WHAT IS THE EFFECT OF EMU ON GREECE'S EXPORTS TO THE EUROZONE?

KYRIACOS ARISTOTELOUS
Otterbein College

Abstract

This paper investigates the effect of EMU on Greece's exports to Eurozone countries in the context of a generalized gravity model using panel data between Greece and twenty-one developed countries from 1981-2005. The dynamic panel model is estimated using Hansen's two-step Generalized Method of Moments estimator. The results suggest that the EMU has led to a decrease in Greek exports to Eurozone countries. That decrease is statistically different than zero. The paper also finds empirical evidence that shows that the negative EMU effect on Greece's exports to Eurozone is most likely due to a loss in Greece's competitiveness in Eurozone markets.

Corresponding Address: Department of Business, Accounting, and Economics, Roush Hall, Suite 419, One Otterbein, Westerville, Ohio 43081, U.S.A Email address: KAristotelous@otterbein.edu

Introduction

The positive effect of the European Monetary Union (EMU) on bilateral trade among its members was held up as one of the main benefits that would come from the euro. It was argued that the elimination of exchange rate uncertainty and associated costs would increase trade among Eurozone countries and lead to direct welfare gains for them. The early literature on the topic found the impact of EMU on intra-Euro-zone trade to be, indeed, positive and economically significant. According to Baldwin (2006a), a paper that provides a comprehensive review and critique of the early literature on the effects of the euro on trade, the consensus estimate suggests that the euro has boosted trade among Eurozone countries by five to ten percent. Flam and Nordstrom (2006), a more recent paper on the topic, estimate that the euro has increased trade within the Eurozone by about 26 percent for the years 2002-2005 compared to 1995-1998.

A careful examination of the literature on the effects of the euro on trade reveals that it has focused, so far, almost exclusively on Eurozone trade as a whole, while paying less attention to the effects of the euro on single member countries trade. With that in mind, this paper attempts to close the gap, at least partially, in the existing literature on the topic by focusing on the effects of the euro on a single Eurozone country, Greece. Specifically, the paper empirically investigates the impact of EMU[1] on Greece's bilateral exports to other Eurozone countries using panel data from 1981-2005 in the context of an augmented gravity model. Examining the EMU effect on Greece's exports is particularly interesting because (a) Greece was the first EU country to join the EMU after its launch in eleven countries on January 1, 1999 and (b) Greece is on the periphery of the European Union (EU) both in terms of geography and economics. The results of this paper should contribute to the debate on the benefits and costs of joining the EMU currently taking place in countries that recently became EU members, many of which are also on the periphery of the EU.

The rest of the paper is organized as follows: Section 2 briefly reviews the empirical literature on the effects of euro on trade. The literature review focuses on papers investigating the euro effect on single countries. Section 3 discusses briefly the theoretical background of the gravity equation and presents the model used in the analysis. Section 4 explains the empirical methodology employed to investigate the EMU effect on Greece's exports and discusses the empirical results. The final section provides a summary of the paper and its main conclusions.

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1. In this paper, the term 'EMU' refers to the introduction of euro on the foreign exchange markets and for electronic payments, a process that was launched in Greece on January 1, 2001. The terms 'EMU effect' and 'Euro effect' are used interchangeably in this paper.

2. A Brief Review of the Empirical Literature on the Effects of the Euro on Trade

Several papers examine empirically the EMU effect on intra-Eurozone trade in recent years. Micco, Stein, and Ordoñez (2003), De Nardis and Vicarelli (2003), Barr, Breedon, and Miles (2003), Flam and Nordstrom (2003 and 2006), Berger and Nitsch (2005) are some of those papers. Without exceptions, these papers find the euro effect on intra-Eurozone trade to be positive and economically significant. For those interested, Baldwin (2006a and 2006b) offers a detailed review and discussion of the most significant early empirical work on the euro's trade effects.

Micco, Stein, and Ordoñez (2003) is not only among the first papers to examine the effect of EMU on Eurozone trade as a whole but also their paper is one of two papers found in the literature that investigated whether the EMU effect is fairly widespread among Eurozone countries. Using information on bilateral trade on 22 developed countries from 1992 to 2002, they find that the EMU had a positive - and significantly different than zero - effect on the trade of Austria, Belgium-Luxembourg, France, Germany, Ireland, Italy, Netherlands, and Spain. In the case of Finland, the effect of EMU on its trade is found to be positive but not statistically different than zero. In the case of Greece and Portugal, it is found to be negative, but significantly different than zero only for Greece. Even though Micco, Stein, and Ordoñez (2003) conclude that there are important differences across countries regarding the EMU effect on trade, they do not offer any insights as to why that is the case.

Aristotelous (2006) is the other paper found in the literature that analyzes the EMU effect on the bilateral trade of each EMU country while emphasizing the potential differences across them. Using a panel of data from 1992 to 2003, he finds that the impact of EMU on trade is positive and statistically significant for Belgium/Luxembourg, Finland, Germany, Ireland, Netherlands, Portugal, and Spain. For Italy the effect is positive, but not statistically significant. For Austria, France, and Greece, the effect of EMU on their trade to the Eurozone is negative and statistically significant. Aristotelous (2006) theorizes that the differentiated effect of EMU on trade may arise because EMU countries differ in terms of their trade composition, level of economic development, and degree of trade openness. He concludes that the most likely source of the EMU differential effect on trade is a country's degree of trade openness—with EMU countries characterized by a greater degree of trade openness and enjoying greater benefits compared to countries that are not so open. Even though a country's degree of trade openness could be a source of the differential effect of EMU on trade, Aristotelous (2006) does not provide any empirical support for that claim, nor does he demonstrate how Austria's, France's, and Greece's trade openness can explain the negative and statistically significant effect of EMU on their trade with other Eurozone countries.

In summary, the above discussion brings to light three important points: First, only two papers attempted to determine whether the EMU effect is fairly widespread among its members. Both papers find that there are important differences across Eurozone countries regarding the EMU effect on their trade. Second, neither paper offers an adequate explanation for these important differences. Third, both papers estimate the euro effect on Greece's trade to Eurozone using very few data points since the launch of the euro in Greece. Micco *et al* (2003) use data from 2001 and 2002 whereas Aristotelous (2006) uses data from 2001-2003. Using only two or three years of data to estimate the EMU effect on Greece's trade can generate only preliminary estimates at best. These three observations demonstrate that the existing empirical literature on how the euro influences the trade of single EMU members is incomplete and requires additional work. With that in mind, this paper attempts to empirically investigate the euro effect on Greece's exports to Eurozone using data from 1981 to 2005. As already pointed out, doing so should provide insights into the euro effect on countries, like Greece, that joined the EMU after the euro was initially launched and are on the periphery of the EU.

3. Model Specification

Since Tinbergen (1962) developed the gravity equation, gravity-type models have been used extensively to explain what drives bilateral trade across countries, primarily because such models provide "some of the clearest and most robust empirical findings in economics" (Leamer and Leminshohn 1995, p. 1384). Unsurprisingly the gravity equation's empirical success aroused curiosity about its theoretical underpinnings which, in turn, led to the development of a number of theories, some without economic content, to explain it. Anderson (1979) is perhaps the first paper to provide strong theoretical foundations for the gravity equation. He derives it from the properties of expenditure systems based on constant elasticity of substitution (CES) preferences. While preserving the CES preference structure, Bergstrand (1985) derives the gravity equation from a general equilibrium model of world trade. Bergstrand (1989) extends the microeconomic foundations of the gravity equation presented in Bergstrand (1985) by incorporating into the analysis relative factor endowment differences and non-homothetic tastes. He demonstrates how the gravity equation fits with the Heckscher-Ohlin model of inter-industry trade and the Helpman-Krugman-Markunsen models of intra-industry trade. Deardoff (1995) also demonstrates that a simple gravity equation can be derived from standard trade theories such as the Heckscher-Ohlin model. More recently, Anderson and van Wincoop (2003) show how a simple gravity equation can be derived by manipulating a CES expenditure system. Their main contribution to the literature, however, is to rewrite the gravity equation in a simple symmetric form, relating bilateral trade to size, bilateral trade barriers, and multilateral resistance variables.

Following convention, this paper uses the following augmented gravity equation in order to estimate the effect of EMU on Greece's bilateral exports to Eurozone countries:

$$\ln(X_{ijt}) = \beta_1 \ln(X_{ijt-1}) + \beta_2 \ln(D_{ij}) + \beta_3 \ln(Y_{it} Y_{jt}) + \beta_4 RER_{ijt} + \beta_5 VOL_{ijt} + \beta_6 EU_{ijt}$$

$$+ \beta_7 EMU_{ijt} + DU + \varepsilon_{ijt} \qquad (1)$$

where 'ln' is the natural logarithm, i refers to Greece, j refers to a developed country, t refers to year, and ε is the error term. The dependent variable (X_{ijt}) denotes the value of real Greek exports to developed country j in period t measured in real US dollars. Using bilateral exports, instead of the average of bilateral exports and imports, as a dependent variable is what the basic gravity theory suggests. Moreover, it avoids a bias in dummies coefficient estimates that is characterized by Baldwin (2006b, p. 11) as the "silver medal" of gravity mistakes.

The first explanatory variable included in equation (1) is the lagged dependent variable. According to De Nardis and Vicarelli (2003, p. 637), it must be included in equation (1) to capture the fact that "countries trading a great deal with each other will continue to do so, thus reflecting entrance and exit barriers due to sunk costs". The observation that "countries trading a great deal with each other will continue to do so," the so called "persistence effect" in recent literature, explains a large part of bilateral trade flows both in pooled and single country estimates.

The next two independent variables in equation (1) are variables which are typically found in every gravity equation. Because their definition and interpretation are standard, only a brief discussion of these variables is offered. The variable, D_{ij}, represents the great circle distance in kilometers between Athens, the capital of Greece, and the capital of country j. It is viewed as a proxy for transportation costs and, thus, its sign is expected to be negative. The variable, $Y_{it} Y_{jt}$, is the product of Greece's real GDP and country j's real GDP both measured in US dollars at constant 2000 prices and exchange rates. It captures the effect of economic size on trade. Its sign is expected to be positive because economically larger countries are expected to trade more.

RER_{ijt} is the real exchange rate measured by the nominal exchange rate adjusted by the Greece's and country j's GDP price deflators. A real appreciation of the Greek currency relative to country j's currency (i.e. an increase in RER) will make Greek products more expensive in country j and, as a result, Greek exports to that country will decline.

VOL_{ijt} is the exchange rate volatility between Greece and country j in time t. It is measured by the moving standard deviation of the first difference of monthly natural logarithms of the bilateral real exchange rate in year t. Traditional trade theory sug-

gests that exchange rate volatility would depress trade because exporters would view it as an increase in the uncertainty of profits on international transactions, under the assumption of risk aversion.

EU_{ijt} is a dummy variable that takes the value of one for the years during which both Greece and country j are members of the EU and the value of zero otherwise. This variable captures the impact of EU membership on Greece's exports to other EU members. Its sign is expected to be positive because countries belonging to the same regional trade association trade more.

The second to last independent variable included in equation (1) is EMU_{ijt}. It is a dummy variable that takes the value of one during the years for which Greece and country j are both EMU members and the value of zero otherwise. Specifically, it is set equal to one from 2001-2005 when country j is Austria, Belgium-Luxembourg,[2] Finland, France, Germany, Ireland, Italy, Netherlands, Portugal, or Spain and the value of zero otherwise.

The coefficient for EMU_{ijt}, β_7, captures the effect of EMU on Greece's bilateral exports to the other EU countries that adopted the euro as their national currency. Its sign is expected to be positive from a theoretical perspective. As Mundell (1961) argues in his seminal paper, trade between areas that use the same currency is cheaper and easier than trade between areas that use different currencies. More specifically, the recent literature on the EMU effect on trade fundamentally identifies three key mechanisms through which the anticipated increase in intra-Eurozone trade will tran-spire. These mechanisms are: lower transaction costs, elimination of exchange rate uncertainty, and enhanced competition (see HM Treasury 2003, p. 16-20, for a more detailed discussion). Micco, Stein, and Ordoñez (2003, p. 322) even describe these mechanisms as the "most relevant in Europe today".

The last variable in equation (1), DU, is a set of dummies designed to approximate the Anderson and van Wincoop resistance index. We introduce a dummy for each year in the sample. These dummies take a value of one for bilateral exports from Greece to all trading partners in the relevant year, and the value of zero otherwise. De Nardis and Vicarelli (2003) approximate the Anderson and van Wincoop resistance index similarly.

The data used in the calculations of the variables in equation (1) are obtained from the International Financial Statistics CD-ROM, except for Greek exports and distances. Greek exports are collected from the International Monetary Fund's Direction of Trade Statistics online service (http://www.imfstatistics.org/DOT/logon. aspx). Great Circle distances are obtained from the U.S. Department of Agriculture web site (http://www.wcrl.ars.usda.gov/cec/java/lat-long.htm).

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2. In the past trade figures for Belgium and Luxemburg were combined into a single total; rather than lose valuable observations, this study treats Belgium and Luxemburg as if they were a single country.

4. Estimation Procedure and Empirical Results

The presence of a lagged dependent variable in equation (1) makes it a dynamic panel model. In a dynamic panel model, least squares estimators would yield consistent estimates only when the time series dimension of the panel data is large. Econometric studies have shown that through Monte Carlo simulations the time series dimension is large enough when it is around 40 years. Since the time series dimension of the panel data in this paper is not large enough, both a pooled least squares and a fixed-effects estimation are inappropriate to estimate equation (1) as they would yield biased and inconsistent estimates. In order to generate unbiased and consistent estimates for equation (1), the Hansen's two-step Generalized Method of Moments (GMM) estimator is used (see Arellano and Bond, 1991, Arellano and Bover, 1995). This estimation procedure is commonly used in the literature to estimate dynamic panel data models as in this case.

Table 1 reports the Hansen's two-step GMM estimation results of equation (1) along with some standard statistics. The dynamic panel model is estimated using data comprising 525 observations (21X25). Twenty-one is the number of the cross-sectional observations, each representing a developed country[3] and twenty-five refers to the time-series dimension of the data covering the period 1981-2005. The beginning of the time period is not random. It coincides with the year Greece joined the European Union.

Table 1. Generalized Method of Moments estimates of the EMU effect on Greece's Exports

	Dependent Variable: Log real Exports
Lag log real Greek exports (-1)	0.39 (0.01)*
Log product real GDP	0.56 (0.05)*
Real Exchange Rate	-0.20 (0.09)**
Exchange Rate Volatility	-0.07 (0.08)
EU membership	0.22 (0.06)*
EMU	-0.26 (0.13)**
J-statistic	301.4

Source: Author's calculations.
Notes: Standard errors are found in parenthesis next to the coefficient estimates.
* denotes statistical significance at the one percent level and ** at the five percent level. The coefficients for the dummies used to approximate the multilateral resistance index are not reported.

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3. The 21 countries included in the study are the 13 European countries that were members of the EU when the euro was launched (recall that Belgium and Luxemburg are treated as one country for the purpose of the analysis) plus Australia, Canada, Japan, Korea, New Zealand, Norway, Switzerland, and USA. Only these countries are included in this study because they tend to share similar experiences and, as a result, it is less likely that the empirical results will be contaminated by factors that cannot be properly accounted for in equation (1).

Since the focus of this paper is on the EMU effect on Greek exports to Eurozone countries, the coefficient estimates for the other independent variables presented in table (1) are discussed only briefly. The coefficient estimate for the lagged dependent variable (X_{ijt-1}) is found to be positive and statistically significant at the one percent level. The positive sign suggests that there is a "persistent effect" in Greek exports to developed countries, as expected. De Nardis and Vicarelli (2003), among others, also find that the "persistent effect" explains a large part of bilateral trade among developed countries. The coefficient estimate for economic size ($Y_{it} Y_{jt}$) is also positive and statistically significant at the one percent level. This result supports the standard prediction of gravity models that economically larger countries trade more.[4]

The coefficient estimate for the real exchange rate (RER_{ijt}) is negative and statistically significant at the five percent level suggesting that a real appreciation in the value of Greece's currency leads to a decrease in Greek exports. The coefficient estimate for the exchange rate volatility (VOL_{ijt}) is negative but not statistically different than zero.[5] This finding is not particularly surprising given that the consensus conclusion of the literature on the effects of exchange rate uncertainty on trade is that nominal (and real) exchange rate uncertainty has very small or no effects on trade (see McKenzie 1999). The coefficient estimate for the EU membership variable (EU_{ijt}) is estimated to be positive, as expected, and is statistically significant at the one percent level.

The coefficient of interest in this study is β_7 which captures the EMU effect on Greece's exports to Eurozone countries. It is estimated to be negative and statistically significant at the five percent level, a result that suggests that the EMU led to a decrease in Greece's exports to Eurozone. Both Micco *et al* (2003) and Aristotelous (2006) find the EMU effect on Greece's bilateral trade with Eurozone countries to be negative and statistically significant.

The fundamental finding of this study that the EMU effect on Greek exports to Eurozone is negative and statistically significant raises a not so surprising question. Why is this the case for Greece, considering the well documented empirical result that the overall EMU effect on Eurozone is positive and statistically significant (see, among others, Micco *et al* 2003, De Nardis and Vicarelli, and Flam and Nordstrom 2003 and 2006)? The theoretical literature on the euro effect discussed by Baldwin (2006a, p. 61-66) offers some insights into why that could happen. According to him

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4. Please note that there is no discussion for the coefficient estimate for the distance variable (lnD) because the variable does not vary over time and when differenced all of its values become zero.

5. Exchange rate volatility is also measured by the moving standard deviation of the first difference of monthly natural logarithms of the bilateral nominal exchange rate at year t. Its coefficient estimate is also found to be negative but not statistically different than zero.

there are fundamentally four mechanisms through which the euro could influence in-tra-Eurozone trade in the relatively short time period since its launch: (a) changes in trade bilateral costs, (b) changes in the number of firms engaging in trade, (c) changes in degree of competition, and (d) changes in marginal costs.

Changes in trade costs are the traditional explanation for why currency unions increase trade. If two nations share the same currency, transactions costs are lower, which, in turn, makes trade between the two cheaper and easier. The problem with this mechanism, however, is that even though it can explain why the effect of the euro on Eurozone trade as a whole is found to be positive, it cannot explain why the euro effect can differ across Eurozone members. Put differently, it is hard to imagine how the reduction in trade costs associated with the EMU can lead to a decrease in Greek exports to the Eurozone, on the one hand, and an increase in another member's exports to the Eurozone, on the other.

The second mechanism through which the euro can influence Eurozone trade is changes in the number of firms engaging in trade. Most European firms are not en-gaged in trade. They sell only in their local markets, due in part to their aversion to exchange rate uncertainty. According to Baldwin (2006a, p. 65), "such uncertainty is a nuisance to giant companies like Nestle and Fiat, but to small and medium firms it is a very real barrier." The permanent elimination of exchange rate volatility in the Eu-rozone removes that very real barrier for these firms which, in turn, will make it much easier for them to export their products to other Eurozone countries. Even though this mechanism is flexible enough to offer insights into why the magnitude of the euro ef-fect may vary across sectors and Eurozone countries, it cannot really explain why the euro effect may be positive for some Eurozone countries and negative for others.

The third mechanism through which a currency union can influence trade is chang-es in the degree of competition. This mechanism is flexible enough to explain why the euro effect may differ across EMU members and sectors. Baldwin (2006a) argues that the euro would increase competition among Eurozone companies, a view that is shared by many trade practitioners as well. The increase in competition, a change in market structure, will change trade volume[6]. The impact of the increase in competi-tion on trade is very likely to interact in a complex manner with various country-spe-cific and sector-specific features. For example Greece and Germany differ greatly in terms of their composition of exports and geographic distance to alternative suppli-ers. If the euro leads to greater price transparency in big-ticket items such as cars and trucks as opposed to food products, its impact on exports would be very different for Greece and for Germany. Flam and Nordstrom (2006), for instance, find that the euro effects are concentrated in industries with highly processed products such as pharma-ceuticals and machinery. Greece does not export many highly processed products.

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6. Baldwin (2006a, p. 64) explains in the context of the Brander-Krugman trade model how a change in market structure can change trade volume.

The final mechanism through which the euro can influence Eurozone trade is changes in marginal costs. According to Baldwin (2006b), the euro can influence marginal costs in a number of different ways. One way is through changes in labor costs. The euro can lead to changes in labor union behavior, especially in sectors where trade competition is particularly fierce. Changes in labor union behavior could influence marginal costs which, in turn, could influence trade flows. This mechanism is flexible enough to explain why the euro effect may differ across sectors and EMU members. For example labor unions in Greece are much stronger and more vocal than labor unions in other Eurozone countries, like the Netherlands. Consequently, marginal costs (and productions costs) will change differently in the exporting sectors of these two countries as a result of changes in labor union behavior, thereby influencing the exports of these two countries differently.

In light of the above discussion, what then is the most likely mechanism that could explain the fundamental finding of this study that the euro effect on Greece's exports to Eurozone is negative? It is safe to conclude that traditional explanations, such as a reduction in trade costs, offered to explain the documented overall positive effect of the euro on intra-Eurozone trade cannot be the ones to do it. Such explanations are not flexible enough to explain why the euro effect may be positive for some EMU countries and negative for others.

The most flexible mechanism that could explain why the euro effect may be positive for some EMU countries and negative for others, as in the case of Greece, is the one that points out that the euro could influence production costs differently across EMU members. If productions costs increase in EMU country i relatively more than productions costs in EU country j, then it is likely that exports from country i to country j will decline. In other words, if Greece's production costs especially in its exporting sectors increase more than the production costs in the exporting sectors of other EMU countries, thereby making Greece's products relatively more expensive than other EMU counties' products in Eurozone markets, its exports to Eurozone may decline.

Table 2 provides some evidence that supports this mechanism. The numbers presented in table 2 are the average ratios of Greece's export prices relative to other EMU countries export prices for 1995-2000 and 2001-2005. The ratio is EPI_G/ EPI_j where EPI_G is Greece's export price index and EPI_j is Eurozone country j's export price index (note that the base year for all indices is 2000). An increase in the ratio over time basically means that Greece's exports become more expensive to Eurozone markets relative to other EMU countries' exports to the same markets. Table 2 presents export price ratios between Greece and other EMU countries for which the export price index could be found. Export price indices could be found for Greece, Austria, Finland, France, Germany, and Portugal. Even though data could be found for only five EMU countries other than Greece, these countries are a reasonable representation of the

entire Eurozone area. The source of the data is the International Financial Statistics CD-ROM. The average export ratios presented in Table 2 are higher during the 2001-2005 (post-Euro period) compared to 1995-2000 (pre-Euro period) in all cases. The increase in the export price ratios from 1995-2000 to 2001-2005 suggest that Greek products became relatively more expensive than Austrian, Finnish, French, German, and Portuguese products to Eurozone markets. Given this observation, it is reasonable to conclude that the increase in the prices of Greek exports relative to the prices of other EMU countries' exports to Eurozone markets can explain the negative EMU effect on Greece's exports to Eurozone.

Table 2. Export Price Ratios

	1995-2000	2001-2005
Austria	0.887	1.035
Finland	0.892	1.166
France	0.836	0.938
Germany	0.893	1.028
Portugal	0.897	1.081

Source: Author's calculations.

The above discussion suggests that the negative EMU effect on Greece's exports to the Eurozone is fundamentally due to the loss in Greece's competitiveness in Eurozone markets. To formally test this presumption, equation (1) is re-estimated by including the multiplicative dummy, EMUxRER, in the model. The Hansen's two-step GMM estimate for the EMUxRER multiplicative dummy is found to be negative, -0.14 to be exact, and statistically significant at the ten percent level. The finding that the coefficient of this term is negative and statistically significant provides empirical support for the presumption that the fall in Greek exports is most likely due to the loss in Greece's competitiveness in Eurozone markets.

5. Summary and Conclusions

This paper investigates the effect of the EMU on Greece's exports to Eurozone countries using panel data for the period 1981-2005 in the context of an augmented gravity model. The empirical findings of this paper suggest that economic size, the real exchange rate, and EU membership are statistically important determinants of Greece's exports. Additionally, they provide strong statistical support for our a priori expectation that developed countries (like Greece) trading a great deal with other developed countries will continue to do so.

The main contribution of this paper to the literature, however, is the finding that the effect of the EMU on Greece's exports to Eurozone is negative and statistically significant. In other words, the adoption of the euro as Greece's national currency on January 1, 2001 led to a decrease in its exports to the other EU countries that also adopted the euro as their national currency. This paper also finds empirical evidence that suggests that the negative EMU effect on Greece's exports to Eurozone is in part due to a loss in Greece's competitiveness in Eurozone markets. In more general terms, this paper provides additional evidence that the widespread finding in the literature that 'the EMU had a positive effect on intra-EMU trade' is not uniform across member countries.

The EMU only began in 1999 in eleven EU countries and 2001 in Greece. As a result, the key finding of this study that the EMU had a negative effect on Greece's exports should be primarily viewed as a short-term finding since the amount of data available from 2001 is still limited. It is too soon to identify the long-term effects of the EMU on Greece's exports to the Eurozone. Nonetheless, much can be learned from papers such as this one regarding how, and the mechanisms though which, the EMU influences trade in individual Eurozone countries.

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