GREECE IN THE EUROPEAN UNION: POLICY LESSONS FROM TWO DECADES OF MEMBERSHIP

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ABSTRACT

This paper examines the first two decades of Greece's experience as a member of the European Union (EU). In evaluating the Greek experience within the EU, we derive three fundamental policy lessons that apply both to similar small peripheral countries now entering the EU and to the EU itself in terms of facilitating their integration in a large economic area. First, small peripheral countries that enter the EU must address the structural deficiencies of their economies before entry in order to minimize the impact of increased competition after the removal of trade protection, and follow domestic policies that maintain and promote their comparative advantage within the EU. Second, the Convergence Criteria have proven to be a successful mechanism for countries with a poor historical policy record to achieve macroeconomic stability, as shown by the case of Greece. Third, common EU policies can be very helpful in facilitating structural reforms in small peripheral economies. However, these policies must be continuously evaluated and improved so that their effectiveness is maximized. *JEL: F15, O52, P52*

I. INTRODUCTION

Greece's entry into the European Economic Community (EEC) in 1981 was a milestone in the country's recent history. For Greece, membership in the EEC was viewed as a safeguard of the country's recently restored democratic institutions after the dictatorship of 1967-1974, and an opportunity to participate in a large economic area. But Greece's entry was also a milestone in the Community's history. Eight years after the EEC's first enlargement with the accession of the United Kingdom, Ireland, and Denmark, Greece's entry marked the beginning of the Mediterranean enlargement for the EEC, followed by the entry of Spain and Portugal in 1985. All three new members had experienced a return to democratic regimes in the 1970s and their entry into the EEC was equally based on political as well as economic justifications.

This paper examines the Greek experience in the first two decades of membership in the European Union (EU)[1]. We derive three fundamental lessons that should apply to similar small peripheral countries now entering the EU and to the EU's ability to integrate them politically, socially, and economically.

- First, small peripheral countries that enter the EU must address the structural deficiencies of their economies before entry in order to minimize the impact of increased competition after the removal of trade protection. Also, domestic policies must be consistent with maintaining and promoting the country's comparative advantage within the EU.
- Second, the Convergence Criteria have proven to be a successful mechanism to achieve macroeconomic stability in countries with a poor historical record, as shown in the case of Greece.
- Third, common EU policies can be very helpful in facilitating structural reforms in small peripheral economies, such as Greece. However, these policies must be continuously evaluated and improved so that their effectiveness is maximized.

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[1] The European Economic Community (EEC) changed its name to the European Union with the signing of the Treaty of Maastricht on February 7, 1992.

The process of economic integration between Greece and the EU began in 1961 with the signing of a free trade agreement. By the late 1970s, the EU had become Greece's largest trading partner. However, Greece's economic development lagged that of other member countries. At the time of entry Greece's per capita GDP was 68% of the EU average, higher only than Ireland's. Agriculture constituted a much larger part of the economy relative to other member countries, and despite progress toward industrialization, its industry was still well protected from foreign competition. Even after two decades of sustained high rates of growth, Greece still lagged in terms of infrastructure, technological development, and institutional development.

Greece's comparative advantage lay in "Mediterranean" agricultural products. Prior to entry Greece also enjoyed a comparative advantage in labor-intensive manufacturing products such as textiles. However, it failed to maintain these advantages due to pressure from foreign competition and flawed domestic policies.

Greece entered the EU in a period of deteriorating economic performance. The Greek economy was not the only one adversely affected by the oil crises of 1973 and 1979, but the democratically elected governments that followed the end of the dictatorship in 1974 faced increasing demands for income redistribution and expansion of the welfare state and, consequently, domestic policies failed to address the implications of these crises. This resulted in an era of populist policies that inhibited any efforts to restore macroeconomic stability. Nor were there mechanisms or common policy requirements at the EU level to prevent Greek domestic policies from being driven by short-term voter demands. The role of the state in the economy was greatly expanded and minimal steps were taken in terms of structural reforms.

In the second decade, Greek economic performance improved significantly after a successful macroeconomic stabilization program. Membership in the Euro zone required adherence to the Convergence Criteria for fiscal and monetary policy. This external discipline proved to be a credible anchor for Greek economic policy in the 1990s. The return of macroeconomic stability improved the country's growth. Greece was also a main beneficiary of the EU's decision to revise its regional policy and to allocate increased funds for economic and social cohesion. However, structural reforms during the

1990s had noticeable results mainly in areas where the EU adopted common policies, such as in the case of banking and financial markets.

The paper is organized as follows. In section 2, we will describe the condition of the Greek economy before entry. Section 3, examines the impact of EU entry on agriculture, manufacturing and trade in Greece. In section 4, we examine the macroeconomic policies of the first decade and point to the role of the convergence criteria in stabilizing the economy. Section 5 examines the role of common policies in the areas of labor markets, financial markets, and regional development in fostering progress and reforms. Finally, section 6 presents the conclusions and lessons for future member countries.

II. THE GREEK ECONOMY BEFORE ENTRY INTO THE EU

The state of the Greek economy in the period before entry into the EU was shaped by the presence of a number of country specific and time specific factors. Some of these factors may be common in the experiences of other countries at the time that they join the EU, but others, particularly those pertaining to the institutional structure of the EU itself, have evolved through time.

Country specific factors include a large agricultural sector, a protected and low-tech manufacturing sector that was dominated by small and family-owned enterprises, and a large gap between Greece and its EU partners in per capita income, infrastructure, and institutional development. Time specific factors include a recession in the world economy after the first and second oil shocks, rising budget deficits from the expansionary fiscal policies of the late 1970s, as well as the institutional weakness of the EU. Thus Greece entered the EU without having corrected its existing macroeconomic imbalances and without having addressed the structural weaknesses that would be exacerbated in an environment of increased competition.

Despite two and a half decades of rapid expansion that had transformed Greece from a primarily agricultural economy in the early 1950s into a semi-industrialized economy by the mid-1970s, the structure of the country's economy remained significantly different from those of its EU partners at the time of entry. The principal difference was the larger share of agricultural output and the much larger share of agricultural employment in Greece as compared to the EU average. As shown in Table 1, the share of the agricultural sector in GDP in Greece had declined from 32.2% in 1960 to 25% in 1980. During the same period, the share of manufacturing in GDP expanded from 19.2% to 25.3%. The services sector was slightly larger in 1980 compared to 1960 and totaled almost 50% of GDP. These changes were followed by major changes in the distribution of employment in the economy, as shown in Table 2. In 1960, 53.8% of the labor force was employed in agriculture. That share had declined to 30.8% by 1980 as a result of increased domestic migration to urban centers that resulted in larger shares of employment in industry and services. Nevertheless, the share of employment in the agricultural sector in Greece was considerably higher than the EU average in the late 1970s. At that time, the average share of agricultural employment in the other nine EU member countries was around 8%; in Spain it was around 20%; only in Portugal was agricultural employment close to 30% as it was in Greece (Tsoukalis, 1981).

The Greek manufacturing sector had experienced considerable growth in the two decades before Greece's entry into the EU, but was protected from external competition, and included a large number of small- and medium-size enterprises with a family ownership structure. The expansion of manufacturing was attributable to several factors that contributed to high rates of investment and capital accumulation: a stable macroeconomic environment; an autocratic regime that, combined with an abundant supply of labor willing to migrate from the agricultural sector, kept wages and production costs low; access to financing through the state-owned and heavily regulated banking sector; and an improved infrastructure through increased public investment. In addition, the Greek state provided various incentives to manufacturing firms and foreign investors in the form of tax and customs duties exemptions, investment grants, and preferential treatment in government procurement. Greek manufacturing firms were also relatively less technology intensive and were thus vulnerable to foreign competition after the removal of this protection.

External trade with the other EU countries had risen after the signing of a trade agreement in 1961. Greek exports to the EU were almost 50% of total exports by the end of the 1970s. However, Greek manufacturing firms were benefiting from high protection in the domestic market and the complementary nature of imports. Giannitsis (1985) estimated that the sum of fiscal and financial subsidies to Greek manufacturing in 1975 was about 29% of total net profits in the sector. The Greek government negotiated an adjustment period for trade liberalization that extended until the late 1980s. During the adjustment period, Greece applied duties on imports that were substantially higher than the EEC's Common External Tariff, as well as a variety of other domestic taxes and duties (Tsaveas, 2001). Greece was also allowed to progressively reduce duties on imports from other EEC countries during the period 1981-1986. The composition of Greek imports and exports did not exhibit any changes during the period before entry. The main imported items both in 1976 and in 1980 were fuels, capital goods, and manufactured consumer goods. A similar pattern appears in Greece's exports, where the main categories were industrial and handicraft products, and food and beverages, throughout the late 1970s.

In addition, Greece's macroeconomic performance exhibited a considerable deterioration during the five-year period prior to entry as a result of the impact of the oil shocks. The deteriorating performance of the Greek economy was characterized by lower growth rates, higher inflation and current account deficits, an expansionary fiscal policy that resulted in higher budget deficits, and the beginning of a persistent wage-price cycle. However, in the case of Greece, it is important to further disentangle the forces behind this deterioration. In addition to the adverse supply shock of higher oil prices, Greece experienced a sharp policy regime change during the mid-1970s (Alogoskoufis, 1995). The pre-1974 regime was characterized by commitment mechanisms, such as guarantees of property rights, control of labor union activity, and favorable tax laws, as well as macroeconomic stability that enabled high rates of capital accumulation. The democratically elected governments that followed the end of the dictatorship in 1974 faced the public's demands for income redistribution and the expansion of the welfare state as a reaction to the policies of the previous decades. In the post-1974 period, these commitment mechanisms were gradually allowed to erode. The consequent crowding out of private investment contributed to the deteriorating performance over the following decade.

Table 3 shows the sharp contrast in the performance of the Greek economy between the period 1951-74 and the five-year period before entry into the EU. During the former period, the average annual growth rate of GDP was 6.4%, the average inflation rate was 6% and the average unemployment rate was 4%. For almost the same period, Greece's current account deficit averaged 2.1% of GDP and these deficits were sustained through capital inflows and the existence of controls on outflows. The first oil shock of 1973 had a major adverse effect on the Greek economy. Inflation exhibited a sharp rise to

15.5% in 1973 from an average of 2.2% during the decade to 1971. This was attributed not only to the oil price shock, but also to the depreciation of the drachma, which remained tied to the depreciating US dollar after the collapse of the Bretton Woods system in 1972 (Alogoskoufis, 2000). The current account deficit also increased to 6.2% of GDP in 1973, after averaging less than 3% during the 1960-73 period. The policies of the second half of the 1970s were unsuccessful in correcting the macroeconomic imbalances caused by the first oil shock. As other EU member countries implemented policies to bring inflation under control, Greek was unsuccessful in lowering inflation[2]. By 1980, Greek inflation was 19% compared to an average of 10.8% for the other nine EU member countries.

A major factor in Greece's failure to reduce inflation was the direct control on monetary policy exerted by the government. Until the early 1980s, monetary policy objectives were set by the Currency Committee, which was comprised of five Ministers and the Governor of the Central Bank. As a result, monetary policy gradually became a tool for financing the government's fiscal expansion. A major source of inflation is the recourse to money creation by governments faced with limited borrowing option in order to finance large budget deficits (see for example, Bruno and Fischer, 1990). Drazen and Helpman (1988) have also shown that if a government is faced with large budget deficits, it will have little choice but to increase its use of monetary policy, thus raising expectations of future inflation. Inflationary expectations further accommodated by the adoption of a crawling peg exchange rate regime in Greece while the conduct of monetary policy was impeded by an underdeveloped financial system that limited policy effectiveness.[3]

A further significant development for future inflation rates in Greece was the beginning of a wage-price cycle during the second half of the 1970s. After decades of repression, labor unions gained considerable strength during this period and demanded higher wages in compensation for past losses in income. The government conceded to requests for higher wages, possibly to keep voters happy. As an example, hourly nominal wages in manufacturing increased on average by 24.25% per year during the

[2] One such mechanism was the introduction of the European Monetary System (EMS) in 1978. Giavazzi and Giovannini (1988) have shown that participation in the EMS helped high-inflation countries in the disinflation process. However, Greece became a member of the EMS only in the late 1990s.

[3] As Garganas and Tavlas (2001) point out, the banking system was very inefficient, capital controls tended to be circumvented and thus had limited power, regulations were not applied universally to all lending institutions, and the maintenance of artificially low real interest rates discouraged savings and reduced the efficiency of investment.

1975-80 period, far exceeding the average rate of 11.08% during the 1965-74 period. Moreover, changes in real hourly wages in manufacturing were higher than changes in labor productivity, which resulted in a significant rise in unit labor costs. These wage increases, which were also observed in the public sector, altered workers' expectations for future wage increases and laid the ground for the wage policies of the 1980s.

The fiscal expansion of the late 1970s was a time specific factor, common to the experiences of other EU countries in an effort to address the negative implications of stagflation. For example, in 1980, the general government's borrowing requirement in Italy was 8.6% of GDP, in Spain was 2.5%, in Portugal was 8.5%, in Ireland was 11.6%, while in Greece was 2.6% compared to 3.4% for the EU average. As shown in Table 3, in the case of Greece, the average annual borrowing requirement of the general government for the period 1975-80 was 2.5% of GDP. As a result, by 1980 the debt-to-GDP ratio had risen by four percentage points to 28.6%. The rising deficits reflected increased expenditures for national defense, state social transfers, compensation of public sector employees, and the cost of nationalizing ailing enterprises, while revenue growth was lower mainly due to tax evasion and the elimination of several indirect taxes in preparation for EU entry.

However, the nature of the fiscal expansion of that period set the ground for the continued expansion of the 1980s. In that sense, this expansion can be considered idiosyncratic to the case of Greece. As other EU countries pursued policies to decrease their budget deficits in the 1980s, Greece proceeded with the expansion of the public sector in the economy. The expansion of the public sector during the period before entry into the EU resulted in a number of distortions in the allocation of resources in the economy. Alogoskoufis (2000) points out that the support of labor union demands lowered the return on investment, and the accommodation of the fiscal expansion by monetary policy did not permit the monetary authorities to fight inflation. In addition, the policy of nationalizing ailing enterprises enabled the government to avoid the high political costs of rising unemployment, but had a detrimental effect both on the perception of investors in terms of the guarantees of property rights and on the productive efficiency of the now state-owned enterprises. Finally, the pressures on monetary policy to finance the increased budget deficits meant that the government, through its control of the Currency Committee, was able to divert credit towards nationalized enterprises to cover not their investment needs, but their operating deficits.

Finally, the institutional and policy structure of the EU in the early 1980s was another time specific factor. In this sense, the EU as an institution at the beginning of its Mediterranean enlargement was very different from the EU today as it is about to undergo the largest enlargement in its history. Institutional mechanisms for macroeconomic stability and discipline, such as the EMS and the Convergence Criteria, simply did not exist to act as external constraint mechanisms for domestic policies in the three Mediterranean countries that had a poor historical policy record. Similarly, one can argue that the EU itself benefited in terms of improving the effectiveness of its common policies, such as the agricultural, regional, and social policies, after the experience of the Mediterranean enlargement.

III. The Impact of Entry on Agriculture, Manufacturing, and Trade

The immediate effect on Greece of its accession to the European Community was political and psychological: Greece became part of Europe. Geographically, Greece is both Balkan and Mediterranean. As such Greek socio and political economics and culture bears greater resemblance to the countries seeking entry to the European Union in the twenty-first century than those that entered in the twentieth century.

The successful campaign for accelerated membership in the EEC, achieved in part as a consequence of Europe's collective guilt at it's passive stand during the seven year dictatorship, seemed to have set the seal on the country's uncertain identity. Clogg (1992) points out that during the debate in the British Parliament in 1980 over ratification of Greek membership in the EC, a foreign office minister stated that Greece's entry would be "a fitting repayment by the Europe of today as the cultural and political debt that we all owe to a Greek heritage almost three thousand years old." While Greece certainly hoped for significant economic benefits from membership, it was clear that the driving force behind the application was political and psychological.

III. A THE IMPACT ON AGRICULTURE

The principal economic affect on the Greek agricultural sectors was through the implementation of the EEC's Common Agricultural Policy (CAP). The CAP consists of price supports and structural measures. Price supports are aimed at stabilizing markets, supporting the income of farmers, and protecting the interests of consumers by stabilizing supply. Structural measures are aimed at changing the structure of agricultural production, increasing productivity, and promoting technical progress.

An evaluation of EEC membership leads to the conclusion that Greece was a net beneficiary of EC transfers payments, but that the price structure of agricultural goods resulting from the CAP caused a transfer of wealth from consumers to producers, a deterioration of the balance of trade, and a reallocation of agricultural resources not in accordance with Greece's comparative advantage. However, there are significant differences of opinion as to whether the net effect of the Common Agricultural Policy was positive or negative for Greece.

When Greece joined the European Community its agricultural sector was a far more important component of its economy than in any other EEC country. In Greece agricultural GDP constituted 18% of total GDP and accounted for some 30% of total employment, compared to 11% of GDP and 17% of employment in Ireland, 6.5% of GDP and 12% of employment in Italy, and less than 5% of GDP and less than 10% of employment in other EEC countries (Georgakopoulos and Paschos (1985)).

Greek agriculture is characterized by small and fragmented lots, a relatively dry climate, and a mountainous terrain, but its agricultural production patterns were largely complementary to the other EEC member countries. Greece produced more than it consumed of fresh vegetables, citrus, and other fruits while the remaining EEC countries were less than self sufficient in these products. Greece was less than self sufficient in meat and animal products where the EEC had surpluses. On the other hand, both Greece and the EEC produced surpluses of wheat, rice, and potatoes, and both are less than self sufficient in corn (Georgakopoulos and Paschos (1985)).

Greece implemented the CAP ahead of schedule. The accession agreement provided for a five-year transition period in which Greece should gradually adapt prices of agricultural products to EEC levels. Exceptions were made for peaches and tomatoes, which were allowed a seven-year adjustment period. In actual practise Greek agricultural prices were gradually raised to EEC levels during 1979-80 so that they were, for the most part, equalized in the first year of membership. Prices for remaining agricultural goods were equalized by the end of 1983.

The accession agreement provided for a similar transition for subsidies, with national subsidies giving way to Community subsidies over a five-year period. This included the abolition of national subsidies to reduce the costs of agricultural imports such as animal feed and fertilizers. In practise, subsidies were introduced at the EEC level from the beginning for products for which prices were equalized, although Greek import subsidies were not totally phased out until the end of 1986 (Georgakopoulos and Paschos (1985) and Caraveli-Ioannidis (1987)).

There is little doubt that Greece was a net beneficiary of transfer payments under the European Community agreement, a substantial portion of which are transfers under the European Agricultural Guarantee and Guidance Fund (EAGGF). These transfer funds freed national funds for other purposes and provided much needed foreign exchange to finance part of the deteriorating balance of payments deficit. However, most studies maintain that Greece was a net loser in terms of invisible transfers due to increasing prices and a deteriorating balance of trade.

One objective of the CAP is the stability of agricultural markets: to support farming income levels while providing a reliable supply at stable prices. To accomplish this the CAP price supports kept EEC prices for most agricultural products above world market prices. As a result the average consumer benefits through stable prices and plentiful supplies, but those prices are high. Thus when Greece entered the EEC, agricultural support shifted from direct subsidies to price supports. This meant that agriculture would be supported by consumers rather than by taxpayers. Moreover, since the poor tend to spend a larger proportion of their income on food, the burden of the CAP is regressive: poorer people and poorer countries carry a larger burden of the CAP. Baltas (1997) points out that the proportion of income going to the consumption of food in Greece, Ireland, and Portugal is twice the EU average. Thus when the poorer countries were added to the EEC (Ireland in 1973, Greece in 1981, and Spain and Portugal in 1985) the CAP caused significant transfers of income from consumers to producers, not only within the countries, but also from the newer poorer periphery to the core. The principal beneficiaries of the price supports were big farmers who expanded production in response to guaranteed prices irrespective of market demand.

Moreover, while very effective controls in terms of levies existed for most northern products such as cereals and meat around which the CAP was designed, the border controls for Mediterranean products are much weaker. Tobacco has a GATT tariff but EEC imports are free. The same is true for raisins. For several fruits and vegetables there is no minimum import price but only quality controls. The consequence is that the CAP exposed Greek Agriculture to an uneven pattern of world instability and competition (Sarris (1984)). The balance of trade in agricultural products with the EC, which had generated a surplus for twenty years, changed to a deficit.

Sarris's (1984) analysis of Greek agricultural production from 1978 to 1983 suggests that the CAP pulled Greek production structure away from products in which it has comparative advantages, and generated a growing imbalance of trade. Import levies distorted relative prices and restrictions on agricultural trade with non-EEC countries forced Greece to buy expensive European imports. As a result the share of exports going to the EEC increased from 46% to 54%, but the share of imports coming from the EEC increased from 33% to 74% over the same period. (see Table 4)

In the food and live animals sector the balance of trade deteriorated from a healthy surplus to an increasingly worse deficit. This deterioration is attributed to the barriers placed between Greece and its traditional trading partners. In most years prior to 1981, Greece had a net surplus with the EEC and a net deficit with the rest of the world; after 1981 the situation was reversed with a large and growing deficit with the rest of the EEC and a surplus with the rest of the world. For example, the average share of meat imports coming from the EEC jumped from 19% before membership to 85% after membership. Sarris (1984) attributes this drastic shift in trade to the quantitative restrictions the CAP placed on meat imports from third world countries. In the beverages and tobacco sector the balance of trade also deteriorated after membership due to a continuously decreasing surplus with EEC countries, again largely due to trade restrictions with the third world. However, in oils and fats (including olive oil) the balance of trade improved substantially after membership.

However, measuring the extent of the impact of the CAP is complicated by the fact that Greece implemented many of the terms of the CAP gradually over the two years before the actual entry date and thus many of these comparisons should use 1979 as the entry date rather than 1981. Measurement is further complicated by the second oil crisis, which raised the price of energy and lubricants used in agriculture by some 40% in 1979 and 60% in 1980. This substantially affected the price of agricultural inputs since energy constitutes about 23% of total intermediate consumption in Greek agriculture. Georgakopoulos and Paschos (1985) find that if the price of energy in 1979 and 1980 had increased at the same rate as the GDP deflator in Greece, the average prices of agricultural inputs would have been much lower, and the terms of trade for agriculture would actually have improved upon entry.

Demoussis and Sarris (1988) conclude that Greece's accession to the EC and the application of the CAP does not seem to have affected Greek agriculture significantly. Farm incomes increased modestly and the agricultural trade balance deteriorated, but transfer payments were received to compensate for this, and farm structures and the composition of agricultural production remained essentially unchanged.

Real investment in the agricultural sector had been decreasing steadily since 1975 and by 1981 it had fallen to the level recorded in 1966. However, relative price changes over the same period resulted in an increase in agricultural income levels. Georgakopoulos (1988) argues that real farm incomes have increased, though only slightly, as a result of the CAP. Caraveli-Ioannidis (1987) shows that the rising trend in relative farm income has been influenced more by the rising trend in relative productivity than by the decreasing trend in the terms of trade. In turn, relative productivity is influenced more by the demographics of growth and change than by specific agricultural policies. As people leave agriculture, productivity increases. There is a steadily increasing use of purchased inputs (feed, fertilizers, soil improvement, and energy) and mechanization. Caraveli-Ioannidis (1987) cites an increase in the number of tractors from 24,533 in 1961 to 221,919 in 1980 and a decrease in the cultivated area per tractor from 152 hectares in 1961 to 16 hectares in 1980. In addition, a substantial and increasing proportion of Greek farmers, mainly on small farms and in less-favored areas, are engaged in part-time work off the farm, which raises their total income and reduces farm income disparity although it is not included in income disparity measures. Fousekis and Patzios (2000) confirm that the most important component of agricultural productivity growth in the period 1968 to 1996 is technical change, followed by scale effects as farm sizes increased.

The CAP was restructured in 1992. Under the reforms, the CAP moved away from a system of price supports to a system of farm support through direct payments not specifically linked to quantity produced. This also shifts the part of the burden of farm support from consumers to taxpayers. Baltas (1997) estimates that the benefit of the CAP reform post 1992 in terms of price reductions is highest in Greece followed by Ireland, Portugal, and Spain. However, this also means that Greece bore a correspondingly high cost of maintaining the CAP in the first decade of EEC membership.

Nonetheless, quotas introduced by the restructured CAP had a major impact on Greek tobacco growers. Greece produces just less than half of Europe's total raw tobacco. Overall tobacco production decreased 17% after the quotas were introduced but the reduction for certain varieties in which Greece specialized were more significant. For example the production of flue-cured tobacco declined 47%. On the other hand, Greece benefited from increased milk quotas (Baltas (1997)).

One consequence of the CAP restructuring is that price variability meant that farmers and producers were exposed to price risk. Fousekis and Pantzios (2000) find that the elasticity of expected output price with respect to output price variance is 0.091; Greek farmers are risk averse and if price variance were to increase by 100% they would require a 9.1% increase in the expected price of agricultural products to maintain the same level of production. Thus part of the post 1992 agricultural reality was the development of futures markets. EuroNext (MATIF) attributes its launch of several commodity futures contracts (Rapeseed (Canola) in October 1994, Milling Wheat in March 1998, Corn in October 1999, and Sunflower seeds in 2002) to the changing environment launched by the Agenda 2000 reform package and the 1992 McSharry Reforms of the CAP. This is an indication that the EU can allow free markets to address risk and price stability issues rather than rely on price supports and equalization payments.

III. B THE IMPACT ON MANUFACTURING AND TRADE

Greece's entry into the EU had an adverse impact on Greek manufacturing, principally through the removal of protection. This led to the diversion of trade from traditional patterns and increased foreign competition in the industrial sector. The income policies of the 1980s, the expansion of the state's share in economic activity, and the instability in the macroeconomic environment also contributed to the deterioration of the performance and competitiveness of the Greek industry. Moreover, the deficiencies in the industrial development under a protected environment during the two decades before entry became noticeable after that protection was removed, such as the low use of technology, lack of integration, etc.

The general pattern observed in Greek manufacturing over the last four decades of the twentieth century is one of growth over the 1960s and 1970s followed by a gradual decline over the 1980s and 1990s. The manufacturing sector's share of GDP in 1980, before Greece joined the EU, was 19.5% and subsequently declined to 14.1% by 1998.[4] Table 5 reports the composition of the output of Greek manufacturing through time. To facilitate our analysis, we summarize the information by key groups of industries that belong to similar product categories. The data indicate that food-beverages-tobacco and textiles-clothing-footwear were the dominant industrial groups throughout the period 1970 to 1996. Their share in output reached a high of 46.2% in 1985 followed by a decline down to 38.5% by 1996. However, it is interesting to note that while the food-beverages-tobacco group continued to grow over that period, the textiles-clothing-footwear group was shrinking. A key characteristic of both of these groups is that they are relatively more labor intensive rather than technology intensive. As the data also show, the share of the capital and technology intensive industries of chemicals and machinery-electronics in total manufacturing output has also declined from a high of 26.2% in 1990 to 18.8% in 1996. The machinery-electronics industry has experienced the most notable decline, from 12.8% in 1970 to 6.5% in 1996. The metals industry shows a declining pattern until 1985 and then a state of growth with 9% share in output by 1996. As a result of these changes, the share of all other industries in manufacturing has increased from a low of 22.2% in 1985 to a high of 33.7% in 1996.

Figure 1 presents the pattern of employment, productivity, and labor costs for Greek manufacturing as a whole over the period 1975 to 1998. The numbers shown are indexes over the period with the year 1972 as the base year. We observe that total hours worked increased until 1980 and then declined over

[4] There are differences in the reported share of manufacturing in GDP between the old system of national accounts and the more recent ESA 95 system. A better estimate of the decline in manufacturing is given by examining the share of manufacturing employment shown in Table 2.

the 1980s (with the exception of 1988 and 1989) with the index reaching the initial level of 100 in 1993 and then declining until 1998. The number of establishments and the number of employees in Greek manufacturing exhibit similar patterns. Thus, the number of establishments increased to 9,378 by 1982, but then it started declining and reached 5,813 establishments in 1995. The average annual number of employees in Greek manufacturing increased to 430,000 in 1982, but it declined to about 239,000 by 1996.[5] These trends clearly show the substantially reduced employment in manufacturing after Greece entered the EU.

Figure 1 also shows output per hour worked and output per employee. A general upward trend indicates increases in productivity. However, these productivity increases are not spectacular. They were significant before 1980, but then decreased during the 1980s and improved again in the 1990s. Output per employee shows a decline over the period 1981 to 1984. The ratio of value added to total manufacturing output exhibits a similar pattern. The ratio reached a high of 33% in 1977 then decreased to 27% in 1985 and it was at 35% in 1996. The ratio is consistent with the decrease in the share of manufacturing output of the high-technology (high value added) industries reported above. The most dramatic pattern in Figure 1 is the rise in unit labor costs excluding employers' contributions.[6] Unit labor costs increased at rates of 20% to 33% between 1975 and 1985 with correspondingly significant increases in production costs. Wages per employee over the period 1975 - 1995 increased by 65% in real terms.

To examine the patterns in profitability and capital structure of Greek manufacturing firms, we show in Figure 2 the pattern of the debt to equity ratio (leverage) and return on equity (profitability) over the period 1975 to 2000. The debt to equity ratio from the range of 2 in the late 1970s reached a high of 6.92 in 1985 with a decline thereafter to 1.02 in 2000.[7] The high leverage of Greek manufacturing firms in the 1970s and especially in the 1980s is explained below. It is well known that excessive leverage negatively impacts profitability due to excessive interest expenses. The return to equity rates show moderately

[5] The two dominant sectors of food-beverages-tobacco and textiles-clothing-footwear consistently have the largest number of establishments and employ the largest number of employees.

[6] Unit labor cost including employers' contributions shows a similar pattern.

[7] These debt-to-equity ratios are potentially understated due to off-balance sheet financing permitted by Greek financial accounting standards. For example, lease capitalization is not required.

positive profitability in the late 70s when leverage was relatively low but negative profitability from 1982 to 1986 when leverage was excessively high. As leverage rates declined in the 1990s, profitability improved and return on equity fluctuated around 11%. Investments in Greek manufacturing follow a similar pattern as profitability. Real gross fixed capital formation per manufacturing employee increased until 1981, it declined until 1988 and exhibited an upward trend afterwards. Investments increased over the period 1975 to 1995 by 44% in real terms. Kaskarelis (1993) shows that, over the post-war period, investment in Greek manufacturing comprised about 15% of total investment in the Greek economy despite the subsidized low interest rates for industrial long-term loans.

Overall we can conclude that until the late 1970s, Greek manufacturing grew rapidly so that Greece was considered a semi-industrialized country (Vaitsos and Giannitsis, 1987). After that, Greece entered into a phase of de-industrialization with a gradual loss of competitiveness in its manufacturing. We note that the decline of the manufacturing sector is attributed to a combination of factors: first, idiosyncratic characteristics related to the pattern of growth of Greek industry prior to the 1980s; second, the removal of protection and the trade diversion after entry into the EU; and third, the macroeoconomic policies of the 1980s that contributed to the decline in manufacturing.

There were several idiosyncratic factors related to industrial development in Greece. Greek manufacturing was comprised of a large number of small- and medium-size family-owned firms. Focus on family ownership for the purpose of retaining control did not facilitate consolidation and kept firm size small. The small size did not allow firms to expand and exploit economies of scale and/or scope. For example, Segoura (1998) finds that only the food products and transport equipment industries in Greek manufacturing exhibit internal increasing returns to scale. When all manufacturing sectors act together in increasing inputs then Greek manufacturing exhibits constant returns to scale (external economies are present). Thus, failing to reduce production costs, Greek manufacturing firms lacked in terms of competitiveness when they were exposed to increased competition after entry into the EU.

As a consequence Greek manufacturing firms followed a limited vertical integration strategy. This did not allow them to exploit synergies in production, marketing, distribution, or financing and placed them at a comparative disadvantage to large, vertically integrated European and other multinational firms

(Giannitsis 1985). More importantly, due to the small size of most companies, Greek manufacturing stayed away from innovation due to lack of financing. In particular, there was very limited investment in Research and Development (R&D) prior to 1980. As Vaitsos and Giannitsis (1987) explain, R&D spending was considered a waste of resources given the small size of the domestic firms and the small size of Greece's developing economy. Thus, technology was imported through purchasing and foreign direct investments. This is obviously a reason for the strong presence of foreign firms in Greece's technology intensive industries. What is even more striking is that both the firms and the state failed to understand the need for some limited domestic R&D that is necessary to absorb the imported technologies. Clearly, the lack of R&D activity during the 1960s and 1970s negatively affected the competitiveness of the domestic firms. Catching up in R&D has become impossible for Greece given an increasingly complex and competitive global technological environment. This explains the declining share of the technology intensive industries in the total manufacturing output reported in Table 5. In the early 1980s, Greek manufacturing firms started investing in R&D in a consistent way. However, with firm R&D spending rates of 0.1% to 0.12% of GDP over the 1980s and early 1990s, Greece was at the bottom of the R&D spending list in the EU (Ministry of Development, 1997).

A second main factor for the decline of the manufacturing sector was the removal of protection for Greek industry after entry into the EU. The removal of protection must be examined together with the impact of joining a customs union in terms of trade creation or trade diversion. Overall, there were significant implications for the Greek manufacturing sector from Greece's increased integration to the world economy that took place during the early 1980s. The dismantling of tariff protection, particularly in industries in which Greece had traditionally had a comparative advantage, and the ensuing increase in import pressure as a result of diversion of trade from its traditional trading partners in most of the industrial branches had a negative effect on the competitiveness of Greek manufacturing and contributed to its decline (Giannitsis, 1988).

Trade relations between Greece and the EU had strengthened during the two decades before entry. Table 6 shows the changes in the composition of Greece's exports and imports across time by major product category. In terms of imports, we first notice that before entry, capital goods and manufactures had an equal share in Greece's imports. Together they comprised more than 40% of imports, while the other major import category was fuels and lubricants. After entry, there is a gradual increase in the shares of both capital goods and manufactures in total imports. By 1995, these two categories comprised almost 75% of total imports and this share had further increased above 80% by 1999. This significant increase matches the declining trends in the Greek manufacturing sector in the period after entry. Even though the share of agricultural imports did not increase substantially, there is a slight increase from 11% in 1980 to 14% by 1999. This increase indicates that Greece maintained its reliance on agricultural imports despite the significant support from the CAP and reflects the higher costs of those imports as a result of trade diversion in agricultural trade. On the other hand, Greece's export composition does not exhibit major changes. According to Tsaveas (2002), the structure of Greek exports has shown a remarkable stability in the 1980s and 1990s. Agricultural products have raised their share, while most of merchandise exports are in low-tech manufactures. In terms of manufacturing exports, almost half are in textiles, while metal products account for around 10% and chemicals around 6% throughout the last two decades. A noticeable change has been the decline in the share of cement in manufacturing exports, from 11.1% in 1980 to 5.3% in 1997 (Tsaveas, 2002).

Table 7 shows that by 1980 almost 40% of Greece's imports and 48% of exports were with the other nine member countries of the EU. The share of exports and imports with other EU countries rose substantially after entry so that by the late 1990s, 60% or more of imports and exports were with other EU countries. There is a U-shaped pattern in Greece's trade with other OECD countries, which can be attributed to Greece's increased trade with several Central and Eastern European countries after they became members of the OECD in the mid-1990s. A noticeable change is the decline in Greece's trade with other developing economies after entry in the EU that lasted until the mid-1990s. Trade with this group of countries has risen in recent years due to the increased economic ties between Greece and its neighboring countries in the Balkans, as well as with Turkey.

The changes in the composition and direction of trade described above are directly linked to the removal of trade protection after entry and the issue of trade creation vs. trade diversion from joining a customs union. Before entry there was increased protection and subsidization of the manufacturing sector, and particularly of the traditional industries, that had a negative impact on their modernization and exposure to competition. The gradual removal of protection in the 1980s exposed these industries to increased foreign competition. This factor, together with the wage policies of the early 1980s that we discuss below, contributed to a loss in the comparative advantage of Greece in traditional industrial areas, such as those of food-beverages-tobacco and textiles-clothing-footwear, that are more labor intensive.

The issue of trade creation vs. trade diversion from Greece's entry into the EU has been examined in a number of studies (see Giannitsis, 1988; Hassid and Katsos, 1992; Arghyrou, 2000). Giannitsis (1988) conducted a detailed study of the post-entry implications for Greece's external trade and the implications for the country's manufacturing sector. He concluded that during the period 1981-86 there was both increased trade diversion and trade expansion. Integration with the EU resulted in both a higher share of EU imports in total imports and a higher degree of import pressure, as measured by the ratio of trade to domestic production. Furthermore, the increased import penetration, combined with the idiosyncratic factors of industrial development in Greece led to the disappearance of several important firms in many industrial branches. In a more recent study, Arghyrou (2000) examined the trade effects from EU entry in the case of Greece until 1992-93. His findings show that, in the post-entry period, there was gross trade creation in imports from Greece's EU partners and gross trade diversion in imports from non-EU countries. Also, due to the decline in the competitiveness of the Greek economy after 1981, there was no substantial increase of Greek exports to other EU countries.

The third factor that contributed to the decline in Greece's manufacturing sector was the macroeconomic policies of the first decade after entry. These policies resulted in an unstable macroeconomic environment that discouraged investment, as well as the expansion of the role of the state in the economy that led to the crowding out of the private sector. We will discuss some of these developments in more detail in the following section. However, we must point out that there was a considerable impact on the competitiveness of Greek industry from a dramatic increase in labor costs during the early 1980s as part of the government's income policy. This policy, combined with a rigid labor market, led to rising labor costs for manufacturing firms and eroded their competitiveness.[8] For example,

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[8] Giannitsis (1988) claims that these wage increases did not have a significant effect and that they would not have prevented the trade patterns observed.

between 1979 and 1985 manufacturing workers' wages increased by about 3.5 percentage points faster annually than wages in the rest of the private sector.

In an effort to maintain low unemployment rates, the governments of the late 1970s and early 1980s also engaged in rescue plans for ailing firms that resulted in their nationalization. State ownership increased significantly in textiles, fertilizers, cement and shipbuilding. This policy provided wrong incentives to labor unions that were inclined to see the nationalization of private companies in order to gain the benefits of public-sector employment. These events help explain the decline in productivity in the early 1980s and the steep increases in unit labor costs shown in Figure 1. Manufacturing firms could not pass the increased labor costs to consumers because price controls were in place to battle inflation that intensified after the second oil shock and the large wage increases. The resulting pressure from these events on profits forced firms to rely increasingly on bank financing. This was possible because of the increased state ownership of both manufacturing firms and major banks.[9] Even without state ownership, close links between firms and banks in the form of significant equity holdings and participation in management made it difficult for banks to withdraw their financial support from loss-making firms. All of these factors help explain the patterns of leverage and profitability in Greek manufacturing shown in Figure 2.

During the1980s the Greek state also followed a regional development policy with the aim to industrialize the most backward regions of the country. This policy had only limited success due to lack of infrastructure and support services in the less developed regions of the country. In addition, state support did not last for a long period because of the redirection of the state's focus on modernizing the infrastructure in congested urban areas (Pepelasis-Minoglou, 1999). Since 1991 the state introduced "The New Industrial Strategy" in an effort to restructure Greek manufacturing and improve its competitiveness. The key elements of the strategy are the creation of new built-in competitive advantages and business networks by sectors or geographical areas with the participation of the state. In addition, the state engaged in a privatization drive of state owned companies.

[9] Legislation introduced in 1982 made state assistance to the private sector conditional on equity ownership of the state (Caloghirou, Ioannides, and Lyberaki, 1993).

IV. Macroeconomic Policy

Greece's first decade in the EU coincided with a major deterioration in the country's macroeconomic performance. This deterioration was the result of the adoption of expansionary fiscal policies, financed primarily by domestic borrowing, which resulted in a tripling of the debt-to-GDP ratio by the early 1990s and a divergence of Greece's economic performance from that of its partners. The absence of any EU constraint on the policy choices of the Greek governments in the 1980s was the crucial factor for the Greek economy's deteriorating performance. More specifically, the EU had not developed the institutional mechanisms that would impose discipline on the Greek economic policies. On the contrary, the EU provided assistance to Greece when it needed to finance a large deficit in the current account in the mid-1980s without imposing strict conditions for discipline and reforms followed by monitoring of their progress. We claim that this lack in the EU's institutional structure allowed successive Greek governments to spend and borrow without real constraint in the late 1980s, with detrimental implications for the country's efforts for macroeconomic stabilization. The dismal performance of the Greek economy is in sharp contrast to the impressive progress toward stabilization and growth in the 1990s. We find that the evolution of the EU toward monetary union had a positive spillover effect on Greece by imposing an external constraint on the conduct of macroeconomic policy through the requirement of satisfying the convergence criteria for EMU membership. Therefore, the convergence criteria have proven to be a credible commitment mechanism for macroeconomic policy in countries that have a history of inconsistent policies, such as was the experience in Greece.

IV. A Macroeconomic Policy Without EU Constraints

Greece's entry into the EEC in 1981 coincided with a further deterioration in the country's macroeconomic performance. Having failed to effectively address the problem of rising inflation after the first oil shock, the Conservative governments of the late 1970s were faced with the impact of the second oil shock in 1979. In 1981, which also happened to be an election year, there was a major fiscal expansion.[10] Government spending rose to 35.1% of GDP compared to 29.7% in the previous year. Expenditures for compensation of public sector employees rose to 14.9% of GDP from 13.6% in 1980, while transfers to households and enterprises rose from 14.4% to 15.3%. By contrast, government spending for fixed capital formation was only 3.1% of GDP, which was about the average level of the late 1970s. In the same year, government revenues declined to 26% of GDP from 27% in 1980. As a result, the general government's borrowing requirement rose to 9.1% of GDP from 2.6% in 1980. In addition, the current account deficit increased to 5.3% of GDP from 4.5% in 1980. Finally, the annual inflation rate for 1981 remained at 22.5%, only slightly lower from 26.2% in 1980, and GDP growth was –0.2% compared to 1.9% in the previous year.

Rather than adopting policies to correct the macroeconomic imbalances of the Greek economy in order to restore macroeconomic stability and growth, the newly elected Socialist government further promoted policies for income redistribution and the expansion of the public sector. These policies reflected two aspects of the political and economic system of that period. First, they reflected the political priorities of the newly elected government, which was elected under a promise to the public for a radical change in the socioeconomic system. The expansion of the welfare state in the late 1970s had increased the public's appetite for additional state transfers and for further measures to lower the gap between low- and high-income groups in the society. Second, they reflected the lack of any constraint, internal or external, in the conduct of economic policy. The debt-to-GDP ratio in 1981 was only 34.5%, despite the fiscal expansion that took place during that year. The debt-to-GDP ratio was the highest of the previous 30 years, but still at a relatively low level by world standards. Thus, the Greek government did not face any difficulties borrowing from the domestic and international markets in the early 1980s. This allowed the government to continue pursuing its expansionary policies. Moreover, the central bank lacked independence, a factor that Alesina (1988) and Cukierman, et. al., (1992) find to be inversely related to inflation. Even though the Currency Committee was officially abolished in 1982, the government continued to set the broad outlines of monetary and exchange rate policies during the 1980s. This meant that monetary policy was dominated by the need to finance fiscal expansion.

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[10] The parliamentary election took place in October of 1981, so for the most part of that year the Conservative Party was in office.

The new government faced no external constraints either. Rather than participating in the European Monetary System (EMS), which would have required a credible monetary policy to reduce inflation, Greece continued with a crawling peg exchange rate system that accommodated the expansionary monetary policies. Membership in the EU in the early 1980s did not include any monitoring of national macroeconomic policies from the European Commission. Nor were there any institutional mechanisms for macroeconomic policy coordination among member states not participating in the EMS. Lacking both internal (Greek) and external (EU) constraints, successive Greek governments initiated a vicious cycle of periods of expansionary policies followed by brief attempts to stabilize the economy.

During the next decade, these periodic attempts to stabilize the economy were short-lived and were interrupted by increasingly intense political priorities (winning the next election). In addition, the expansion of the public sector and the implementation of policies that resulted in creating a less favorable environment for investment resulted in a drastic slowdown in the growth performance of the Greek economy. The rise in government spending and the accumulation of large budget deficits led to almost zero growth rates and a tripling of the debt-to-GDP ratio by the early 1990s.[11]

The main element of the macroeconomic policy of the first decade of Greece's membership in the EU was the fiscal expansion, followed by a large increase in public debt. With the exception of brief periods of stabilization efforts, government borrowing requirements increased continuously until the early 1990s. Fiscal expansion was characterized by large increases in government spending and the inability of revenues to keep pace. In the early 1980s, the Greek government increased its spending in an effort to satisfy political priorities: an increase in spending for compensation of public sector employees that was partly due to a 35% increase in the minimum wage across all sectors of the economy in 1982; a significant increase in state transfers to households; an increase in the costs of subsidizing or nationalizing ailing enterprises in order to prevent unemployment from rising; an increase in public debt; and the return of positive real interest rates that resulted in much higher interest payments on this debt by the end of the 1990s. Thus, as shown in Table 8, government spending as a share of GDP rose further

[11] Barro and Lee (1994) have found a significantly negative relationship between government consumption and economic growth in cross-country regressions for growth rates of real per capita GDP.

from 30.3% in 1980 to 43.1% by 1985. Public employee compensation rose from 9.4% of GDP in 1980 to 11.4% in 1985, while social transfers rose from 9.4% to 14.2%.

The growth in government spending that took place between the mid-1970s and the mid-1990s is largely accounted for by the rapid expansion of transfer payments and debt service (Manessiotis and Reischauer, 2001). Social transfers and subsidies from the government to households and enterprises reached almost 17% of GDP by 1989. The higher transfers reflected the changes in the social security system, which permitted several categories of employees to receive benefits from early retirement, and the costs of the introduction of a National Health System that provided free health care. A possible motive for increased transfer payments during the early 1980s can be offered by models of opportunistic political business cycles. Empirical evidence on opportunistic manipulation of economic policy before elections has shown that, to the extent that manipulation occurs, it is through transfer payments that would affect disposable income before elections (Alesina and Roubini, 1992; Alesina et. al., 1992). The costs of employee compensation in the public sector were exacerbated by the expansion of public sector employment and the introduction of an automatic wage indexation mechanism in 1982 that was in effect until 1991. The government also subsidized ailing enterprises and guaranteed loans for various private and public firms and agencies, as well as agricultural cooperatives.

The primary source of government revenues in the 1980s was indirect taxes. As shown in Table 6, the ratio of indirect to direct taxes was more than 2:1 throughout this period. Being a member of the EU, Greece was obliged to introduce a Value-Added Tax (VAT) in the 1980s. This, together with other initiatives by the European Commission in this area, was aimed at the harmonization of indirect taxation across member countries and helped to simplify the Greek tax system. But, it also led to a decrease in the share of government revenues from indirect taxes. Indirect taxes have decreased from 46% of total government revenues in 1975 (check numbers) to 33.5% in 2000.[12] During the 1980s, tax evasion was widespread and only in the early 1990s did the government began a serious effort to minimize the size of

[12] Another reason was the elimination of several indirect taxes before Greece's entry into the EEC and before the completion of the Single Market in 1992.

the problem. Despite substantial progress, the complexities of the tax system have proven to be an obstacle to economic growth.

The fiscal policies of the 1980s were supported by a monetary policy regime that lacked the credibility to reduce inflation. The average inflation rate for the 1981-90 period was 19%, almost three times higher than the EU average. During the first decade of Greece's membership in the EU, monetary policy supported the government's fiscal objectives by providing seignorage revenues to finance the budget deficits. Constrained by the political priorities of the 1980s and operating within an underdeveloped financial system, the monetary authorities frequently overshot their targets for monetary expansion and failed to bring inflation under control. Contributing to this outcome was the fact that the drachma did not participate in the Exchange Rate Mechanism (ERM) of the EMS, which acted as the main disinflation mechanism in other EU countries, and that the central bank lacked independence. The reduction of government revenues from indirect taxes and the widespread evasion of income taxes reduced the government's ability to finance its spending. The government turned to the central bank for financing of its rising borrowing requirement in the early 1980s. Table 9 presents a breakdown of the financing sources of the public sector's borrowing requirement (PSBR). As shown, in the second half of the 1980s, the financing of the PSBR by the central bank was substituted by government securities that were sold to banking institutions and the general public. Throughout this period, more than two thirds of borrowing was domestic; external borrowing played only a minor role.

The political business cycle was manifest by the abrupt termination of a serious stabilization program in the mid-1980s. The fiscal expansion of the early 1980s, combined with the real overvaluation of the drachma due to the high inflation rates, despite the crawling peg exchange rate regime, led to a dramatic rise of Greece's current account deficit in the election year of 1985. From an average of 3-5% of GDP in the past, the deficit rose nearly 9% in that year. The inability to finance this deficit forced the government to implement a stabilization program as part of an agreement with the European Commission in exchange for a guarantee of Greece's additional borrowing from the international markets. Had Greece not received the support of the European Commission, a request to the IMF for short-term financial assistance would most likely have been unavoidable.

The stabilization program was accompanied by a 15% nominal devaluation of the drachma and a two-year freeze in nominal wage increases. The program was successful in reducing Greece's inflation and budget deficits in the following two years. Inflation decreased from 25% in 1985 to 16% in 1987. The government's general borrowing requirement also decreased from 11.6% of GDP in 1985 to 9.6% in 1987. Furthermore, the current account improved considerably and the deficit was reduced to around 2% of GDP by 1987. This stabilization attempt had a negative impact on growth and the unemployment rate did not decline. But, this was considered the first serious attempt to bring the expansionary policies of the early 1980s under control and could have potentially contributed to the improvement of the economy's growth performance had it lasted longer.

The government succumbed to the political priorities of the upcoming election in 1989 and abandoned the efforts to stabilize the economy in 1988. The lack of any constraints in economic policy is again a main reason for Greece's failure to stabilize its economy in the late 1980s. Another explanation is the incentive of incumbent governments to "tie the hands" of a possible successor with different preferences, which will lead to overissuance of government debt relative to what is optimal (Persson and Svensson, 1989; Alesina and Tabellini, 1990). High real rates of return on short-term government securities allowed the government to finance the new increase in its spending. The highly-regulated and underdeveloped domestic financial system did not provide households with alternative investment opportunities and the government was able to raise large amounts to cover its borrowing requirement. Even after the beginning of the process of liberalization of the banking system in 1987, banking institutions were required to allocate around 56% of their deposits for lending to the public sector, including a 38% secondary reserve requirement in Treasury bills. These factors led to a further deterioration of Greece's macroeconomic position by 1990. The political uncertainty that accompanied three elections in a period of ten months and the inability of the country's political system to support coalition governments caused further economic deterioration.

IV.B MACROECONOMIC POLICY WITH EU CONSTRAINTS

The determination of the EU member countries to achieve monetary unification by the end of the 1990s put Greek economic policy at a crossroads. The Maastricht Treaty and the Convergence Criteria that would determine EMU membership imposed an external constraint on macroeconomic policy. However, Greece was also faced in the early 1990s with the additional constraint of servicing its high public debt that had reached almost 110% of GDP. By 1991, interest payments on public sector debt had reached almost 12% of GDP due to the accumulated budget deficits and the rise in real interest rates after the liberalization of the banking system. Even though disentangling the final impact of the two constraints on the conduct of macroeconomic policy in Greece is not easily possible, we claim that the Convergence Criteria had a more significant impact for two reasons. First, the initial stabilization effort based on deficit reduction in the early 1990s had a limited success and was shortly thereafter followed by the re-emergence of the political business cycle. Second, despite a serious and successful program to reduce the budget deficit and public debt, there remain concerns about the speed and scope of public sector reforms in Greece.

When the Maastricht Treaty was signed in 1991, Greece's macroeconomic aggregates were far from the EU average. Greece's inflation rate was 19.8%, while the average of the EU-11 was 4.07% and the average of Spain, Portugal and Ireland was 7.03%. The general government's deficit was 11.5% of GDP, while the average for the EU-11 was 3.64% and for Spain, Portugal and Ireland was 4.26%. During the 1991-93 period, there was another attempt to stabilize the economy with the implementation of the so-called "Medium-term Adjustment Program". This program focused on fiscal adjustment, the reduction of inflation, and the beginning of structural reforms. However, this program was only partly successful. Inflation was reduced somewhat and there was a major improvement in the current account, but restrictive policies led to a slowdown in economic activity in 1992 and a brief recession in 1993 with an adverse effect on unemployment. The thin parliamentary majority of the government during that period forced it to respond to requests for less restrictive policies and government projections for budget deficit reductions were not realized in 1993, another election year. Moreover, the pace of structural reforms in areas such as privatization and public sector restructuring was also relatively slow.

The limited success of the first adjustment program in Greece in the early 1990s can also be attributed to the uncertainty of the process toward EMU during that period. The crisis in the EMS during 1992-93 had raised doubts about the ability and determination of the EU member countries to complete the EMU process and achieve the Convergence Criteria. Thus, the Convergence Criteria did not initially impose a strict constraint on Greek macroeconomic policy.

After the EMS crisis, it became obvious that the EU member countries were determined to continue along the agreed process toward EMU. Therefore, beginning in 1993 with the first Convergence Program for the period 1993-98, the Greek government proceeded with a serious stabilization program. The main goal of the convergence program was the reduction of inflation, budget deficits, and public debt. These are three areas of macroeconomic performance where the Convergence Criteria acted as an anchor for Greek macroeconomic policy. First, in terms of fiscal policy, there was a consistent effort, uninterrupted by election years, to reduce the budget deficit below 3% of GDP by the end of the decade in order for Greece to qualify for EMU. The policies were successful and the deficit was reduced from 13.6% of GDP in 1993 to 0.8% by 2000. This reduction is attributed to a serious effort to raise government revenues, primarily through an increase in revenues from direct income taxes. However, as Manessiotis and Reischauer (2001) point out, there is no concrete evidence that this increase was due to a decline in income tax evasion. Moreover, the government's expenditures were brought under control. There was a reduction in interest payments after a successful restructuring of the government's outstanding debt that increased the debt's average maturity and lower interest rates that followed the reduction of inflation. But, there are still concerns that the government's final expenditures have not been reduced as much as needed. In fact, Arghyrou (2000) claims that the Greek government's convergence programs of the 1990s did not achieve enough fiscal progress because they placed too little emphasis on reducing public consumption. Nevertheless, the rising primary surpluses, which increased from 2.7% of GDP in 1994 to 5.8% in 1999, led to a gradual reduction of the debt-to-GDP ratio from around 110% in 1993 to around 103% in 2000.

Second, the requirements of the Maastricht Treaty and the Convergence Criteria mandated reforms in the monetary policy regime and acted as an external constraint on the conduct of monetary policy that led to a successful reduction of inflation. The Maastricht Treaty required that, beginning in 1994, monetary financing of the general government's borrowing requirements and access by the government to the banking system would be abolished. The Bank of Greece used this opportunity to begin a serious effort for disinflation. The central bank used the exchange rate as a nominal anchor and began to announce specific targets for the exchange rate. This policy was successful in reducing inflation from 11.2% in 1994 to 6.9% in 1997. To satisfy the exchange-rate criterion for EMU, Greece entered the ERM in March of 1998. Moreover, as part of the mandated reforms, the central bank was officially granted independence in 1997, which added credibility to the conduct of monetary policy.

The return to macroeconomic stability led to an improvement in Greece's growth performance. Greece achieved a successful macroeconomic stabilization that was not accompanied by a slowdown in economic activity. The average annual growth rate for the period 1994-2000 was 2.81%, double the rate of 1.42% of the period 1981-1993. From having the lowest growth rate among EU member countries in 1994, Greece had the fourth highest rate in 2002, well above the EU average. But, the rise in incomes resulted in widening current account deficits in the late 1990s. These deficits were financed by increasing capital inflows, particularly during the period of convergence of Greek interest rates to the lowest rates in the EU and while the central bank was following a stable exchange rate policy.

V. The Role of Common Policies in Structural Reform

The Greek economy was characterized by a number of structural deficiencies before entry into the EU that were not adequately addressed during the 1980s. Product, labor and financial markets operated under a heavy regulatory environment. Moreover, the expansion of the public sector had resulted in a crowding out of the private sector and in distortions in the allocation of resources in the economy. These structural deficiencies played a major role in the slowdown of the growth process in Greece during the 1980s (see Vamvakidis and Zanforlin, 2002). The completion of the monetary union in the 1990s implied the loss of sovereign control over stabilization policies and made structural reforms that would improve the flexibility of labor markets necessary. Thus, there was an effort to improve the supply side of the Greek economy in the 1990s, as part of the convergence programs (Arghyrou, 2000). However, structural reforms were facilitated by the implementation of common EU policies, such as in the area of banking and financial markets, or by improving the effectiveness of policies, such as in the case of the revision of EU regional policy in the 1990s.

IV. A LABOR MARKETS

Greece's labor market exhibits a persistent rigidity throughout recent decades that has had major implications for the economy's growth performance and the rise in unemployment rates. The Greek labor market is characterized by a much higher percentage of either self-employed or unpaid workers in a family business compared to other EU countries (Burtless, 2001). In addition, the percentage of employment in the agricultural sector of the economy has also remained much higher than the EU average. The labor market has been heavily regulated and there exist extensive measures to protect employees in both the private and the public sectors of the economy. Even though the Greek economy faced increased competition after entry into the EU, there were no reforms to improve the flexibility of the labor market in the 1980s. Instead, in 1982, the government increased the minimum wage in the economy by 35%, which resulted in a 26% increase in unit labor costs (Christodoulakis, 1999). The wage policies of the 1980s and the expansion of employment in the public sector contributed to a rise in unemployment.

Until 1991, labor relations and wage negotiations were determined by Law 3239 of 1955 that set the framework for collective bargaining. According to the labor law, employers and employees were supposed to negotiate wage increases. If negotiations were unsuccessful, the parties requested government mediation, which could lead to compulsory arbitration if unsuccessful. Governments could thus implement their wage policies by favoring one party over another.[13] Mandatory contributions for social security by employers also resulted in a much higher compensation of low-skilled employees compared to other countries. In the early 1980s, the government's support of low-wage workers raised the costs of hiring low-skilled workers with damaging implications for employers' willingness to employ them. Employers in Greece also face a highly regulated working environment. This included regulations for working hours, paid vacation, procedures for termination of employment and severance pay, and mass layoffs. As a result of the strict environment, employers were unwilling to increase their hiring during periods of expansion in economic activity, particularly in the case of low-skilled workers.

[13] Burtless (2001) claims that this system strengthened the unions' position and resulted in higher wage increases.

Moreover, due to strict regulations and social security contributions, employers prefer family or non-contractual forms of employment, as opposed to contractual employment typically found in other developed economies.

The strict regulation of labor markets has also contributed to a rise in unemployment rates. This could also be attributed to the slowdown in the growth of the Greek economy during the 1980s, but the higher growth rates of the late 1990s have not led to a substantial decrease in unemployment. The average annual unemployment rate rose from 2.07% during the period 1975-80 to 8.03% during the period 1981-93. By the early 1990s, Greece's unemployment rate rose above 10% and has failed to come down considerably ever since. According to Demekas and Kontolemis (1996), a major factor behind the rise in unemployment was the inflexibility of real wage aspirations of unions and state-arbitrators, and the slow adjustment of demand to shocks. The expansion of the state contributed to an increase in the public/private relative wage during the 1980s and depressed private sector employment by raising workers' effective reservation wages.

The reform of the labor market has been progressing slowly given the resistance from labor unions. Labor market reforms are necessary given that Greece's participation in EMU eliminates the use of monetary and exchange rate policies to smooth the business cycle of economic activity. The government implemented a package of reforms in 1998 that aimed at increasing the flexibility of the labor market and reducing labor costs and the level of employment protection. Despite some progress, it is clear that, in the case of labor markets, the absence of a common policy framework at the EU level has allowed Greece to proceed at a slower pace in the absence of specific deadlines within which policies must be implemented.

IV. B FINANCIAL SECTOR REFORM

The Greek financial system operated under a heavy regulatory framework until the mid-1980s. An extensive array of regulations restricted the activities of financial institutions and imposed controls on interest rates. The financial system was bank-dominated, oligopolistic, and was characterized by the dominant presence of state-owned institutions.[14] Credit allocation was based on the priorities of government policy and banking institutions were faced with large obligatory investment ratios. By the mid-1980s, banks were obliged to allocate around 56% of their lending to the public sector. Another 25% was allocated to small businesses and to long-term lending to industry. Thus, the system was very inefficient in terms of credit allocation. The strict regulatory environment had transformed the banking system into a source of funding for the increased government spending. The system also operated under extensive controls on foreign exchange transactions.

This pervasive regulatory framework had resulted in a number of distortions in the system that limited the benefits from the finance-growth nexus (see King and Levine, 1993; Levine et. al., 2000). The obligatory investment ratios had created incentives for arbitrage among different segments of the credit market. In addition, rather than allocating credit for long-term investments, most banking institutions preferred to provide mostly short-term funds for working capital. State-owned banks were used to provide credit to ailing state enterprises and were later pressured to absorb them under an exchange of debt for equity. The restrictions on the provision of financial services did not encourage banking institutions to innovate and offer new products to their customers. Moreover, relying on the state to cover their losses, state banks had no incentives to implement modern risk measurement and management methods. The state-owned banks were also a source of employment for political friends with negative implications for bank profitability. Bank employees were organized in powerful unions with the ability to extract wage and benefit rights from the government, but also the influence to resist change. The high costs of state banks, partly due to their large shares of low-quality assets, combined with their dominant position in the system resulted in very high interest rate spreads. Finally, the regulatory and supervisory framework was also underdeveloped.

Even though the banking system had performed adequately during Greece's post-war period of growth and industrialization, Greece's financial development lagged that of its EU partners when it joined the EU. In 1980, bank credit to the private sector was equal to 52% of GDP compared to 85% for

[14] For example, in 1990, state-owned banks and specialized banking institutions controlled 90% of the lending market.

Portugal, 55% for Italy and 60% for the average of continental Europe.[15] Bank deposits were equal to 51% of GDP compared to 94% in Portugal, 72% in Spain, 67% in Italy and 64% for the average continental Europe. However, the main features of the Greek banking system did not differ greatly from those of its EU partners (Danthine et. al., 1999). The entry into the EU and the developments in fiscal policy in the 1980s significantly altered the banking system's role in the economy. First, the use of the banking system as a source of financing for the government's increasing budget deficits had significantly distorted the allocation of credit in the economy. Second, as Rajan and Zingales (2002) claim, the process of monetary integration led to dramatic changes in the European financial markets, such as the expansion of arm's length financing. For Greece, this process of monetary integration implied that developments in the Greek financial system had to follow the EU directives in the area of financial services (OECD, 1995).

A process of liberalization begun in 1987, and mostly completed by 1993, followed the first and second EU banking directives. Financial liberalization was accompanied by the strengthening of the regulatory environment in every step of the process. The process began with the removal of several interest rate controls and the eliminations of all requirements for credit allocation within the following six years. As part of the completion of the Common Market, capital controls were also eliminated in the early 1990s and the bank regulatory and supervisory environment was considerably strengthened.

The liberalization of the financial system had a major impact on the allocation of credit in the economy, the provision of financial services to households and firms, the size and efficiency of the banking system, the conduct of monetary policy, and the development of the domestic capital market. Large amounts of loanable funds became available to banking institutions and the primary beneficiaries of the expansion of bank credit were households. Banking institutions improved their expertise in the provision of new financial products and services, such as marketing of government securities and foreign exchange management, and the range of investment opportunities for households expanded.

[15] These percentages are higher in bank-based financial system, such as those of continental European countries. The corresponding shares for market-based systems, such as those of the US and the UK, were 35% and 27%, respectively.

Liberalization also intensified competition in the system. The banking sector went through a process of restructuring and consolidation in the late 1990s in anticipation of Greece's participation in the EMU. Several state banks were privatized, and were mostly acquired by other private banks in the system. Thus, the state banks' share of total assets decreased from 60% in 1995 to 46% in 1999. In a recent study, Gibson and Demenagas (2002) have shown that the liberalization of banking in Greece has led to increased competition with beneficial effects for the system. Moreover, the increased presence of private institutions has improved the efficiency and profitability of the Greek banking sector. In an effort to improve the stability of the system, prudential supervision was also enhanced through the monitoring of banking institutions' risk management systems and the introduction of rigorous standards for loan provisioning. Another significant reform that was part of the compliance with the EU directives was the introduction of a deposit insurance system in 1998.

Before the recent liberalization, the domestic capital market was very thin and had only a minor role in corporate financing and in household savings allocation. However, this was also a main feature of other financial systems in continental Europe that are characterized as bank-based due to the dominant role of banking institutions in the system (see Allen and Gale, 2000). Moreover, the Greek business sector was dominated by family-owned firms that mostly relied on bank financing and retained earnings to finance their investments. The small size of many Greek companies was an obstacle in the development of the domestic equity market. According to the OECD, until the mid-1990s, market capitalization of the Athens Stock Exchange (ASE) was less than 20% of GDP, which was one of the lowest in the OECD area.

The lack of a modern institutional framework was an additional obstacle for the development of the Greek capital market. Thus adopting the EU directives for stock market legislation in the 1990s was a significant factor in the growth of the domestic capital market (see Papaioannou and Gatzonas, 1997). The number of listed companies grew at a high rate, a new electronic trading system was introduced, a parallel market for smaller capitalization companies was launched and a derivatives exchange was established.

Overall, Greece's participation in the EU has been the reason for the rapid liberalization and development of the country's banking system and capital markets. However, the introduction of the common currency may also increase the pressure from foreign competition. Greek banks do not have the size to compete with their large European counterparts. A further integration of the European market for banking and financial services implies that Greek banks may not have the size, the expertise, and the cost structure to compete at the pan-European level. Nevertheless, Greek banks will be able to use their established reputation and relationships at the local level, their knowledge of the domestic market, and their extensive branch network to maintain a strong local presence. The domestic regulatory and supervisory authorities will continue to benefit from the initiatives to strengthen the regulatory framework at the pan-European level. Finally, large Greek companies may also benefit from initiatives to create a pan-European market for equities and the growth of the market for corporate securities by having access to a larger pool of investors for financing.

IV. C REVISION OF EU REGIONAL POLICY

Greece has been a major beneficiary of the EU's regional policies. Regional issues were not at the top of the EU's policy agenda until after Greece's entry. More serious policy discussions about regional disparities began to take place after Greece's accession, given that the new country's living standards were well below the EU average. A new approach to regional policy was taken in 1985 with the introduction of the Integrated Mediterranean Programs (IMP). The IMP covered the whole of Greece and funding began in 1986. The goal of 'economic and social cohesion' of the Single European Act of 1986 led to a revision of regional policies at the EU level. The reform included the doubling of resources available for regional policy and the reform of the Structural Funds under the Delors I package (Tsoukalis, 1997). In the early 1990s, there were additional reforms in the EU's public finances under the Delors II package, which included further reforms of the Structural Funds and the introduction of the Cohesion Fund, as well as additional increases in funding for regional policies.

As one of the poorest countries in the EU, Greece received significant amounts of funds in the two decades after entry. Greece's net receipts as a share of GDP rose rapidly in the 1980s and have been at 3% of GDP for the period after 1986. In the 1990s, net receipts have been about 4% of GDP. Also, Greek receipts from the EU have been more than twice as payments to the EU since the country's entry. This ratio has been above 4:1 throughout the 1990s indicating that Greece has been a major beneficiary of EU funding.

In terms of the composition of Greek receipts from the EU, these reflect the major shifts in EU policies in the past two decades. Until 1987, almost 70% of Greek receipts were from the EAGGF-Guarantee Fund as a result of the implementation of the price support system of the CAP. During the same period, the percentage of total receipts originated from the EAGGF-Guidance Fund did not exceed 6%. After 1987, the rising importance of funding for regional policies led to an increase in the share of funds from the Structural Funds and the Cohesion Fund. By late 1990s, the share of funding for price supports had been reduced to less than 50% of total receipts, while the share of funding for regional and social policies had increased above 50%.

Within the revised regional policies of the EU, Greece benefited from the transfer of funds through the Community Support Frameworks (CSF). There were two CSF for Greece: the first during the period 1989-93 and the second during the period 1994-99. The evidence on the rate of absorption of funds and their allocation to various sectors in the economy shows that Greece did not benefit as much from the first CSF as it did from the second CSF, compared to the other EU periphery economies. For the first CSF, support from the Structural Funds was equal to 2.6% of GDP for Greece, while it was 3% for Portugal, 2.6% for Ireland, and 0.7% for Spain (Lolos, 2001). But, in the second CSF, Greece received funds equal to 3.5% of GDP, Portugal 3.7%, Ireland 2.4%, and Spain 1.6%. This increase reflects Greece's improvement in the rate of absorption of funds. For example, according to Manassaki (1998), Greece's rate of absorption of funds from the EU budget for the second CSF increases from 32% during the 1994-96 period to 43% if we calculate it over the 1994-97period, and the rate was higher in 1998.

According to a study by Lolos (2001), the implementation of the two CSF for Greece had an effect on the country's growth rate that was equivalent to one half of a percentage point on an annual basis, and it restricted the rise of the unemployment rate by 2 percentage points. Based on the allocation of funds to the various sectors of the economy, there are some interesting similarities and differences in the priorities of the two CSF for Greece. In the first CSF, most of the funds (37%) went for infrastructure improvement.

The agricultural sector received 23%, funds for human resources comprised 27%, while only 11% of funds were for projects related with the improvement of the economy's competitiveness. In the second CSF, there was a decrease in funding for infrastructure (29%), while human resources received the same share and there was a significant increase in funding for projects that would increase the economy's competitiveness (28%). Thus it can be concluded that the increased allocation of funds for economic cohesion by the EU during the 1990s, combined with the improvement in Greece's ability to absorb a large percentage of them, did have a significant effect on the economy's growth performance and on the country's infrastructure.

VI. CONCLUDING REMARKS

In this paper, we examined Greece's experience as a member of the EU. This experience exhibits two very contrasting patterns. The first decade after entry was marked exposure to increased competition from other EU countries, and the presence of domestic populist policies. The combination of these two effects led to the deterioration of the country's economic performance and the divergence between Greece and its EU partners. There were no institutional mechanisms on the part of the EU to restrain the choices of Greek policymakers. During the second decade, a successful stabilization of the Greek economy, mostly due to the external constraint imposed by the Convergence Criteria for participation in the EMU, restored economic growth and initiated the process of economic convergence. Greece's experience also contributed to the reconsideration of the role of common EU policies and the revision of EU Regional Policies to achieve the goal of social and economic cohesion among member countries.

In evaluating Greece's experience, we derived the following policy lessons that apply to both small peripheral economies that will join the EU in the future and to the EU itself in terms of facilitating the integration of these economies within a large economic area. First, it is crucial for small peripheral countries to address the structural deficiencies of their economies before joining the EU in order to minimize the impact from increased competition after the removal of trade protection. At the time it entered the EU, Greece had a considerably larger agricultural sector compared to the other member countries, its manufacturing sector had operated under a protected environment that did not facilitate a fast adaptation to a more competitive environment, and its infrastructure was lagging. Due to these deficiencies, Greece's adaptation to the EU structure was slow and necessitated the transfer of large amounts of EU funds to support the development of the Greek economy. This, it is imperative that there be an adequate pre-accession period that will enable new member countries to prepare for entry. That the experience of countries like Greece has not been lost on the EU can be seen in the longer pre-accession period of the recent Eastern European enlargement.

Second, domestic policies are equally important for maintaining and promoting a small peripheral country's comparative advantage after entry into the EU. As the case of Greece shows, the populist policies of the 1980s that raised labor costs and discouraged investment, together with the competitive foreign pressures from Greece's increased integration to a large economic area, contributed to the loss of the country's comparative advantage in labor-intensive manufacturing activities. Moreover, Greece's reliance on agricultural subsidies from the CAP did not encourage the restructuring of the Greek agricultural sector despite their positive impact of agricultural incomes. This experience contributed to the revision of the EU's agricultural policies toward increased support for structural reforms in agriculture.

Third, the process of EMU and the Convergence Criteria are a successful way for countries with a poor historical policy record to commit to macroeconomic stability, as was shown by the experience of Greece. The Greek case shows that the requirement of the Convergence Criteria for participation in the EMU was the main factor that led to macroeconomic stability in the 1990s. It is also noticeable that, despite a very high debt-to-GDP ratio in the early 1990s, the Greek governments continued to face domestic pressures for expansionary policies. It was only when the economic costs of remaining outside the monetary union became visible that Greece made a commitment to achieve the Convergence Criteria with positive implications for the country's growth performance. This was also the case for other EU economies with poor historical policy records. Therefore, the requirement that the new member countries satisfy these criteria before entry facilitates their accession into the EU.

Fourth, the Greek experience also shows that common EU policies can facilitate structural reforms in peripheral economies with considerable structural deficiencies. In Greece, the implementation of EU policies led to the liberalization of the financial system and introduced institutional reforms in the areas of monetary policy and regulation of financial markets. These reforms put an end to the financing of government deficits through the banking system that had taken place in the 1980s, and elevated the role of the financial markets within the process of resource allocation. However, common policies must be evaluated on a continuous basis so that their effectiveness is maximized. This has been the case with the EU regional policy. Learning from the Greek experience in the absorption of regional funds in the 1980s helped improve the effectiveness of EU regional policy. As a result, Greece was a main beneficiary of EU funds in the 1990s that modernized the country's infrastructure. By contrast, lack of common policies in other areas, such as labor markets, has slowed the reform process.

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TABLE 1:
STRUCTURE OF GDP (%)

Sector	1960	1970	1980	1985	1990	1997
Agriculture	32.2	33.0	25.0	15.6	10.5	11.0
Mining	0.4	0.5	0.6	1.0	0.9	0.9
Electricity, Gas, Water	0.5	1.0	1.8	2.2	2.7	3.2
Manufacturing	7.3	11.3	15.2	15.3	15.3	14.0
Construction	11.0	10.2	7.7	7.0	7.6	7.0
Services	48.6	44.0	49.7	58.3	63.0	63.9

Source: National Accounts, Ministry of National Economy

TABLE 2:
STRUCTURE OF EMPLOYMENT BY MAJOR SECTOR (%)

Sector	1960	1970	1980	1985	1989	1994	2000
Primary	53.8	38.9	30.8	29.4	25.3	20.8	17.0
Secondary	18.1	25.5	28.1	27.0	27.5	23.6	23.0
Tertiary	27.7	34.8	40.3	42.8	47.1	55.5	60.0

Source: OECD Economic Outlook, Greece; various issues

TABLE 3:
MAIN MACROECONOMIC INDICATORS (AVERAGE ANNUAL RATES)

	1951-1974	1975-1980	1981-1993	1994-2000
GDP Growth	6.4	4.68	1.42	2.81
Inflation	6.0	14.98	17.96	6.64
Unemployment	4.0	2.07	8.03	10.09
Current Account[1]	- 2.1[3]	- 3.6	- 3.62	- 2.73
Budget Balance[1]	0.42[4]	- 2.5	- 10.92	- 5.97
Government Debt[2]	16.7	28.6	111.6	103.5

[1] Percentage of GDP
[2] End of period value
[3] Average for period 1954-1973
[4] Average for period 1960-1974

Source: OECD, Ministry of National Economy

TABLE 4:
AGRICULTURAL TRADE (US $ MILLION)

		1978	1979	1980	1981	1982	1983
Food & Live Animals	With the EU	201.7	137.6	132.9	-196.2	-323.1	-281.7
	With the rest of the world	-44.9	-121.4	85.7	183.9	130.1	100.6
	Net Balance	156.6	16.2	218.6	-12.5	-192.9	-181.1
Beverages & Tobacco	With the EU	77.5	54.8	56.7	27.2	7.1	8.4
	With the rest of the world	157.5	155.7	160	141.1	153.2	144.2
	Net Balance	235	210.5	216.7	168.3	160.3	152.6
Oils & Fats	With the EU	43.1	12.7	-13.2	-2.9	36	187.5
	With the rest of the world	14.8	11.6	12.3	14	29.5	25.2
	Net Balance	57.9	24.3	-0.9	11.1	65.5	212.7

Source: Sarris (1984)

TABLE 5:
STRUCTURE OF MANUFACTURING OUTPUT BY SECTOR GROUPS (%)

	1970	1975	1980	1985	1990	1996
Food, Beverages, Tobacco	18.9	17.5	19.0	22.4	22.0	27.1
Textiles, Clothing, Footwear	23.5	27.3	26.5	23.8	22.7	11.4
Chemicals	11.2	13.1	12.8	14.8	16.9	12.3
Machinery & Electronics	12.8	11.4	11.8	11.1	9.3	6.5
Metals	7.4	6.4	6.1	5.7	5.7	9.0
Other	26.2	24.3	23.8	22.2	23.4	33.7

Source: Louri and Minoglou (2001); National Statistical Agency of Greece

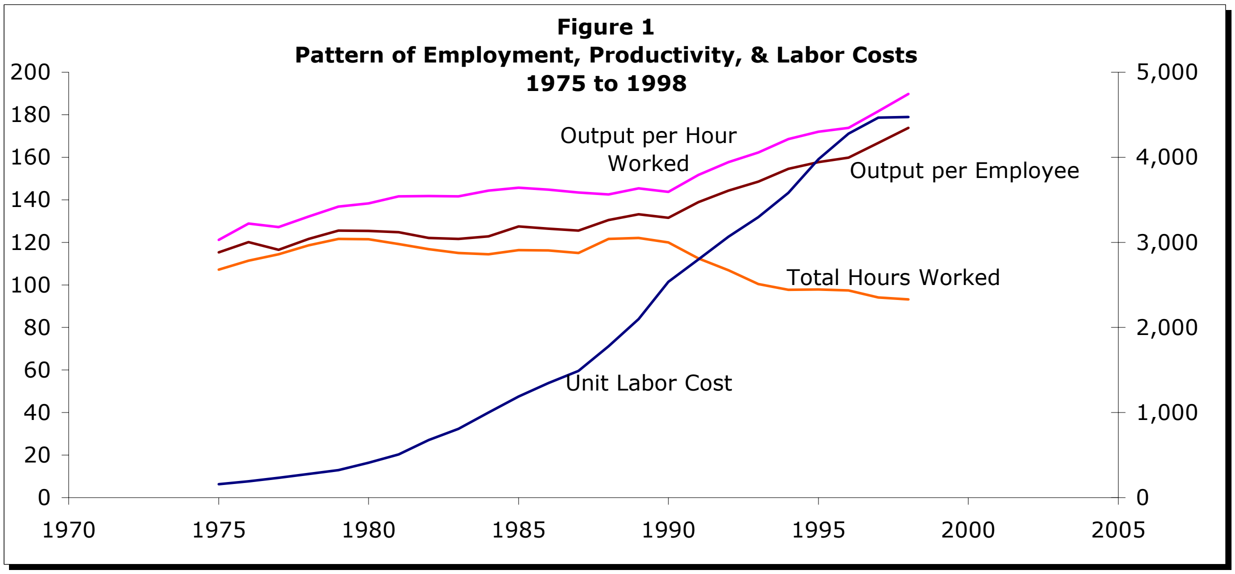
Figure 1
Pattern of Employment, Productivity, & Labor Costs
1975 to 1998
Output per Hour Worked
Output per Employee
Total Hours Worked
Unit Labor Cost
200
180
160
140
120
100
80
60
40
20
0
5,000
4,000
3,000
2,000
1,000
0
1970
1975
1980
1985
1990
1995
2000
2005

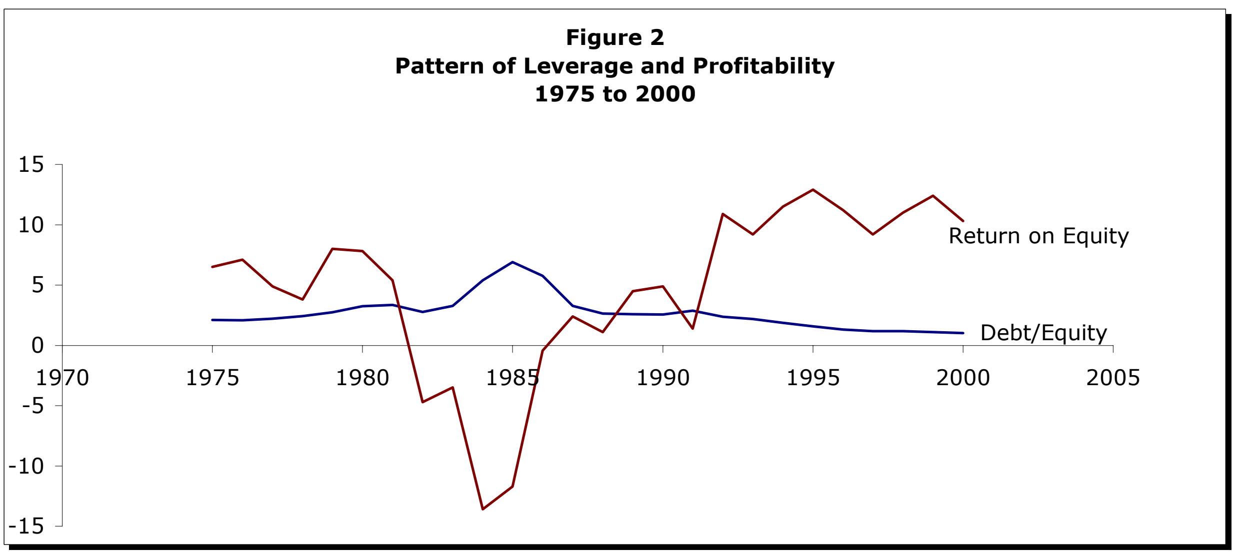
Figure 2
Pattern of Leverage and Profitability
1975 to 2000
Return on Equity
Debt/Equity
15
10
5
0
-5
-10
-15
1970
1975
1980
1985
1990
1995
2000
2005

TABLE 6: COMPOSITION OF EXTERNAL TRADE

	1976	1980	1985	1990	1995	1999*
			Imports (% of Total)			
Food Products	11	11	13	13	14	14
Raw Materials	17	18	14	13	13	3
Fuels-Lubricants	18	27	30	14	10	-
Capital Goods	28	22	20	23	25	32
Manufactures	25	21	29	36	39	51
			Exports (% of Total)			
Food and Beverages	24	23	21	24	23	28
Tobacco	7	5	2	2	2	
Raw Materials	6	3	3	3	6	19
Minerals and Ores	6	7	5	6	4	16
Petroleum	3	6	19	7	8	
Manufactures	52	55	45	54	53	37

Source: Bank of Greece

- Provisional data
-

TABLE 7: DIRECTION OF EXTERNAL TRADE

	1975	1980	1985	1990	1995[1]	1997[1*]
			Imports (% of Total)			
European Union	38	39	49	64	68	64
Other OECD	21	24	13	17	15	18
Central & Eastern Europe	6	6	7	4	4	3
Other Countries	36	30	7	9	13	15
			Exports (% of Total)			
European Union	50	48	55	64	59	58
Other OECD	15	10	15	15	24	23
Central & Eastern Europe	11	10	6	4	2	3
Other Countries	24	32	14	12	14	16

Source: OECD, Bank of Greece

[1] Data from settlements statistics

* Data from January through September

TABLE 8: GENERAL GOVERNMENT CONSOLIDATED EXPENDITURES AND RECEIPT (PERCENTAGE OF GDP)

	1975	1980	1985	1990	1995	1999
Total Expenditure	**28.7**	**30.3**	**43.1**	**51.6**	**49.3**	**47.0**
Government Consumption	12.8	13.5	16.6	15.1	15.3	15.0
Compensation of Employees	8.3	9.4	11.4	12.5	11.3	11.5
Social Transfers & Subsidies	10.4	11.4	16.4	15.7	15.5	16.0
Interest on Debt	0.8	1.4	3.6	9.4	11.2	7.6
Gross Fixed Capital Formation	3.5	2.6	4.2	10.5	5.9	5.9
Total Resources	**25.8**	**27.6**	**31.5**	**31.7**	**36.5**	**42.1**
Direct Taxes	3.7	5.0	5.2	5.3	7.4	10.5
Indirect Taxes	12.4	11.9	13.9	13.0	13.5	15.2
Other resources	2.6	1.9	1.6	1.9	2.9	2.7
Capital Transfers Received	-	-	-	4.0	2.7	3.1

Source: Ministry of National Economy, *Main National Accounts Aggregates of the Greek Economy, 1960-1999 (ESA-95)*

TABLE 9: FINANCING OF PUBLIC SECTOR BORROWING REQUIREMENT AND COMPOSITION OF PUBLIC DEBT (% OF TOTAL)

	1982	1985	1988	1990	1993	1995
Domestic Borrowing	**82**	**66.6**	**96.5**	**87.9**	**68.2**	**80.8**
Banks	37.1	56.3	66.7	29.8	26.3	
of which:						
Loans and Credit	**19.9**	**14.8**	**19.4**	**13.7**	**9.9**	**- 0.9**
Government Securities	17.2	41.5	47.3	16.1	16.4	30.8[1]
Non-bank residents	- 0.2	1.1	31.2	43.1	42.8	69.1[1]
Bank of Greece	45.1	9.2	- 1.4	15	- 0.8	- 18.1
External Borrowing	**18**	**33.4**	**3.5**	**12.1**	**31.8**	**19.2**
Public Debt						
Domestic	67.9[2]	57.3	67.2	76.9	77.9	80.0
External	32.1[2]	42.6	32.7	22.9	22.0	20.0

Source: Bank of Greece

[1] Sales of securities in the secondary market are also included
[2] 1981