annual Conference in New York City and I am grateful for the comments from the discussant and the audience. I am also grateful for travel support for the above conference from the Dean of KSOM, Dr. Ronald Johnson. I would like to acknowledge the help provided by my research assistants, Maen Abdelhafez, Kristin M. Mangan, Andrew Witko, Lajja Shah, and Suvrat Gupta. The usual disclaimer applies.

ket economy and might be required more time to adjust in the future with all these tremendous structural, cost, urbanization, and demographic changes and its rapid expansion with ten new members from this year. JEL (Classification): F15, F36, F41, F42, C2, J6, D81.

Key Words: Economic Integration, Financial Aspects of Economic Integration, Open Economy Macroeconomics, International Policy Coordination.

1. Introduction

As economies is expected to switch from recession to recovery and unemployment rates, hopefully, to decline, a tenth of the EU's workers still remain without jobs, especially the young labor force[1] of the Union. The introduction of the new and peculiar currency ("euro") on January 1, 2002 has caused many problems to European citizens and has stimulated inflation,[2] but the trade-off between inflation and unemployment (Phillips curve)[3] does not seem to exist, there. Lately, the appreciation of this currency, due to speculations, uncertainty, and oppositions towards the dollar, will affect negatively (deteriorate) trade and contribute to higher unemployment.[4] Opinion polls have shown that more than 60% of the Europeans were against the euro (and this percentage is increasing in some regions), except bureaucrats in Brussels, parliamentarians in Strasbourg, and the governments of the 12 countries of the Euro-area because they need their good jobs that they possess, due to the creation of the Union. The primary goal of the European System of Central Banks as set forth by the Maastricht Treaty is to "maintain price stability" (Article 105.1). The treaty further instructs the Eurosystem to "support the general economic policies" in the Euro-area without prejudice to the goal of price stability. Thus, the treaty makes it clear that any other objectives (unemployment, uncertainty, social welfare, etc.) are secondary to that of price stability.[5]

A few EU countries experienced a dismal recession in 1991-1992, which became worse in 1993, with an average Euro-area real GDP growth for 1993 of -0.8%[6] and an average EU unemployment rate of over 11% in 1994 (Spain's unemployment was 24%). Lately, in 2001-2002 the gloomy slump is back with a real GDP growth for the Euro-area of 0.3% per annum and an unemployment rate of over 8%.[7] The average growth rate for the first quarter of 2003 was 0.0% for the Union. For all of the 1990s the unemployment rate was exceeded 10% p.a. and the data seems that understate these statistics. Germany[8] and Italy are doing worse than the other EU members. "When that dismal record is compared with the job-creating records of America and Japan, even the most arrogant Eurocrat or government minister must worry about the future."[9] Garibaldi and Mauro (2000) have found that a majority of the European economies substituted capital for labor to a greater extent than the non-European econo-

mies with dynamic job growth; also, employment growth was much faster for women, there; lastly, high dismissal costs and higher level of overall taxation have affected negatively employment and turned manufacturing away from EU.[10]

The objective of this analysis is to examine the causes of this persistent high unemployment in the EU by using different monetary and fiscal policy determinants and to test the effect of risk (interest rate risk) on unemployment. When an economy is becoming riskier, it is expected workers to work more and thus to hedge their income risk. Then, an increase in risk will lead to an increase in the labor supply, reduction in wages, increase in the demand for labor, and decrease in unemployment. We want to test empirically if the real interest rate risk has any effect on the European unemployment rate. After a good microeconomic theoretical work, Basu, Ghosh, and Kallianiotis (2001) have found that in the U.S. unemployment rate has responded positively to an increase in the time-varying real interest rate risk.[11] Also, similar literature has been provided by Levhari and Srinivasan (1969), Block and Heineke (1975), Selden (1978, 1979), Mankiw (1981), Altonji (1982), Wijnbergen (1992), Sargent (2002), and Alexiou (2003). Further, with this empirical work, we can test similarities and differences among (the controlled) EU country-members and the (free market) economy of the United States.

In this paper, a different model of unemployment, as a function of some policy macro-variables (to measure policies' effectiveness) and of the real interest rate risk, is used, as follows,

$$u_t = f(X_t\gamma, r_{Risk_t}\beta) \tag{1}$$

where, u_t = the unemployment rate, X_t = a vector containing macro-policy variables affecting employment, $r_{Risk\,t}$ = a measurement of risk (the volatility of real interest rate), γ = a vector of policy variables coefficients, and β = the interest rate risk coefficient.

An increase of riskiness in our economy may encourage an individual to work more and save more due to future uncertainty, if he has an access to the labor market (then, unemployment will decline) because individuals have a strong motive for similar (and growing) needs and consumption smoothing across their lives. Of course, the opposite can also be true. An increase in riskiness will make businesses to reduce their costs, investment, and production so they will reduce the labor that they utilize and unemployment may increase. But, "although the unemployment rate rose and confidence declined during

the recent recession, consumers continued to spend".[12] These might be the results of high liquidity (loans) from our banks with eminent social costs, later.

The current research contains five sections. Section 1 gives a small introduction to the analysis. Section 2 provides a model of the full employment (natural level of) unemployment rate. Section 3 presents the empirical model and the statistical results between real interest rate risk and unemployment. Section 4 discusses some socio-political issues in the European Union. At the end, section 5 offers the conclusion (epilogue) of this analysis.

2. Full Employment (Natural Level of) Unemployment Rate and Public Policies

In 1990s the unemployment rate in the EU persisted to be of double digits. Why should European citizens tolerate such high levels of unemployment, together with the waste that occurs when all this human and physical capital is underutilized? Should we conclude that there is a simple solution that normative economists, objective historians, moral philosophers, and laymen understand, but politicians refuse to accept or ignore? Or is the problem of high unemployment basically insolvable? No, this is not true. Public policies must be used to such a way to promote employment for all the citizens of a country.

During periods of higher-than-expected inflation, growth in nominal compensation will lag growth in the general level of prices, and real compensation will decline (this decline in real compensation is the reason why firms expand hiring during periods of surprise inflation). Conversely, during periods of lower-than-expected inflation, households will experience faster growth in real compensation. Uncertainty for the future of the economy will affect working and employment decisions by individuals and businesses. We will test some factors that they may cause these fluctuations in unemployment, by starting from the following expectations-augmented Phillips curve,[13]

$$\pi_t = \pi_t^e + \varphi(q_{t-1} - q_t^N) \qquad (2)$$

where, π = inflation rate, π^e = expected inflation rate, q = growth of real output (actual), q^N = growth of potential level of output (full employment output or its natural level), and φ = coefficient of the real GNP gap.

We substitute q_t in eq. (2) with u_t and the equation becomes as follows,[14]

$$\pi_t = \pi_t^e + \psi(u_{t-1} - u_t^N) \quad (3)$$

where, u = the unemployment rate and u^N = the natural level of unemployment.

Then, solving the new equation for u_t^N, we get,

$$u_t^N = \frac{1}{\psi}(\pi_t^e - \pi_t) + u_{t-1} \quad (4)$$

In addition, by taking into consideration the equation of exchange and generating afterwards the rate of growth of its variables, we have

$$MV = PQ \quad (5)$$

where, M = stock of money, V = velocity of money, P = price level, and Q = real output.

By generating the rate of growth and solving it for the inflation rate, we receive,

$$\pi_t = m_t + v_t - q_t \quad (6)$$

Then, we substitute π_t^e and π_t in eq. (4) from our new functions of inflation rates derived from the equation of exchange, eq. (6). Now, eq. (4) through (6) becomes,

$$u_t^N = \frac{1}{\psi}[(m_t^e - m_t) - (q_t^e - q_t) - (v_t^e - v_t)] + u_{t-1} \quad (7)$$

The optimal (natural level of) unemployment, which minimizes social risk, depends on two unanticipated policy variables (money growth and real GNP growth), on growth of velocity (a measurement of risk in our economy, for the current work), and on lag unemployment. Equation (7) reveals that if we have a perfect forecast of money growth, real GNP growth, and risk, the potential unemployment would be equal to the last period's unemployment (perfect forecast is possible only for an efficient market of an ideal economy).

In the EMU of the EU the monetary policy is expected to be less effective because it is pursued from the European Central Bank and not from the Central Banks of the country-members. We expect, then, the fiscal policy to play a

greater role in public policies than the monetary for the individual countries. For this reason, we introduce the government budget and the real output of the countries through an IS relation[15] to test fiscal policy effect, as follows.

$$Q_t = C(Q_t - T_t) + I(Q_t, r_t) + G \tag{8}$$

where, C = consumption, T = taxes, I = investment, r = real rate of interest, and G = government spending.

Rewriting eq. (8) in the rate of growth form of its variables, we get,

$$q_t = C(q_t - T_t) + I(q_t, r_t) + G_t \tag{9}$$

where, X = the rate of growth of the variable X.

A general function of the unemployment rate based on eq. (7) can be given with the following specification

$$u_t = f(q_t, m_t, h_{r,t}, u_{t-1}) \tag{10}$$
$$f_q < 0, f_m < 0, f_h < 0, f_u > 0$$

Combining eqs. (10) and (9), we receive the final equation of the model.

$$u_t = f(q_t, T_t, G_t, m_t, h_{r,t}, u_{t-1}) \tag{11}$$
$$f_q < 0, f_T > 0, f_G < 0, f_m < 0, f_h < 0, f_u > 0$$

In the above function, we see that unemployment depends on growth (industrial production index), policy variables (T_t, G_t, and m_t), and the real interest rate risk ($h_{r,t}$) as specified in eq. (12) below. The signs of the expected effects are presented bellow the equation. The objective, here, will be to test the direction and size of these effects on unemployment and to reach some statistical inferences and make recommendations towards the EU country-members for resolving this chronic and colossal problem in their societies.

3. Real Interest Rate Risk and Unemployment: The Empirical Model

Here, we want to see the effect of risk on employment in EU by using as a measure of risk the volatility of the real interest rate. The interest rates that are used are the T-bill rate, the government bond rate, a lending rate of interest, and Moody's Aaa and Baa corporate bond rates (for the U.S.A). The time

series monthly data (from 1959.01 to 2002.12) are coming from International Financial Statistics (IMF), various issues.

In order to measure the real interest rate risk, we use Bollerslev's (1986) model, which is an extension of Engle's (1982) original work by developing a technique that allows the conditional heteroskedastic variance to be an ARMA process. This process is the Generalized ARCH (p, q), called the GARCH (p, q), which is the following:[16]

$$h_t = E_{t-1}\varepsilon_t^2 = \alpha_0 + \sum_{i=1}^{q} a_i \varepsilon_{r,t-i}^2 + \sum_{i=1}^{p} \beta_i \sigma_{r,t-i}^2 \qquad (12)$$

where, $\varepsilon_{r,t}$ = the disturbances or estimated residuals and $\sigma^2_{r,t}$ = the variance of $\{e_t\}$.

Equation (12), mostly a GARCH (2, 2) process, here, provides a proxy for real interest rate risk (h_{rt}). The results of this equation, by country and instrument, appear in Table 1 below. The next task is to estimate the effect of these interest rate risks, together with other macro-variables, on the unemployment rates. An OLS regression of unemployment rate based on eq. (11), the theoretical model of the optimal unemployment rate, can be written in a linear form with the following specification

$$u_t = \gamma_0 + \gamma_1 LRIP_t + \gamma_2 LT_t + \gamma_3 LG_t + \gamma_4 LM_t^s + \sum_{i=1}^{q} \alpha_i \varepsilon_{r,t-i}^2 + \sum_{i=1}^{p} \beta_i \sigma_{r,t-i}^2 +$$

$$\sum_{i=1}^{n} \delta_i u_{t-i} + \varepsilon_t \qquad (13)$$

where, u_t = the unemployment rate, $LRIP_t$ = the logarithm of the real industrial production, LT_t = the logarithm of taxes, LG_t = the logarithm of government spending, LM_t^s = the logarithm of the money supply, $\varepsilon_{r,t}^2$ = the estimated residuals (RESID) of the real interest rate, $\sigma_{r,t}^2$ = the variance (GARCH) of the real interest rate risk, as estimated in eq. (12), and ε_t = the error term. The lagged unemployment rate will also be useful to correct the serial correlation of the error term. Countries with advanced free market conditions (with large private sector) are expected to have less effective fiscal policy and the opposite must hold for more "socialist" countries.

All these data are also from IMF, except those of the U.S., which are from the site, www.economagic.com and the results of eq. (13) are presented in Table 2. Each country is unique and different from the others (as it is revealed by the statistics), which show the dissimilarities and heterogeneity of the European Union. We were expecting real industrial production and money supply to have negative effects on unemployment rates and risk to have a negative effect, too. Taxes were anticipated to have a positive effect on unemployment and government spending a negative one, due to job creation. The results for the U.S. are compatible with other research in the past.[17]

Austria's results show that industrial production, taxes, government spending, and money supply have no significant effect on unemployment; risk decreases unemployment. The country and many other EU ones may not be completely free-market economies or these bad results could come from unreliable data. Belgium's unemployment is reduced by industrial production, spending, and money supply, but taxes and risk have no significant effect on it. In Denmark, money supply and risk affect positively unemployment. Finland shows that increases in industrial production and spending increase unemployment, taxes reduce unemployment, but risk and money supply have no significant effect on unemployment. In France, all variables are insignificant because this economy is less market oriented and the data are very limited, especially after 1999. Germany also gives insignificant coefficients or wrong signs (i.e., for LG), the residuals of real interest rates affect negatively unemployment.

Also, the unemployment rate in Greece is affected by industrial production, taxes, government spending, and money supply; risk has no significant effect.[18] Ireland's results show that industrial production affects employment. Italy shows that industrial production has positive effect, money supply has the expected effect, and taxes, spending or risk have no effect on employment. The Netherlands' unemployment is sensitive to money supply and it is declining as risk is growing; industrial production, taxes, and government spending have insignificant effects. Portugal's unemployment is affected by industrial production and risk; the other three independent variables have no effect on unemployment. Spain's industrial production negatively affects unemployment, but taxes, money supply, and risk have no effect; government spending has the wrong sign. In Sweden, only industrial production affects unemployment; the other variables have no effect on unemployment. In the U.K., industrial production, spending, and money supply affect negatively unemployment, taxes give wrong sign, and risk has a small positive effect.[19] Lastly, in the U.S., signs

of industrial production and money supply are correct and coefficients are significant for all variables, but the signs for taxes and spending are not the expected ones; the risk, here, is decreasing unemployment. This economy is different than the EU ones because of its complete free-market oriented structure. In some EU countries, the unemployment seems as an exogenous to the economy (political) variable. This is an indication that these economies are not operating under the free-market rules (economic fundamentals). Employment depends on public enterprises and on governments to create its demand in the European continent.

4. Some Socio-Political Considerations in European Union

Lately, manufacturing employment has steadily been giving way to the rapidly rising number of service industry jobs. It is obvious that EU cannot decrease wages to attract business, but can improve skills and education levels of its workers. The personal computer and the rise of computer numerical control led to productivity[20] increases and reduction in employment. Averages for the EU monthly Industrial Production Indexes show that manufacturing output growths have averaged just over 3% p.a. since 1959.01. Given that employment has not changed (rather has declined) dramatically, it might be productivity and the amount of automated machinery used to produce the growing number of manufactured goods that have led to increases in manufacturing output growth and in unemployment rates. Then, increase in productivity, high labor cost, disincentives, and lost of manufacturing have limited the demand for more workers. Employers have discovered that they could return production to a pre-recession level without adding workers to the payrolls, but by investing more in high technology (of course, very soon they will discover that this decision was also very costly due to fast depreciation, obsolescence, and the high speed with which the new technology appears).

In addition, jobs were lost not only from manufacturing,[21] but from the farm and service sectors. Agricultural products are coming from other EU countries (or outside EU), which are having lower cost of capital, land or labor to the ones with high cost and higher prices. The EMU has created price equalization in goods and services, but disequalization in wages and incomes still exist, which affect demand and employment. Also, the equity (stock) markets have contributed to unemployment. The "irrational exuberance" of 1990s in equity markets, where the markets peaked at extraordinarily (irrational) high levels[22] and created temporary jobs, artificial wealth, and false hopes has affected negatively current employment and income. The last four (middle

1999-middle 2003) years of straight losses in financial markets are also responsible for part of our today problem. The high energy prices[23] (oil shocks, wars, uncertainty, cold winters, hot summers, and so many natural disasters lately) have limited the amount of spending consumers could dedicate to non-energy-related products and have increased businesses' cost. The September 11 (2001) terrorist attacks have increased risk in our societies[24] and have caused a sharp decline in travel, tourism, hotel, and airline industries. While the world was struggled to absorb these external to the business shocks, business scandals, corruptions, bankruptcies, etc., broader concerns about corporate governance (free market economy) and the role of governments (regulations and protection of their citizens) have been generated. Finally, the wars in Yugoslavia, Afghanistan, Iraq, and the Middle East continue to cloud the economic picture and unfortunately to keep unemployment at high levels and risk and uncertainty[25] at even higher ones.

It seems that there is no miracle cure for the EU's joblessness, which is destroying its social welfare and has made unemployment "preferable" and "prevalent", especially for young people, to many sorts of work that are taken by illegal immigrants or by business that move to Eastern European countries, where the labor cost is very low. Already, the EU's big cities are scarred by ghettoes of the unemployed, the uneducated, the disaffected, the drug-addicted, the refugees from all over the world, the smugglers, the slave-traders, the prostitutes, the underclass-in-waiting, and the uncontrolled crime.[26] Are these the first benefits of the integration, the free mobility of every "factor", and abandonment of the borders control? What is it following next? Unemployment must be one of the most closely watched measures of economic health in EU and every country-member. Strong opinions exist regarding both its desirability and its inevitability, with high unemployment cursed for the misery it inflicts on the unemployed and the tremendous social cost on the society, but some feared low unemployment as an omen of an overheated economy, which is preferable. European societies and economies need to go where they were in 1960s; the same structure, culture, values, and self-sufficiency. There is no other solution in the horizon and the rest of the world is expected to learn, to be illuminated, and to be guided from this "old continent", too.

It is well known that Europeans were taking for granted their high quality of life in their homogeneous societies before the integration that many others might envy and they persuaded the windfall European politicians to say "yes", without the concession of their citizens, to this unapproved experiment, the de-

segregation of so many different cultures, customs, dogmas, languages, economies, markets, societies, histories, and people together to make this impersonal and completely lost men, the value neutral "European citizen". The question is now; are Europeans better-off with this lower quality of life, but with better nominal economic figures and statistics? Is this current unemployment, inequality in income distribution and wealth, and chaos in their countries what they were expected and dreaming when politicians were trying so hard (and they quarrel who would get the credit) for joining the union?

Before the integration, Europeans were working mostly in secure jobs provided by the governments or government-owned enterprises.[27] The uncontrolled privatization programs across the whole Union have affected employment because these private businesses now must care for their own objectives (profit, wealth, cost, power, etc.)[28] and not for the social welfare of the countries. These were well known to everyone and to attract businesses you need to give incentives or to help the domestic ones to grow and compete or preserve them to protect your citizens. Many of these EU countries are living beyond their means (and soon citizens are moving towards the same direction).[29] Citizens' sources of income, except labor, are from social benefits, from family allowances, from unemployment assistance, from sickness pay, from old age pensions, and EU subsidies.[30] The proceeds of the governments are from taxation and tax rates are too high and taxes are too many; with the declines in the stock markets the government revenues have fallen, so tax rates have to rise even higher for governments to pay for their programs. Professionals try to escape from this vicious circle through the black economy. This corruption cannot go on for ever. A new Hercules is needed (because his personal cost would be enormous) not only for Greece this time, but for the entire Europe and why not for the entire world!

Then, the single escape route of governments is to borrow because they cannot print money now, due to the EMU, where only the ECB can control the money supply. This practice is producing a second vicious circle of tax revenue being used to service the public debt instead of making investments (schools, hospitals, roads, etc.) and improving employment. One of the criteria for a country to enter the EMU at the end of 1997 was that country's gross public debt should not exceed 60% of its GDP. Only Finland, France, and Luxembourg satisfied this goal of the Maastricht treaty at that time. Some countries' debt was over 100% of their GDP[31] and with annual interest payments on their debt more than 10% of their GDP. To escape through excessive borrowing is a mere illusion for individuals, businesses, and nations.

Over time these debts that crowd out investment and consumption, are going to have drastic effects on cost of capital. Countries interest rates will have to rise and then, infrastructure will deteriorate, education will be under-funded, health care will be private and a good available to very rich people, and social security and public pensions could become smaller or non-existent. All these are increasing the uncertainty in the future, the risk of these economies, the anguish, the struggle, and the unemployment, so the quality of life of these previous sovereign Europeans will gradually decline. Was that to be Europe's fate? Where are the individuals in these decision-making processes? Are these procedures democratic? Democracy is a system that requires a moral, ethical, and just environment to survive and a spiritual, intellectual, and divine habitat to grow.[32]

Consequently, the real escape from these European, covered at present, crises will be country-members, concentrating on their domestic social and ultimate objectives, reducing risks, improving employment, increasing net social welfare, reforming education (incorporating back their indigenous values), decentralizing and dis-urbanizing their societies, and refining true quality of life. Societies in balance, happy, and hopeful are going to have full employment, make better incomes and revenues, have bigger (optimal) investments in human and physical capital, and fulfill their objectives in life. Only then, the current vicious circle will be transformed to a virtuous circle and will help individuals in Europe to become persons (true Europeans with a name denoted by the thousands of years old history of some that they have the obligation to preserve and perpetuate). Can we destroy these strong foundations today or replace them with a new structure (the new European Constitution) erected on sand and with all these EU divisions since the Iraqi war?

Besides, Europe will face dramatic demographic changes over the next years. The EU will be entering uncharted territory. In the twenty-first century, the population is expected to grow more slowly than ever before over an extended period.[33] The population will also age rapidly, with the share of the population over 65 climbing to a succession of new record highs. Europe will become a nation of immigrants from Eastern Europe (at least, they are Europeans), Asia mostly, and Africa. Of course, the accession of the ten new country-members from May 1, 2004 will generate new problems and will cause new divisions in this heterogeneous union. Over the past decade, the wave of new immigrants (mainly illegal) has become unbearable for some countries. This inflow is projected to persist throughout the coming decades, with new immigrants and the children of those immigrants contributing well over half of the

increase in the European population. And because the source of this inflow has shifted from among European nations (more or less with the same culture) to Asian and African countries, this new wave will change, not only the employment statistics, but also the voice, the face, the faith, the culture, the languages, and the history of Europe forever.[34] Given the European traditions, the security of the country, and ethical concerns, immigration policy must be determined by considerations beyond the purely economic prospect or political expediency. Europe has become a continent of a recent mosaic of illegal immigrants. This situation is a cause for serious concern and the responsibility for choosing the appropriate policy actions that will help turn away this potential ruinous problem (like Kosovo) into a small one lies with our politicians and of course, their voters are jointly responsible. When a citizen is voting, he must consider seriously the effect of his vote on the future of his country. We must be accountable of what we are doing during our lives and responsible towards future generations and human history, in general.

At the end, these unexpected demographic shifts are likely to trigger some major adjustments within the European economy (labor market) and society (civilization). The birth rate of these immigrants is very high and one particularly challenging issue is how two parents will supply the consumption needs of a growing number of dependents without a decline in European living standards or an increase in crime. Human capital has proved key to achieving productivity gains, and, on the average except Eastern Europeans, recent immigrants have relatively little schooling compared with European nations. Their arrival will also reduce average levels of educational attainment. At the end, the aggregate European welfare, the labor quality, productivity growth, and a seven thousand years old culture will suffer. Are European politicians interested for Europe or only for their personal interest? So far their policies towards their own citizens and countries are a little ambiguous.

5. Epilogue

The empirical results show (in some cases perhaps due to data limitations) that this persistent European high unemployment does not depend only on growth, on fiscal policy, on monetary policy or on risk, but it is structural, seasonal, cultural, socio-political, behavioral, encouraged by family factors, due to changes of the economies from agricultural (almost self-sufficient) and manufacturing or small business to services (vulnerable and dependent ones), caused by illegal work or underground economies, etc. Then, there is no specific economic model that can determine unemployment rate in all

these EU country-members. Each one of these states is unique and they should not be unified because common public policy cannot apply to them. It would be better if these countries were independent and have only some interdependence and cooperation among themselves, depending on the similarities and the degree of homogeneity that they have. Now, any common policy, rules, regulations, currency, or anything else does not seem to work and the cost of all these efforts exceeds their benefits. The conclusion is obvious; this union is just a monetary and political (without common foreign and defense policy) union with a very uncertain future. We saw its serious division during the Iraqi war in spring of 2003 and during the discussion of the draft of the European Constitution.

In EU the interest rate risk (volatility) does not affect so much unemployment as it happens in the U.S.A. Interest rate risk is affected positively employment only in Austria, Netherlands, and the United States; the rest of the countries can borrow to smooth their consumption or their consumption follows the business cycle. Of course, more research is needed to find out the causes of this high and persistent European unemployment, which has started since 1979. Growth and the right public policies are always necessary for any economy. Thomas Sargent has said that "the Europeans pay for more unemployment, and they get it."[35] But, this is not true because European countries had more generous welfare states in the 1960s and 1970s[36] and at that time their unemployment was lower than that in the United States. Then, we cannot blame European Institutions for the current high unemployment because the same system (but not an integrated European Union yet) had delivered low unemployment for so long. An explanation can be the tight monetary policy, the fiscal consolidation with its huge taxes, and the tremendous illegal migration (with low wages) to satisfy the Maastricht criteria for the EMU, which have created a reduction in aggregate demand and consequently, high unemployment for the European citizens, but at the same time, Europe has become a paradise for all forms of crimes (large underground economy). Also, Europe has a very high cost of production and manufacturing has gone to developing countries. EU needs to find ways to diversify its economy and attract foreign (FDI) or support domestic businesses (decentralization and support of small businesses is necessary). Antitrust laws must be activated if it wants to reduce unemployment and protect domestic firms from multinationals (monopolies).

Also, since 1970s, the economic environment, the political, the cultural, the social one have become more turbulent and unpredictable (reduction of a

self-sufficient agricultural sector and increase of the service one, which is very vulnerable to business cycles and uncertain). The oil crises in 1973-74, again in 1979-80, and now with the Iraqi crisis (war) and the recent strikes in Venezuela, the financial market liberalization in 1980s, also the product market deregulation, the huge privatizations, the enormous mergers (reduction in labor force), wars in the Balkans, the Middle East, and the Gulf, terrorism, and Europeans' participation to all of them as NATO members, pervasive technological changes, and the acceleration of economic integration (ten new members, too) have increased the cost tremendously, especially for the poorer countries of the south. Economists and politicians, of course, look for the long-term efficiency in Europe and they do not understand that the most important policies for a country are the full employment of its citizens, the homogeneity of the culture and population, the sovereignty of the country, the freedom, safety, and traditions of each one of these civilizations (independent nations) and nothing else.

Furthermore, the European workers from now on will have many challenges, like earnings instability, greater risk of having a job today and losing it tomorrow, tremendous risk of losses of human capital in turbulent economic times, which was unknown to Europeans and they cannot deal with these circumstances. With all this enormous unemployment in EU and especially, with young people being unemployed, their human capital is deteriorating further and the average duration of unemployment in EU has increased considerably lately. Ultimately, the interest and the analysis of a researcher must be from the humans' point of view and not from the businesses, institutions, organizations, unions or anybody else's point of view. Our objective as social scientists (economists) is the net social welfare (the well-being) of every single citizen who is the superior creature of this cosmos with dual needs (spiritual and physical ones). All the rest are of secondary priority. Education, knowledge, and true wisdom are tools that an informed and responsible citizen needs and we must provide these social (public) goods to improve not only employment, but all the current social problems. Transparency and disclosure of data and information are important for any advanced societies[37] and the same holds true for the EU.

Lastly, technological advances, free trade, integration, liberalization, privatization, urbanization, and common currency might lead to productivity gains, but to employment losses and risk gains at the same time. Strong growth (or high speed) of the above processes has revealed to us the double-edged sword of trading employment growth, social welfare, and security for productivity

gains, uncertainty, and globalization. Today, some "modernists" (neo-liberals) believe that productivity gains, efficiency, and specialization mean that it is possible to produce more with less and satisfy unlimited wants. These productivity gains, over-consumption, and depletion of resources have been critical in keeping production at a high level, cost at a high level, waste at a high level, prices at a high level, nominal wealth at a high level, destruction of the environment at a high level, differences among people at a high level, conflicts at a high level, but at the same time in generating relative higher loss of employment, higher loss of peace, higher loss of values, and higher loss of the true objective in life.

TABLE 1

GARCH Estimates for Real Rates of Interest [eq. (12)]

	r_{S1}^{B}											
a_0	7.808 (4.861)	29.671 (5.422)	.724 (.773)	2.372 (6.443)	.071 (.670)	1.038 (.654)	2.113 (1.705)	102.632 (122.062)	115.155 (124.795)	.870 (1.340)	1.492 (1.108)	1.052 (.763)
e_{t-1}^{2}	.078 (.038)	.111 (.064)	.053 (.023)	.090 (.145)	-.041 (.016)	.095 (.023)	.083** (.027)	-.013** (.004)	-.014*** (.001)	.146 (.133)	.133** (.058)	.136** (.053)
$e_t-_2^2$	.110** (.036)	.127** (.064)	-	-	-	-	.108*** (.020)	-	-	-	-	-
$\sigma t\text{-}1^2$	-.196* (.099)	-.490*** (.019)	.927*** (.036)	.872*** (.210)	1.034*** (.003)	.896*** (.027)	-.077* (.040)	.0570 (.514)	.574 (.465)	.821*** (.159)	.809*** (.093)	.826*** (.074)
σ_{t-2}^{2}	.768*** (.091)	.494*** (.037)	-	-	-	-	.855*** (.032)	-	-	-	-	-
SER	5.82	6.31	5.90	8.42	5.71	8.27	9.18	13.01 13.71	13.71	5.49	5.24	5.46
Log L(.)	1201.11	1151.04	1659.13	735.66	300.90	1273.14	1510.27	2087.60	1925.24	587.61	1561.15	1589.83
N.	384	358	523	209	386	368	427	522	475	193	515	522

Table 1 (continued)

Variables													
a_0	4.491 (2.425)	10.148 (3.976)	40.312 (81.328)	38.280 (26.645)	60.016 (61.846)	1648.738 (1768.732)	.189 (1.604)	-.019 (.241)	.192 (.704)	.445 (2.208)	7.789** (2.582)	14.684* (8.003)	50.999*** (18.187)
e_{t-1}^2	.293 (.084)	.216 (.080)	.258 (.338)	-.076 (.044)	-.073 (.049)	-.004 (.00002)	.125*** (.044)	.117** (.049)	.102** (.032)	.201 (.190)	.260** (.087)	-.029 (.021)	.357** (.131)
$et-2^2$	-	-	-	-	-	-	-	-	-	-	-.213** (.075)	-	-
s_{t-1}^2	.507*** (.166)	.511*** (.156)	.258 (1.141)	.914*** (.100)	.829*** (.231)	.591 (.439)	.880*** (.042)	.887*** (.045)	.897*** (.034)	.787*** (.167)	.625*** (.118)	.697*** (.175)	-.133 (.245)
s_{t-2}^2	-	-	-	-	-	-	-	-	-	-	.116 (.117)	-	-
SER	4.60	5.98	9.13	15.80	15.78	50.55	15.50	6.21	7.19	8.82	6.42	6.72	8.06
Log L(.)	941.92	1664.94	809.92	855.85	928.01	2483.58	1660.15	964.17	1750.23	796.30	1162.37	1369.53	1099.19
N	326	523	224	206	223	462	419	306	419	228	361	413	316

Table 1 (continued)

Variables															
α_0	.625 (.547)	-.395 (.265)	2.924 (2.135)	.257 (.299)	.322 (.049)	.403 (.521)	31.201** (5.690)	66.852 (4910456)	44.839*** (12.072)	39.602*** (3.538)	41.016*** (3.376)	11.090 (9.972)	.611 (.505)	.536 (.476)	.857 (.719)
ε_{t-1}^2	.034 (.022)	.035 (.008)	.067 (.027)	.170 (.049)	.122 (.049)	.185 (.086)	.027** (.005)	.00004 (.178)	.503*** (.108)	.405*** (.036)	.391*** (.035)	.172*** (.065)	(.108)** (.051)	.107** (.046)	.113** (.055)
e_{t-2}^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
σ_{t-1}^2	.945*** (.027)	.962*** (.008)	.908*** (.021)	.842*** (.039)	.875*** (.044)	.817*** (.077)	.875*** (.022)	.476 (384.756)	.470*** (.045)	.174*** (.042)	.146*** (.036)	.676*** (.182)	.861*** (.067)	.873*** (.054)	.861*** (.073)
σ_{t-2}^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SER	8.98	19.66	16.49	6.92	7.36	8.20	18.08	11.42	19.459	9.77	9.50	8.52	4.73	5.34	6.13
Log L(.)	712.98	2027.40	1141.25	923.34	981.25	752.26	2149.02	522.67	891.527	1650.99	1855.92	781.40	1522.66	1584.79	1653.15
N	205	483	281	284	294	223	502	136	213	463	522	223	528	528	528

Note: r = the real rate of interest (i-π), TB = Treasury bill (3-month), GB = government bond, LR = lending rate, Aaa and Baa = Moody's corporate bonds, SER = standard error of regression, Log L(.) = log of likelihood function, N = number of observations, * (**) and (***) = significant at the 10, 5, and 1 percent level, standard errors in parentheses, AU = Austria, B = Belgium, D = Denmark, FD = Finland, G = Germany, GR = Greece, IR = Ireland, I = Italy, N = Netherlands, P = Portugal, S = Spain, SD = Sweden, U.K. = United Kingdom, and U.S. = United States.

Source: International Financial Statistics (IMF) and www.economagic.com

TABLE 2

LS Estimation of Unemployment (u_t) [eq. (13)]

Variables	$U\{TB)^{AU}$	$U_{(GB)}{}^{AU}$	$U_{(GB)}{}^{B}$	W	$U(SI)^{B}$	$U_{(TB)}{}^{D}$	$U_{(GB)}{}^{D}$	$U_{(TB)}{}^{FD}$	$U_{(GB)}{}^{FD}$	$U_{(TB)}{}^{F}$	$U_{(GB)}{}^{F}$	
γ_0	2.937 (11.604)	-5.521 (3.872)	27.056*** (5.985)	38.609*** (6.803)	31.236*** (5.530)	-200.725* (117.140)	-96.055 (124.897)	-8.242*** (2.203)	-7.780** (2.256)	2.862 (8.035)	4.890 (6.092)	-.573 (6.976)
LRIPt	.920 (.635)	.779 (.770)	-2.449*** (.353)	-2.412*** (.343)	-2.378*** (.355)	6.101 (5.101)	3.635 (5.138)	.729*** (.235)	.709*** (.236)	-.514 (1.177)	-1.445 (1.211)	-.616 (1.131)
LT_t	.131 (.394)	.165 (.445)	-.077 (.075)	-.102 (.074)	-.075 (.075)	-5.316 (12.265)	-5.380 (14.169)	-.642*** (.184)	-.647*** (.184)	.011 (.036)	-.007 (.035)	.019 (.035)
LG_t	-.020 (.376)	-.374 (.482)	-.466 (.139)	-.495 (.135)	-.466*** (.139)	14.391 14.079)	6.608 (15.808)	.680** (.210)	.681*** (.210)	-.011 (.126)	-.008 (.119)	.037 (.127)
$LM1_t$	-.742 $(1.752)^{++}$	.875 (.971)	-1.006 $(.602)^{++}$	-2.179*** $(.693)^{++}$	-1.398*** $(.556)^{++}$	3.430** $(1.457)^{++}$	4.445** $(1.732)^{++}$	-.192 $(.151)^{++}$	-.181 (.151)	.041 (.675)	.329 (.481)	.455 (.612)
RESIDt	-	-	-	-	-	.062** (.027)	.082** (.033)	-.001 (.002)	-.001 (.001)	.010 (.011)	.020* (.010)	.015 (.011)
$GARCH_t$	-.008** (.004)	-.007** (.003)	.010 (.010)	-.005 (.003)	-.017 (.014)	.019** (.008)	.023 (.014)	.001 (.004)	-.001 (.003)	-.0002 (.003)	.008* (.005)	.004 (.004)
U_{t-1}	1.569*** (.085)	1.583*** (.089)	1.040*** (.074)	.979*** (.072)	1.032*** (.071)	.785*** (.118)	.952*** (.110)	.975*** (.007)	.975*** (.007)	1.334*** (.111)	1.287*** (.109)	1.314*** (.110)
U_{t-2}	-.850*** (.074)	-.869*** (.081)	-.356*** (.069)	-.342*** (.065)	-.386*** (.077)	-	-	-	-	-.413*** (.115)	-.369*** (.109)	-.375*** (.113)
R^2	.912	.916	.935	.938	.935	.910	.902	.995	.995	.920	.925	.923
SER	.368	.377	.199	.194	.198	.444	.463	.350	.350	.217	.210	.214
Log L(.)	24.332	22.727	16.361	18.140	16.611	16.696	18.157	132.377	132.549	13.538	16.272	14.884
D-W	2.390	2.383	2.070	2.057	2.114	1.729	2.203	1.919	1.920	2.074	2.053	2.032
N	68	61	62	62	62	35	35	371	371	82	82	82

Table 2 (continued)

Variables	$U_{(TB)}^{G}$	$U_{(GB)}^{G}$	$U_{(LR)}^{G}$	$U_{(TB)}^{GR}$	$U_{(GB)}^{GR}$	U(TB)	$U_{(GB)}^{IR}$	$U_{(TB)}^{I}$	$U_{(GB)}^{I}$	$U_{(LR)}^{I}$	$U_{(TB)}^{N}$	$U_{(GB)}^{N}$	$U_{(LR)}^{N}$
γ_0	-11.497 (10.221)	-6.352 (9.535)	-6.788 (9.882)	-28.755*** (6.091)	-28.799*** (6.066)	1382.523 (1044.783)	55.394*** (20.616)	-.892 (4.042)	-1.659 (5.137)	-.955 (3.779)	8.288 (6.191)	8.415 (5.922)	7.030 (6.237)
$LRIP_t$	-.016 (2.304)	.366 (2.172)	-.402 (2.234)	2.587*** (.639)	2.591*** (.637)	-3.217* (1.752)	-5.525*** (1.971)	1.746** (.867)	1.915* (1.051)	1.762** (.777)	-1.402 (1.149)	-1.768 (1.090)	-1.373 (1.139)
LT_t	-.028 (.079)	-.054 (.078)	-.037 (.076)	.613*** (.200)	.610** (.203)	.519 (.617)	.364 (.602)	-.117 (.242)	-.104 (.244)	-.115 (.242)	.255 (.280)	.452 (.271)	.283 (.280)
LG_t	1.499*** (.235)	1.425*** (.336)	1.429*** (.232)	-.758*** (.137)	-.761*** (.136)	.234 (.435)	-.125 (.483)	-.065 (.040)	-.070* (.036)	-.065 (.041)	-.001 (.266)	.031 (.251)	.008 (.264)
LMI_t	1.217 $(1.238)^{++}$	.336 (.657)	.858 $(1.224)^{++}$	.771 $(.290)^{++}$	.770 $(.296)^{++}$	-.302 $(.389)^{++}$	-.023 $(.366)^{++}$	-.072** $(.033)^{++}$	-.072** $(.033)^{++}$	-.072** $(.030)^{++}$	-.711** $(.324)^{++}$	-.528* $(.290)^{++}$	-.610* $(.335)^{++}$
$RESID_t$	-.060*** (.014)	-.059*** (.014)	-.063*** (.013)	-.0003 (.002)	-.0004 (.002)	.009 (.012)	.005 (.012)	.007 (.016)	-.006 (.016)	.003 (.016)	.0002 (.006)	.0005 (.005)	-.0005 (.006)
$GARCH_t$	-.001 (.006)	.0007 (.007)	.003 (.003)	.0006 (.0009)	.0007 (.001)	-.335 (.260)	-.012 (.008)	-.0005 (.004)	.001 (.005)	-.0003 (.002)	.0002 (.002)	-.046*** (.017)	.001 (.001)
U_{t-1}	1.166*** (.089)	1.178*** (.091)	1.202*** (.093)	.658*** (.051)	.661*** (.051)	.727*** (.072)	.777*** (.068)	.764*** (.093)	.758*** (.094)	.763*** (.093)	.969*** (.031)	.969*** (.028)	.974*** (.031)
U_{t-2}	-.397*** (.070)	-.412*** (.095)	-.427*** (.089)	-	-	-	-	-.227** (.093)	-.223** (.093)	-.226** (.093)	-	-	-
R^2	.951	.951	.953	.968	.968	.914	.914	.656	.656	.655	.954	.959	.955
SER	.276	.278	.270	.250	.250	.594	.593	.450	.451	.451	.188	.178	.186
Log L(.)	4.347	4.774	2.852	1.021	.967	84.735	84.559	69.941	69.951	70.020	22.202	26.198	22.827
D-W	2.052	2.043	2.211	1.644	1.644	1.700	1.717	2.187	2.205	2.186	1.995	2.200	2.122
N	70	70	70	102	102	99	99	120	120	120	71	71	71

Table 2 (continued)

Varia-		$U_{(GB)}^{P}$	$u_{(LR)}^{P}$	$U_{(TB)}^{S}$											
γ_0	27.327*** (5.333)	43.714*** (9.026)	44.208*** (11.056)	20.146** (9.726)	21.192** (9.571)	19.526* (9.955)	8.436* (4.686)	1847.189 (1689.945)	9.800** (4.741)	15.087*** (4.801)	16.607*** (4.838)	15.362*** (4.809)	4.249*** (.741)	4.296*** (.722)	4.390*** (.720)
$LRIP_t$	-3.855*** (.752)	-4.650*** (.993)	-3.982*** (.910)	-2.515** (1.011)	-2.594*** (.977)	-2.474** (1.026)	-1.949 (1.194)	-4.649** (2.230)	-2.213* (1.188)	-.935*** (.335)	-1.036*** (.337)	-.941*** (.335)	-.492*** (.096)	-.508*** (.094)	-.520*** (.094)
LT_t	-.380 (.484)	-.036 (.545)	-.885 (.586)	-.281 (.308)	-.295 (.307)	-.269 (.312)	-.183 (.151)	-.163 (.261)	-.258* (.152)	-.128** (.059)	-.142** (.060)	-.131** (.059)	-.335** (.134)	-.366*** (.134)	-.374*** (.134)
LG_t	-	-	-	.226** (.093)	.229** (.089)	.223** (.090)	-1.119 (1.278)	1.999 (2.325)	-1.478 (1.198)	-.071* (.037)	-.068* (.037)	-.084** (.039)	.693*** (.155)	.720*** (.153)	.738*** (.152)
$LM1_t$	1.560*** (.565)$^{++}$	.279 (.562)$^{++}$	.446 (.817)$^{++}$	-.650 (.466)	-.701 (.4650)	-.617 (.469)	1.139 (1.414)$^{++}$	4.375 (3.173)$^{++}$	1.440 (1.403)$^{++}$	-.020** (.008)	-.020** (.008)	-.020** (.008)	-.650*** (.109)	-.641*** (.105)	-.659*** (.105)
$RESID_t$	-.002 (.004)	.003 (.004)	.001 (.004)	-.007 (.007)	-.007 (.007)	-.007 (.007)	.0006 (.002)	.010 (.009)	.002 (.002)	.003 (.002)	.003 (.002)	.003 (.002)	-	-	-
$GARCH_t$	.028** (.011)	.021** (.008)	.003 (.002)	.0005 (.002)	.00001 (.003)	.0007 (.002)	.00005 (.0004)	-14.587 (13.305)	-.00006 (.00005)	.0003* (.0002)	.0003* (.0002)	.0005** (.0003)	-.002*** (.0007)	-.002*** (.0006)	-.002*** (.0005)
U_{t-1}	.373*** (.087)	.287*** (.103)	.229*** (.108)	.912*** (.032)	.909*** (.029)	.914*** (.031)	.897*** (.035)	.813*** (.080)	.899*** (.034)	.950*** (.018)	.946*** (.018)	.945*** (.019)	.942*** (.012)	.942*** (.012)	.943*** (.012)

Table 2 (continued)

									$U_{(LR)}^{UK}$			$U_{(LR)}^{UK}$	$U_{(GR)}^{US}$	$U_{(Aaaa)}^{US}$	$u_{(Baa)}^{US}$
R^2	.948	.947	.945	.983	.983	.983	.921	.943	.922	.976	.976	.977	.986	.986	.986
SER	.108	.109	.113	.359	.360	.359	.518	.529	.514	.215	.216	.215	.178	.178	.177
Log L(.)	32.032	31.810	31.038	48.124	48.207	48.123	93.197	35.503	92.267	23.944	23.559	24.198	158.41	160.798	162.15
D-W	1.639	1.414	1.919	2.252	2.244	2.250	1.727	1.639	1.742	2.175	2.165	2.171	1.883	1.901	1.912
N	35	35	35	132	132	132	180	51	128	171	171	171	509	509	509

Note: See, Table 1. Also, u = unemployment rate, LRIP = logarithm of real industrial production, LT = logarithm of taxes, LG = logarithm of government spending, LM1 = logarithm of money supply (M1) and $^{++}$ (M2), RESID = estimated residuals of real interest rate from eq. (11), GARCH = real interest rate risk (σ_r^2) from eq. (11), R = R-squared, and D-W = Durbin-Watson statistic. *Source:* See, Table 1.

Notes

1. Youth unemployment in some Euro-areas is approaching 40% (TV News, November 18, 2003).

2. Lately (January 15, 2004), euro's appreciation (1.2592 $/euro) will increase unemployment there, even more because European exports have been hurt by this elevated exchange rate and together with high imports, unemployment is imported, too. This U.S. dollar slide could push Europe closer to a prolog recession. (See also, *The Wall Street Journal*, May 20, 2003, pp. A1, A4, and C1).

3. See, Barnes and Olivei (2003).

4. Frankel and Romer (1999) have found a correlation between the importance of trade in a country and the country's income level. The direction of causality runs from trade (exports) to income (employment).

5. See, Pollard (2003, p. 20).

6. *International Economic Trends,* July 2003, p. 5.

7. See, *International Economic Trends,* The Federal Reserve Bank of St. Louis, February 2003, p. 3.

8. German unemployment surged to a five-year high of 11%. (See, *The Wall Street Journal*, February 6, 2003, p. Al and A14).

9. See, Costin (1996, p. 202).

10. Strauss and Walster (2003) claim for the U.S. that: "Recent weakness in the manufacturing sector has clearly contributed to cutbacks in employment".

11. See also similar results in Kallianiotis (2003b and 2004) by using only monetary policy variables. Alexiou (2003) has used dummy variables to determine policy effectiveness after Maastricht.

12. See, Strauss and Walster (2003).

13. See, Hall and Taylor (1986, p. 114) and Kallianiotis (2004) for a similar model, but without fiscal policy.

14. See, Atkeson and Ohanian (2001, p. 6).

15. See, Blanchard (2000, p. 138).

16. See, Enders (1995, pp. 146-149).

17. See, Basu, Ghosh, and Kallianiotis (2001, p. 230) and Kallianiotis (2003b and 2004).

18. This is a nice sign for Greece; it shows the braveness of these people, her thousand years old culture, and its dependence on family support (strong family values) during a period of a bad economy (with high unemployment).

19. It is very bad for an economy if employment is demand determined (significant positive effect of risk on unemployment). This shows that workers have no choice, but to become just a statistic of the unemployment figures.

20. Rogoff (2003, p. 62) shows that productivity in the U.S. has increased from 1.8% in 1971 to 2.8% in 2001, but in Western Europe (industrial countries) has declined from 5.4% in 1971 to 1.5% in 2001. Another indication that market oriented theories and models cannot explain the unemployment in Europe.

21. Strauss and Walster (2003) say that "the 2001 recession was unusual in the sense that it was driven by a fall off in producer investment rather than consumer spending".

22. Where were the regulators (SEC, NASDAQ, Stock Exchanges, Fed, Central Banks, and Treasuries) to intervene to those Internet or others without any intrinsic value companies when their stock prices were rising by 425% on a day? As Cassidy (2003, p. 3) says about Priceline.com. Why authorities and regulators allowed this "madness of crowds", this "irrational exuberance", this "loss of mind", this "loss of money", and this "unfair redistribution of wealth"? See also, Lewis (2002).

23. On January 27, 2004, the crude oil was priced $34.62 per barrel from $19 at the end of 2001. See, Bloomberg.com and *National Economic Trends*, Federal Reserve Bank of St. Louis, January 2004, p. 9.

24. See, *9/11: Economic Viewpoints*, Essays by many South-Western Economics Authors, South-Western, Thomson Learning, U.S.A., 2002.

25. We hope that this high uncertainty for the future might increase saving, which is needed to reduce the cost of capital in our societies and wake up individuals from the lethargy of this apparent prosperity of the last 30 years.

26. I apologize for using these shameful words, but these were my personal observations for being in Europe for six months in 2003.

27. Also, a large proportion of the population used to have its own self-sufficient farming business or any other small business and home economics, which has been restrained, due to competition from abroad.

28. Wal-Mart that has bought so many retailers in EU had net sales in 2002 of $217.8 billions. See, Annual Reports, Walmart.com. What firm in EU can compete with this multinational giant?

29. Businesses' and households' bankruptcies are common every day and families lose their homes, their land, and their cars that have been as collateral for bank loans.

30. Many EU country-members are not even in a position to absorb these subsidies for their societies and they lose them after a specific period (inability of absorption).

31. See, *Euromoney*, April 1996, p. 25.

32. See, Xenophon, *Memorabilia*, IV, vi 12, for a definition of democracy.

33. The average population growth in the U.S. is 1.10 % p.a. and in the EU 0.35 % p.a. *(Eurostat*, Yearbook 2003, p. 84). Some people call it evolution, women's liberation, family planning, but it is actually, crime (abortions) and backwardness, and we will pay for it.

34. Rasmus Hjordt, the People's Party spokesman, said that Muslim immigrants have been changing Denmark for the worse, asking for girls to be excused from gym at school and for pork to be taken off schools' menus, for instance, and that immigrants are responsible for 68% of all rapes in Copenhagen (See, *The Economist*, July 6th, 2002, p. 48). Also, Ireland's high court ruled

immigrants may face deportation even if their children were born in the republic (See, *The Wall Street Journal*, January 24, 2003, p. A1). There are also many other cases that are left out, due to space constraints, here.

35. See, Thomas Sargent, "Reversal of Fortunes: Understanding the Evolution of European and U.S. Unemployment", *IMF Survey*, Vol. 31, No. 16, September 2, 2002, pp. 266-267.

36. In those years the governments in Europe were conservatives, today are all socialists. Is this current policy a socialist one?

37. See, Kallianiotis (2003a).

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