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**Spain in the EU:
fifteen years may not be enough***

by

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Abstract

Europe has been the driving force of economic policy in Spain over the last four decades and the key factor behind the modernization and globalisation of the Spanish Economy. The accession to the EEC in 1986 was a crucial step in the process of economic and political integration.

This process was carried out in several stages. First, trade openness. Exports were liberalized well before 1986, while imports boomed from that date onwards. Secondly, foreign direct investment (FDI) into Spain jumped with accession to the EEC. Finally, Spanish FDI abroad and portfolio investment grew exponentially in the run-up to Euro membership in the late 1990s.

Integration has required a set of measures (increased competition, privatisation of public enterprises, industrial restructuring, deregulation) that have translated into efficiency gains. Efficiency gains have been reinforced by a more stable macroeconomic framework. Lower inflation and fiscal consolidation have led to lower real (and nominal) interest rates, which, in turn, have resulted in a higher sustainable growth.

However, the process of real integration could have been even more successful. Spain's real convergence path with Europe paused from 1975 to 1990. This was partly due to the necessary process of industrial restructuring, deregulation and privatisation. Notwithstanding, the slow pace of reform, in particular in the labour market, with high labour costs leading to persistent unemployment, a real exchange rate appreciation and the impact of two oil shocks prevented Spain from reaping the full benefits of integration.

The long-run benefits of monetary integration are clear. However, there are short-term costs. The losses of the exchange rate and of monetary sovereignty require a process of nominal convergence and fiscal consolidation, as well as higher cyclical correlation, for Euro membership to be successful. This should be taken into account for future EU and EMU candidate economies. It implies that, prior to monetary integration, candidates must carry out a process of modernisation and nominal convergence without fixing their exchange rate. This is a slow process, that must be kept in mind by those countries on the accession path now.

Finally, the role of Structural Funds has also been crucial. These allow for the construction of public infrastructure vital for private sector productivity and real convergence.

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Spain in the EU: Fifteen Years May Not Be Enough

by

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INTRODUCTION

Europe has been the driving force of economic policy in Spain over the last four decades and the key factor behind the modernization and globalization of the Spanish Economy. The accession to the EEC in 1986 was a crucial step in the process of economic and political integration. The process, however, began much earlier, with the implementation of measures (increased competition, privatization of public enterprises, industrial restructuring, deregulation) aimed at modernizing and improving the efficiency of the Spanish economy. These changes, which made possible the accession of Spain to the EU, initially, and made it possible for Spain to become a founding member of the European Monetary Union (EMU), later, were not without cost. Spain's real convergence with Europe ceased for a decade while the reforms were implemented.

The fifteen years since can be considered, overall, a success story. Spain has achieved greater economic stability and is now an integral part of Europe, economically and politically. It is difficult, however, to disentangle the progress derived from greater economic liberalization from those derived from European integration and greater exchange rate stability (the entry of the peseta into the European Monetary System, initially, and, finally, the launch of the single currency).

In spite of this, the process is far from over. Spain's income per capita still stands at 84 percent of the European average. The slow pace of reform, in particular in the labour market, with high labour costs leading to persistent unemployment, and an inappropriate policy mix in the late 1980s prevented Spain from reaping the full benefits of integration. In this sense fifteen years may not be enough.

WHAT HAS EUROPE MEANT FOR THE SPANISH ECONOMY?

The process of European integration has conditioned the progress the Spanish economy has made over the last twenty-five years. Two phases can be distinguished in this period: a

transformation phase, between 1975 and 1986, and a converging phase, post 1986. During the first period Spain had to implement an important program of reforms that had a high cost in the short term. GDP per capital with respect to Europe fell 8 points, from 81 percent in 1975 to 73 percent in 1986, and unemployment climbed to 21 percent at the end of the period from 4.6 percent. This transformation period laid the foundations for the subsequent expansion. The processes of industrial restructuring and land reform were carried out. Subsidies were lowered and the labour market was reformed. Simultaneously, Spanish markets went through an important process of liberalization and foreign exposure, beginning with the privatization of state enterprises and the deregulation of the overly regulated Spanish economy. During this hard process Europe, besides remaining the objective of economic policy, served as a credible excuse for the implementation of policies that, although necessary for long-run growth, induced high short-term costs and, hence, did not have domestic backing.

Once the economic structure was modernized, Europe continued to guide economic policy. The integration of the European economies called for fiscal harmonization and consolidation, increased exposure to foreign markets, the liberalization of capital flows, nominal convergence, and the independence of the Central Banks. In this process Europe continued to serve as an excuse for the implementation of unpopular policies, such as labour reform, privatization, deregulation, foreign direct investment in Spain, and the reduction of subsidies.

European integration was, overall, quite beneficial for the Spanish economy. This is not to say, however, that it did not also induce some costs that will perpetuate. Europe is responsible for the not-so-efficient agricultural policy or fishing policy and has pervaded Spanish external relations, in particular with Latin America. Additionally, the rigidities in the EU in both the labour market and the product markets, and the inherent protectionism of the EU represent a dead weight for the perspectives of Spanish potential growth.

As a whole, the impact of European integration on the Spanish economy can be summarized as efficiency improving and competition fostering. To this end the process of nominal convergence and the external opening of the Spanish economy were crucial.

THE EXTERNAL SECTOR AND FOREIGN DIRECT INVESTMENT

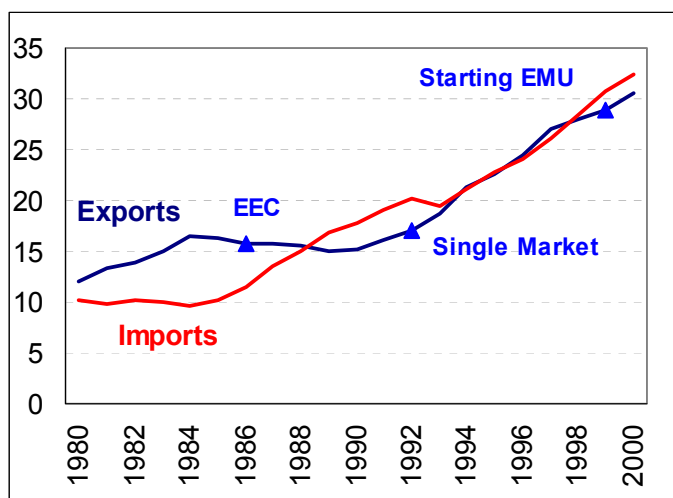
External Sector

The lowering of trade barriers, the suppression of import tariffs, the adoption of economic policy rules (quality standards, harmonization of indirect taxes), and the increasing mobility of goods and factors of production that comes with greater economic integration, together with the lower cost of transactions and greater exchange rate stability associated with the single currency, have boosted trade and enhanced the openness of the Spanish economy. To the extent that, in an open economy, a country's external trade is one of the most important and fastest

vehicles for the transmission of shocks, it is interesting to review how Spain's trade links have evolved in recent years. This aspect is particularly relevant in today's context in which neither the exchange rate nor monetary policy can be used as mechanisms to correct the impact of asymmetrical shocks on EMU economies.

Exports, imports, and the degree of openness. Although the opening-up of the Spanish economy has been gradual, [1] one of the key dates was undoubtedly Spain's entry into the EEC because of its implications for the performance of the external sector. The large-scale tariff dismantling required by economic integration and the introduction of VAT as of 1986 [2] clearly had an impact on the performance of Spain's external trade, and, specifically, on exports and imports, the responses of which to the new situation differed markedly. From GRAPH 1 it is evident that, whereas imports of goods and services in real terms as a proportion of GDP rose sharply (to 13.6% in 1987 from 9.6% in 1984), the share of exports shrank slightly (to 15.8% of GDP from 16.6% in 1984). As a result, the degree of openness of the Spanish economy increased sharply, although entirely because of the expansion in imports (there was therefore a simultaneous deterioration in the trade deficit).

GRAPH 1
SPAIN'S EXPORTS AND IMPORTS (as % of GDP)



Source: Ministerio de Economía.

Among the factors that account for the divergent performance of exports and imports are the following:

(1) Large-scale tariff dismantling; [3]

- (2) A shift in consumer spending toward imported consumer durable goods, as consumers showed their preference for goods which prior to 1986 were subject to a high level of protection, and which, therefore, only accounted until then for a small portion of total imports (on customs data, imports of consumer goods represented 9.6% of the total in 1981, compared with 20.4% in 1988);
- (3) An overvalued currency (between 1985 and 1992, the nominal effective exchange rate of the peseta against the OECD countries appreciated by 5.4%, while the real effective exchange rate rose by 18.6%);
- (4) The scrapping of most state aid for exports;
- (5) A production structure that specialized in labour-intensive goods; and
- (6) A much faster pace of economic expansion than in the rest of Europe (Spanish GDP registered a 16.7% advance during the period 1982–87, as compared to 13% in the EU), which pushed up the rate of expansion in imported goods even further.

The opening-up process and the growing competition of the newly industrialized economies of Asia and Latin America, specializing in the production and marketing of the same kind of goods as Spain, prompted a wholesale restructuring of Spanish exports. As a result of this adjustment, the impact on the external sector of the launch of the single market on 31 December 1992 was much smaller. The Spanish economy therefore continued to open up, but, in contrast to the previous period, exports were now playing a decisive role. The successive devaluations of the peseta (1992, 1993, and 1995) and the associated gains in competitiveness provided a positive stimulus to sales of Spanish goods overseas (from 17.1% of real GDP in 1992 to 27% in 1997), whereas imports slackened off at the beginning of the 1990s (they contracted by 5.3% in 1993), reflecting the deep recession gripping the Spanish economy. In 1999 trade represented 56.4% of GDP.

As in 1986 and 1992, the structural change that took place in the European Union in 1999 will bolster the opening of the Spanish economy. The lower cost of transactions associated with a single currency (Spain's trade with the Euro zone represents around 60% of the total) and the reduction (elimination) in exchange rate volatility will encourage trade between the member countries of EMU. Rising trade flows have resulted in a greater cyclical alignment of the EMU economies since 1992 and will therefore help dampen Spain's economic cycle and developments in the external sector.

Whereas the changes to the production structure, and hence in the structure of exports, [4] will clearly work to stave off the large deterioration witnessed in Spain's external balance when the economy opened sharply in the past (1986 and 1992), indicators of the degree of competitiveness of the Spanish economy (human capital skills, stock of capital, technological capital) show that significant differences remain in comparison to the developed economies.

This confirms the need to press ahead with the structural reforms required to enhance economic efficiency.

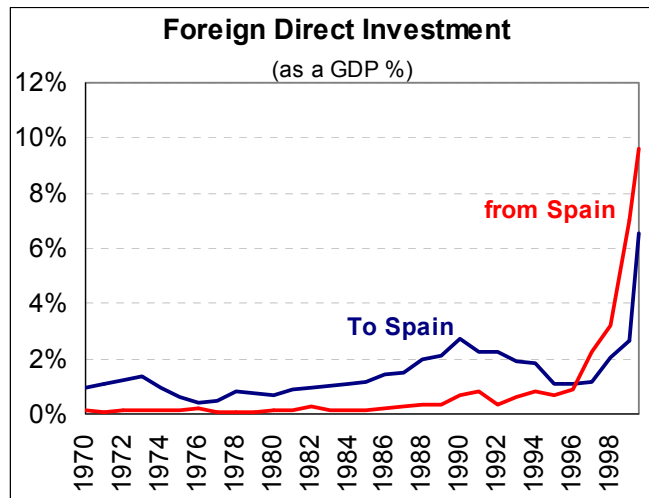
Exchange rate volatility and openness. Like the single currency, the elimination of exchange rate volatility promotes trade, by reducing costs. Doménech and Taguas (1999) analyze how the increased stability of the Euro against the dollar, in comparison to the stability shown by the peseta against the dollar in the past, can affect trade flows and hence the degree of openness of the Spanish economy. They confirm that the impact on exports and imports, and therefore on the openness of the economy, of a fall in exchange rate volatility is likely to be far more muted than the effects of tariff dismantling prior to Spain's entry into the EEC in 1986. On their estimates, in the long run the growth rate of both exports and imports is likely to rise by only a little over 1 percent. The impact on the trade balance would therefore be virtually zero, although the openness of the Spanish economy would experience a permanent increase of just over 1 percent.

Foreign Direct Investment

The evolution of net FDI in Spain can be split into two clearly defined periods. In the first, which runs to the mid-1990s, the Spanish economy is a net recipient of foreign capital, while, in the second, Spain is a net investor overseas. That is, it shifts from being a debtor economy versus the rest of the world to being a creditor economy.

What are the variables behind this shift? When Spain applied to join the EEC at the end of the 1970s, the perception of foreign investors with regard to the economy's growth prospects changed. As a result, FDI in Spain began to rise, slowly at first, in line with the progress being made in the negotiations, and then quickly after EEC entry in 1986. The process of opening to international trade, improved potential for growth, falling production costs (lower wages), and lower risk premia in response to the brighter macroeconomic outlook (economic reforms) account for the increase in FDI in Spain. FDI has very positive implications for the economy. Being permanent in nature, it facilitates the transmission of technology and paves the way for advances in productivity and, hence, an increase in the economy's potential GDP. In addition, the higher the level of FDI, the greater will be the availability of capital for funding investment.

GRAPH 2



Source: Bank of Spain.

GRAPH 2 shows the evolution of FDI both into and out of Spain in terms of GDP. The expansion in FDI in Spain in the 1980s was due to the country's imminent entry into the EEC and a general increase in FDI flows worldwide during these years. Subsequently, after reaching a peak in 1990 (2.7% of GDP), inflows of capital from the rest of the world began to decline because of the recession in Europe (Spain's biggest investor) and the greater appeal of other developing economies with stronger growth prospects (Asia and Latin America). This decline in FDI in terms of GDP, together with the expansion already showing up in Spanish FDI abroad, resulted in Spain becoming a net investor of capital (rather than a recipient country as hitherto). Indeed, in recent years, Spain has become one of the biggest international investors. It ranked sixth in the world in the year 2000 according to UNO data on foreign investment. According to Bank of Spain data, Spanish FDI abroad amounted to 9.6 percent of GDP in 2000. Specifically, Spain is now one of the main investors in Latin America, not only in relation to its GDP but also in absolute terms. The increase in Spanish FDI abroad is a reflection, on the one hand, of how markets have become more international and, on the other, the degree of maturity reached by the Spanish economy and the need to seek out new markets with potentially higher returns.

The increase in FDI in Spain in the year 2000 does not represent a change in trend. Rather, it was the result of one-off operations by large companies (telecommunications operators) within the European Union. Moreover, the degree of maturity reached by the Spanish market, and the potential siphoning-off effect on European capital flows of EU enlargement into central and Eastern Europe, suggest that FDI in Spain will fall back in the coming years. Spain is likely, therefore, to continue to be a net investor country.

This investment process will produce a future flow of funds toward Spain in the form of earnings by Spanish companies abroad. Although not reflected in gross domestic product, this will translate into an increase in gross national product and hence in the incomes of Spanish people. GDP estimates the sum of added values generated domestically in an economy over a specified time period. GNP, meanwhile, corresponds to the value added by factors of production owned by domestic residents over the same period. GNP therefore equals GDP plus net payments to factors affected by the rest of the world. Currently, because Spain has traditionally been a net recipient of FDI, income accruing to foreigners abroad exceeds that accruing to domestic residents, so that GDP is around 1–1.5 percent higher than GNP. As a result of the Spanish economy's big overseas investment drive in recent years, however, inflows of income will grow at a faster pace than outflows, leading to a net positive flow some time in the future. In the last five years, the Spanish economy has gone from being a net recipient of investment (0.2% of GDP in 1996) to being a net exporter of capital (3.1% of GDP in 2000). If net investment sustains the growth rate witnessed in the last few years, it is reasonable to assume that income from abroad will exceed that paid to the rest of the world in less than a decade. The major overseas investment undertaken by the United States up to 1950, for example, prompted net income from investments abroad to rise from 0.47 percent of GDP at the end of World War II to 1.3 percent of GDP at the end of 1970s.

Consequently, when assessing future gains in individuals' living standards derived from economic growth, it is necessary to bear in mind that, thanks to the large investment effort by Spanish firms abroad, the increase in incomes in the economy will be higher than that reflected by GDP growth. The faster the growth rate of GNP, the larger this extra cushion will be. In addition, the diversification of the sources of income in line with the rise in overseas earnings will result in a decline in the volatility of individuals' incomes, as the cyclical component associated with the evolution of GDP is dampened.

NOMINAL CONVERGENCE

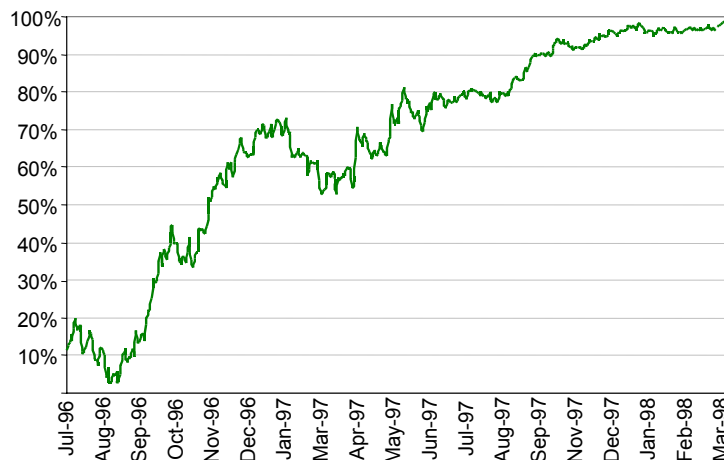
While accepting the beneficial effects on long-term growth of greater economic stability, the short-term costs associated with lower inflation and the deficit-reduction process delayed, in the case of Spain, the adoption of the economic policy measures needed to correct these imbalances until the admission criteria for EMU were established. Given the rigidities exhibited by the European economies, the surrender of monetary policy and exchange rate control as instruments for dealing with asymmetrical shocks to the European Central Bank calls for a degree of nominal homogeneity among EMU countries.

Nominal convergence has been the paramount objective of Spanish economic policy since 1993. As the achievement of the Maastricht criteria became possible, the financial markets

rewarded Spain with a higher probability of accession to EMU. It also allowed for the reduction of inflation expectations and the enhanced the credibility of fiscal policy, giving rise to a virtuous cycle that, at the end, made it possible for Spain to meet the criteria and become a founding member of the European Monetary Union.

GRAPH 3

Probability of Spain joining EMU



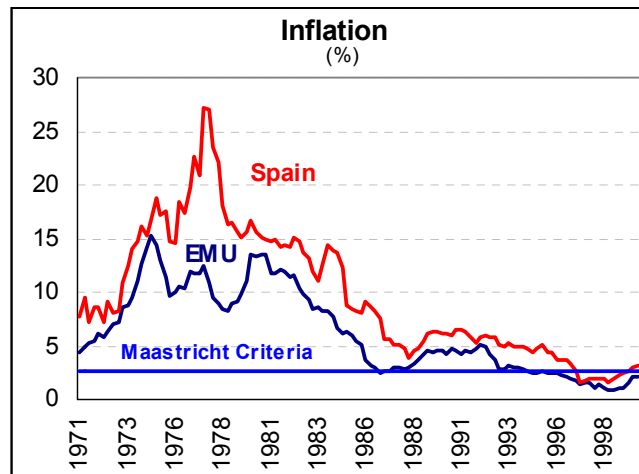
Source: J.P. Morgan.

INFLATION

Inflation first began to fall at the end of the 1970s as a result of the new monetary policy framework adopted by the Bank of Spain. It began to announce a targeted growth rate for the monetary aggregate M3, and the signing of the ‘Pactos de Moncloa’. These developments led to inflation being reined in from rates in excess of 20 percent at the end of the 1970s to around 5 percent in 1987. After Spain joined the EEC in 1986, the exchange rate became a key variable in the design of monetary policy. Monetary policy had to play a dual role: maintain exchange rate stability with other EEC currencies and bring down inflation. The need to converge toward the inflation rate of the major EEC countries saw interest rates rise to quite high levels, generating upward pressure on the peseta. Achieving compatibility between the external goal of averting sharp exchange rate fluctuations and the internal goal of controlling inflation was therefore difficult. With the Spanish economy overheating, and the consequent worsening of imbalances (external deficit and inflation), inflation rose again, to stand at around 6.5 percent in the summer of 1989. After the peseta entered the EMS, [5] with fluctuation margins of +/-6 percent, pressure on the exchange rate eased. The Bank of Spain held interest rates high so that inflation again began to trend downward. The need for a stable peseta within the EMS placed

restrictions on monetary policy, however, meaning that it alone could not bring inflation down to the rates prevailing in other countries. In addition, also hindering the correction of inflation (at a time of economic recession), were the increase in the public deficit, from 3 percent of GDP in 1988 to a peak of 6.7 percent in 1993, and the wage policy of the early 1990s, in which employee compensation rose by 10.4 percent on average in the period 1990–92.

GRAPH 4



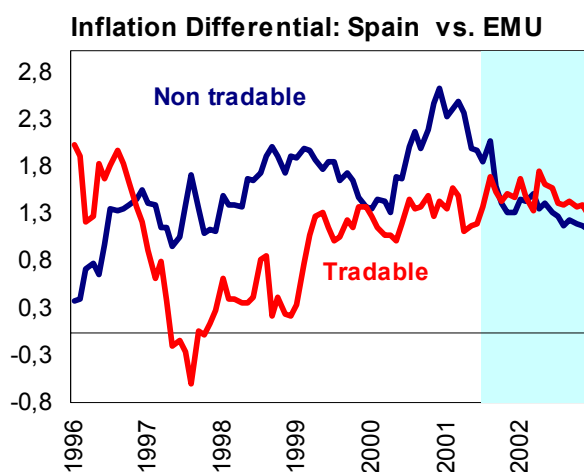
Source: INE and BBVA

The nominal divergence among the member countries of the EMS stood in the way of monetary policy coordination. Following the drawing up of the Maastricht criteria, economic policies in Spain were aimed at securing compliance with the reference values. Wage moderation [6] and the granting of independence to the Bank of Spain (1994), which brought the introduction of annual inflation targets, allowed expectations of inflation to diminish, as the likelihood that Spain would form part of EMU increased. After 1996 the Spanish economy experienced a sharp disinflationary process. The growth rate of prices fell from 4.3 percent in December 1995 to 2 percent at the end of 1997, paving the way for Spain to meet the Maastricht requirement. Although the inflation differential with EMU continued to decline in 1998 (from 0.6 to 0.2 percentage points), the rigidities of the Spanish economy prevented further progress. This became apparent in 1999 and 2000, as a result of the reversal of the conditions that had permitted a favourable evolution of the more erratic price components (commodity and food price developments in 1998) and the expansionary [7] character of the policy-mix. The inflation differential with EMU widened to 1.1 and 1.3 percentage points in 1999 and 2000, respectively. The reduction in inflation until 1998 was underpinned by the favourable evolution of the more erratic components of the price index, rather than by economic policies aimed at generating greater market efficiency and flexibility (the inflation differential with EMU in the services

sector—which in 1997 was 1 percentage point, as against 0.3 points for inflation overall—widened in 2000 to 1.8 percentage points).

This inflation performance is a cause for concern, since it represents a loss of competitiveness vis-à-vis the EMU, which accounts for around 60 percent of Spanish trade, and because of the impact in the formation of inflation expectations and their pass-through to wage demands. It must be remembered that wage moderation is one of the keys of the recent cyclical expansion of the Spanish economy. The inflation differential is not the result of a faster rate of productivity growth and is not, therefore, the natural consequence of the convergence process of an economy with a lower per capita income (the Balassa-Samuelson hypothesis). The risk of the inflation differential becoming permanent arises because of the ‘double’ inflation problem of the Spanish economy; that is, an inflation differential with EMU in both the non-tradable and the tradable sectors. Spain has thus gone from being a country with dual inflation (systematically faster growth in the prices of services than in those of goods) to one with ‘double’ inflation. Furthermore, the impossibility of resorting to competitive devaluations as in the past magnifies the costs associated with the inflation differential due to surplus demand and market inefficiency, as it could lead to a permanent and cumulative loss of competitiveness of the Spanish economy.

GRAPH 5



Source: INE and BBVA.

In view of the costs that the empirical evidence and theory attribute to inflation, the disinflation process has positive implications for the economy in the long run. First, inflation increases the opportunity cost of holding money, reduces the demand for labour, and introduces inefficiencies in the economy through its interaction with the tax system (inflation reduces real after-tax earnings). In addition to this, the uncertainty generated by inflation with respect to the

evolution of the structure of relative prices in an economy leads to inefficient resource allocation. Many studies have found a negative relationship between inflation and growth in the medium term. For Spain, papers by Andrés and Hernando (1996 and 1997) [8] and Andrés, Hernando, and Krüger (1996) conclude that inflation reduces real per capita income growth over an extended period of time, there being a permanent impact on the level but not on the growth rate.

Although empirical evidence indicates that the reduction of inflation improves the long-term growth outlook, a fall in inflation has short-term costs in terms of unemployment. And the lower the flexibility of the labour market, the greater the costs. The decline in inflation in Spain since the end of the 1970s coincided with the rise in unemployment. Thus, whereas the annual rate of inflation fell from 24.5 percent in 1977 to 8.8 percent in 1985, the unemployment rate jumped from 5.3 percent of the labour force to 21.6 percent. Surging unemployment was not simply due to the adoption of policies targeted at reining in inflation, however, but also reflected the dismantling of the protectionist barriers that had shaped Spain's production structure during the dictatorship. Despite the short-term cost of the disinflation process, in the medium and long term, a more efficient allocation of resources and lower inflation expectations, which allow greater price stability, should raise the growth rate of output and hence reduce unemployment. In the second half of the 1990s, there was a simultaneous decline in both inflation and unemployment rates, from an annual rate of 4.9 percent in 1995 to 2.5 percent in 2000 in the former, and from 22.9 percent to 13.2 percent in the latter. Although this decline has been linked to the impact of the labour market reforms approved since 1994 (1994, 1997, 1998, and 2000), [9] the continuation of a high structural rate of unemployment (above 15% since 1998), following a sharp fall in the early 1990s (from 27.2% in 1990 to 15.6% in 1995), seems to suggest that the simultaneous decline of inflation and the unemployment rate, rather than the result of labour market reform, was prompted by the wage moderation arising from the shift in trade union attitudes, and the fall in inflation expectations associated with Spain's participation in EMU.

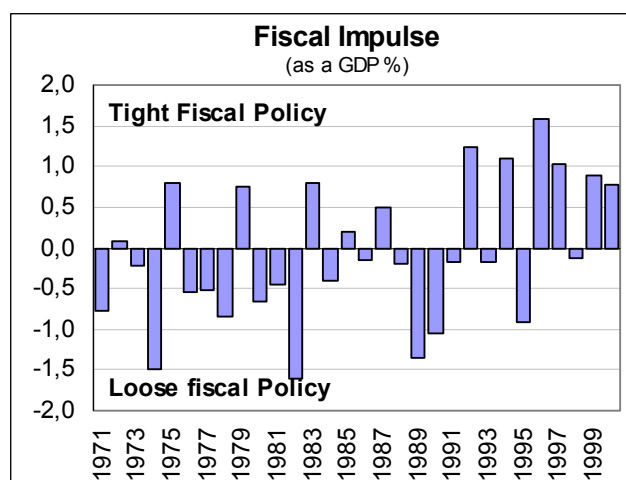
PUBLIC FINANCES

With regard to fiscal policy, the persistence of generalized and continuing public deficits in the prospective EMU participants, and the credibility problems this could generate for the monetary policy of the future ECB, made it necessary to include two convergence criteria in the Maastricht Treaty, limiting budget deficits to 3 percent of GDP and debt to 60 percent of GDP. After the long period of autocratic rule, the decade before Spain entered the EEC (1975–85) was characterized by the gradual adaptation of the country's institutions to the new environment and a sharp increase in the budget deficit resulting from rapid growth in spending. The development

of public services and the creation of a welfare state, similar to that of more developed economies, together with the increase in public support for crisis-hit sectors, are some of the factors behind the rise in public spending (from 20.7% of GDP in 1970, to 40.4% in 1985). In spite of the increase in revenue from 22 percent to 34.2 percent of GDP, the result was a sharp deterioration in public sector finances, from a surplus of 0.6 percent of GDP in 1970 to a deficit of 6.2 percent in 1985. Reflecting this, public debt surged to 45 percent of GDP by 1985, up from 17 percent in 1980. The surge in public spending was partly responsible for the emergence of significant imbalances in inflation and the external sector after Spain joined the EEC. After the peseta entered the EMS, the pursuit of restrictive monetary policies to offset the expansionary stance of fiscal policy only served to exacerbate the imbalances that had accumulated during the phase of expansion. Public spending rocketed over these years. The introduction of universal health care, wider unemployment benefit cover, the increase in public employment, and investment policy took public spending up to 47.6 percent of GDP in 1993, compared with 39.6 percent in 1988. Following the economic crisis in the first half of the 1990s and the changes in the EMS, Spain's budget deficit rose once more, confirming that the slight correction seen in the public accounts during the expansion was simply due to the favourable economic context. Thus, in 1993 the budget deficit reached a peak of 6.7 percent of GDP, as compared to 3 percent in 1988, remaining at similar levels until 1995 (6.6% of GDP). The inertia shown by spending led to an increase in the structural component of the deficit, which reached 5.3 percent of GDP in 1993 (3.7% in 1988). In this period structural public spending rose steadily, confirming the expansionary nature of fiscal policy.

In order to strip out the impact of the economic cycle on the public accounts and assess to what extent fiscal policy was restrictive, we have constructed a fiscal indicator, corrected for the cycle, referred to as the fiscal impulse, which measures the difference between the structural deficits in two consecutive years. A positive fiscal impulse, therefore, indicates that fiscal policy was relatively more restrictive, and a negative value indicates it was more expansionary.

GRAPH 6



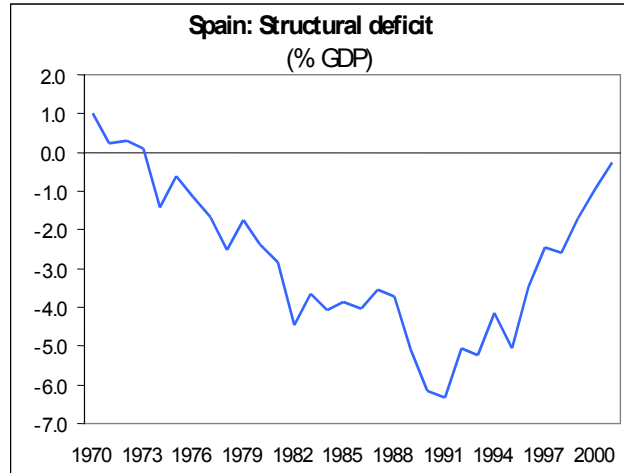
Source: Ministerio de Hacienda and BBVA.

The expansionary nature of fiscal policy at the end of the 1980s and in the early 1990s is apparent in GRAPH 6. Thereafter, given the pressing need to lower the deficit to the 3 percent ceiling by 1997, as stipulated by the Maastricht Treaty, the budget deficit was 2.8 percent of GDP by 1997. As a result, the structural deficit came down by 2.6 percentage points, to stand at 2.5 percent of GDP in 1997. GRAPH 6 confirms the markedly restrictive fiscal policy stance pursued in 1996 and 1997. Although the end of the process of expansion in spending, following the overshoot observed in previous years, is a positive development, an in-depth analysis of its composition shows that expenditure containment was based primarily on two headings that are unlikely to contribute to the same extent to the reduction of the budget deficit in the future. The first of these, interest payments, fell as a proportion of GDP by 0.5 percentage points, reflecting the positive impact of lower interest rates, whereas the second, public investment, declined as a percentage of GDP by 1.2 points. An end to the process of convergence in interest rates with Europe (interest rates on the Spanish Treasury's ten-year bonds fell by 490 basis points over a two-year period), and to the refinancing of debt issued at higher rates, suggests that this expenditure heading will make only a modest contribution to the reduction of the budget deficit in the periods ahead. Likewise, if further progress is to be made in real convergence with the more developed countries, the correction of the budget deficit should not be borne by public investment, in view of the beneficial impact it has on productivity and competitiveness.

In order to prevent deficits from rising as occurred in the past, and thus hampering the design of a single monetary policy, EU countries signed a Stability and Growth Pact, the aim of which was to establish a deficit ceiling (3% of GDP) and set the attainment of a balanced budget as a medium-term goal. During the latter part of the 1990s, Spain's budget deficit continued to

fall (to -0.3% of GDP in 2000) in response to growing fiscal pressure [10] (despite the 1999 IRPF reform), reflecting favourable economic conditions and lower interest payments (-1.4 percentage points). Although the structural deficit continued to shrink, to stand at around 1 percent of GDP in 2000, the rate of decline was much slower than in the mid-1980s. Although this would be sufficient to guarantee a budget deficit of below 3 percent in a recession, it does not guarantee a balanced budget in the medium and long term. [11]

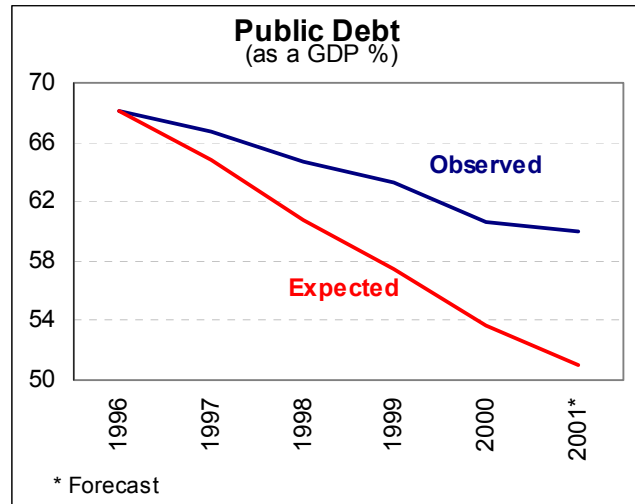
GRAPH 7



Source: BBVA.

In contrast to the experience of Ireland, falling deficits and the favourable domestic economic scene in the second half of the 1990s did not bring about any significant decline in the level of public debt. Bearing in mind that privatization receipts since 1995 amounted to over 5.5 trillion pesetas, this development is particularly worrisome. Public debt in 2000 was still running above the 60 percent of GDP limit set by the Maastricht Treaty, at 60.6 percent of GDP. Given the stock of public debt at the end of 1995, and considering both the evolution of the budget deficit and privatization receipts, public debt should have fallen to below 55 percent of GDP by 2000. Revenue from the sale of financial assets has been used to purchase new financial assets (allocations of loans and guarantees, share acquisitions, etc.). This confirms that, despite the shrinking corporate public sector, cash injections to public entities and loans extended have remained high.

GRAPH 8



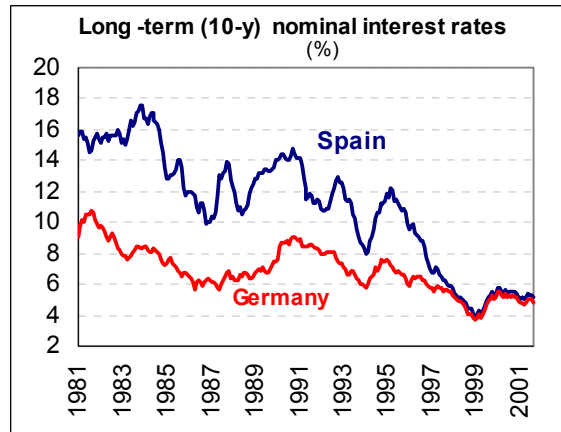
* Expected debt refers to the debt level if all privatization receipts had been dedicated to debt reduction.

Source: Ministerio de Hacienda and BBVA.

INTEREST RATES

The correction of some of the key disequilibria in the Spanish economy (inflation and the budget deficit) has been accompanied by a decline in both nominal interest rates and their volatility. Ten-year rates fell from an average of 16.4 percent in 1983 to a low point of 4.8 percent in 1999. This reduction in rates, which is a reflection of the greater macroeconomic stability and the progress in convergence with the leading European countries, translated into a decline in the long-term interest rate differential between Spain and Germany. The narrowing of spreads sped up as markets priced in the growing probability that Spain would be among the first wave of entrants to the European Monetary Union. The probability of this occurring, which in mid-1996 was only around 10 percent, had risen to above 50 percent by early 1997 and to over 75 percent by the summer of that year. As a result, the interest rate differential shrank from 390 basis points in December 1995 to 100 basis points in January 1997, and to 30 basis points in January 1998, only marginally above an average level of 27 basis points since the launch of EMU. Lower real interest rates reduce the cost of capital and hence bolster investment and the stock of capital.

GRAPH 9



Source: Bank of Spain.

Economic growth is affected not only by the level of interest rates, however, but also by their volatility. In keeping with the Fisher equation, the main component of the volatility of nominal interest rates is the volatility of inflation expectations. In so far as EMU provides a more stable environment, uncertainty seems set to fall. Sebastián and Taguas (1998) find that a permanent reduction in the volatility of Spanish interest rates to close to the historical volatility of German rates raises the growth rate of per capita GDP in the Spanish economy by 0.5 percentage points.

The process of nominal convergence has prompted a reduction in real interest rates. At the end of the 1970s, real interest rates began to rise, reaching an average level that was much higher than in the previous decade and much higher than in the EMU (7.7% and 6.7%, respectively). From 1999 onward both the level of interest rates and the differential started to come down, with the exception of 1995, to stand at around 3 percent in both Spain and the EMU at the end of the period. Lower inflation expectations and the correction of the budget deficit lie behind the decline in real interest rates, as these simply reflect the lower risk premium charged on Spanish assets. The decline in Spain's budget deficit has positive implications for national saving [12] and hence for interest rates. There is an estimated statistically significant negative relationship between fiscal surpluses and real interest rates in Spain (the estimated coefficient is -0.65 , similar to the one estimated for the EMU: -0.62). This implies that a 2 percent increase in the budget deficit corresponds to a rise of approximately 1 point in real interest rates. [13]

REDISTRIBUTION POLICIES IN THE EU BUDGET:

THE ROLE OF STRUCTURAL AND COHESION FUNDS

The structural funds (reformed in 1988) and cohesion funds (1992) [14] are the instruments designed by the European Commission to develop social and cohesion policy within the European Union (Table 4 summarizes the importance of EU funds in the four cohesion countries). These funds, which amount to just over one-third of the EU budget, have contributed significantly to reducing regional disparities and fostering convergence within the EU. They have played a prominent role in developing the factors that improve the competitiveness and determine the potential growth of the least developed regions.

TABLE 1
STRUCTURAL AND COHESION FUNDS

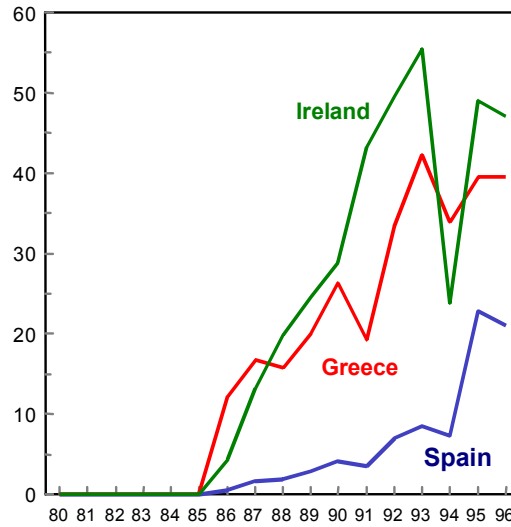
	Greece	Ireland	Spain	Portugal
GDP %				
1989-93	2,6	2,5	0,7	3,0
1994-99	3,0	1,9	1,5	3,3
2000-06	2,8	0,6	1,3	2,9
% on Gross Fixed Capital Formation				
1989-93	11,8	15,0	2,9	12,4
1994-99	14,6	9,6	6,7	14,2
2000-06	12,3	2,6	5,5	11,4

Source: European Commission. Estimates based on Eurostat data and forecast for 2000–2006.

During 1994–99 EU aid accounted for 1.5 percent of GDP in Spain (3.3% in Portugal). This is set to fall slightly in 2000–2006, to 1.3 percent of GDP. The decline reflects, on the one hand, a reduction in structural funds over the new programming horizon (structural funds will represent around 0.3% of European Union GDP in 2006, compared with 0.45% in 1999) and, on the other hand, the impact of enlargement (accession aid). This fall-off in funding will clearly affect the long-term growth of the Spanish economy.

The volume of funding has been so large that these funds cannot be omitted from any analysis of the impact of EMU on potential growth in the economies of the cohesion countries. In fact, these funds have made it possible to lessen the negative impact in the short run of compliance with the nominal convergence requirements. Specifically, the negative impact on public investment and hence on the stock of capital of the fiscal adjustment undertaken in Spain to bring the deficit below 3 percent of GDP was less pronounced because of the take-up of EU funds.

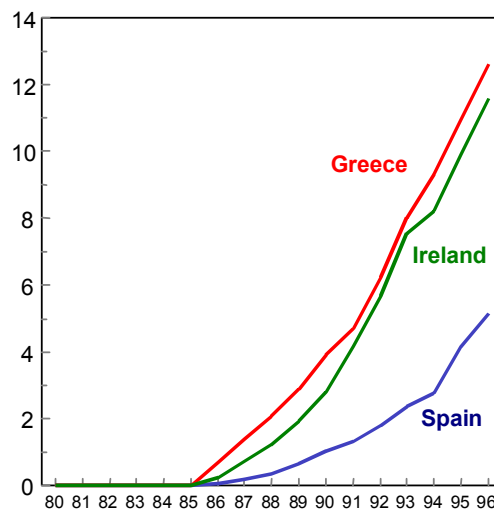
GRAPH 10
 PERCENTAGE OF PUBLIC INVESTMENT FINANCED VIA STRUCTURAL FUNDS



Source: Doménech & Taguas (1999).

GRAPH 10 displays the impact on public investment of EU funding in a number of EMU countries. It is interesting to note that the percentage of public investment financed by EU funds has been rising since 1985, to reach average values of 42 percent for Greece, 42 percent for Portugal, 40 percent for Ireland, and 15 percent for Spain from 1993 onward (the year the cohesion funds were ratified).

GRAPH 11
 PERCENTAGE OF PUBLIC CAPITAL STOCK FINANCED
 WITH EUROPEAN FUNDS



Source: Doménech & Taguas (1999).

Given the importance of the structural and cohesion funds, the data series for public investment that exclude goods financed from EU funding give some idea of their impact on the stock of public capital and their contribution to the reduction of per capita income differences with the European Union. GRAPH 11 plots the effect of EU funds on the stock of public capital. Evidently, the cumulative impact of these funds at the end of the period under consideration is highly significant: 23.5 percent in Portugal in 1977, 17.5 percent in Greece, 13.2 percent in Ireland, and 6 percent in Spain. EU funding has allowed rates of public investment to remain relatively stable since the mid-1980s, despite the fact that part of the fiscal consolidation process has been achieved at the expense of funding for public infrastructure. These effects stand in marked contrast to the modest impact in net contributor countries. For instance, the impact in Germany and the Netherlands is estimated at -0.7 percent and -1.1 percent, respectively, at the end of 1997. EU funds have, therefore, contributed heavily to convergence in per capita stocks of public capital. In the absence of transfers, these differentials would have been 47.5 percent for Greece, 44.5 percent for Portugal, 22.4 percent for Ireland, and 25.3 percent for Spain, as against the observed differentials of 33.4 percent, 35.2 percent, 13.4 percent, and 22.9 percent, respectively. [15]

In a recent paper, departing from Solow's neo-classical model (1956), Doménech and Taguas (1999) estimate that the ratio of public investment in the Spanish economy in the past few years has been 0.5 percent higher as a consequence of EU funding. This increase has in turn had a positive effect on private investment and per capita income in the long run. In the case of Spain, the cumulative long-term impact of EU funding is estimated to have produced a rise of 0.9 percent in the rate of private investment and an increase in per capita income of 1.7 percent.[16]

In its latest Cohesion Report (2001), the European Commission estimates the impact on GDP growth and employment in the cohesion countries of EU structural aid (Objective 1 funding, representing around 70% of the structural funds) approved in the last two EU budget-programming periods (1994–99 and 2000–2006). Like Doménech and Taguas (1999), they find that the main beneficiaries are Greece and Portugal, where GDP rose by 9.9 percent and 8.5 percent, respectively, in 1999, relative to that forecast in the absence of aid. The increase in Spain and Ireland is smaller—3.1 percent and 3.7 percent—although still significant.

TABLE 2

	Greece	Ireland	Spain	Portugal
1993	4,1	3,2	1,5	7,4
1996	9,9	3,7	3,1	8,5
2006	7,3	2,8	3,4	7,8
2010	2,4	2,0	1,3	3,1

Note: Deviation wrt a scenario without European Funds.

Source: European Commission, estimations based on HERMIN model (2000).

As noted earlier, EU funding (structural and cohesion funds) is set to decline over the new EU budget-programming period, 2000–2006 (see TABLE 2). Using the same methodology as in the previous case, the European Commission has estimated the impact on GDP of the structural funds at the end of the programme horizon. As might be expected, the impact weakens, but in relative terms much less in Spain than in the other countries. The estimated effect in 2006 is an increase in real GDP of over 7 percent for Greece and Portugal, 3.4 percent for Spain, and 2.8 percent for Ireland, relative to a scenario with no EU funding.

ESTIMATED IMPACT OF EMU ON GDP AND PER CAPITA INCOME

Doménech and Taguas (1999) analyse the effects on GDP growth of lower inflation, a shrinking public deficit and a more open Spanish economy resulting from economic and monetary integration in the EMU. They conclude that the long-term impact of EMU can be estimated to lead to a 3.3 percentage-point increase in the rate of private investment and a 10.4 percent rise in per capita income. [17] With regard to the latter variable, the largest effect is generated by the fall in inflation (some 4.5%), followed by the correction of the public deficit (3.8%), EU funding (1.7%), and finally the degree of openness (0.4%).

The above estimates take no account of the short-term cost of the policies applied to secure compliance with the nominal convergence criteria laid down by Maastricht. Some studies undertaken for Spain reckon that this cost amounts to around one-third of the long-term benefits. [18] Applying this result to the estimates obtained by Doménech and Taguas (1999), the conclusion is that the net effect of economic and monetary integration is likely to translate into approximately a 5.1 percent increase in per capita income.

REAL CONVERGENCE: FIFTEEN YEARS MAY NOT BE ENOUGH

Nominal convergence (interest rates, inflation, and public deficit) has been the primary objective of economic policy for the past five years. The success of nominal convergence is

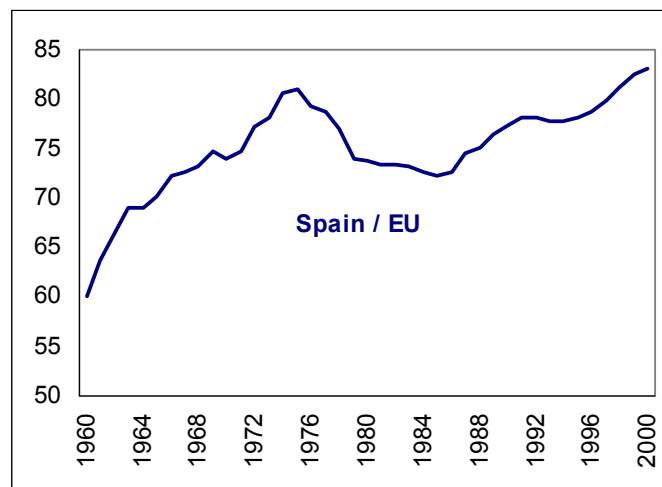
reflected in Spain's qualification as a founding member of the Economic and Monetary Union, and it is a necessary condition (but insufficient on its own) for real convergence to take place.

Nominal convergence is a necessary condition for two reasons. First, because an ECB monetary policy that inherits the credibility of the more stable countries of the European Union will translate into lower rates of inflation and dampen the volatility of inflation, which is just as important for uncertainty as the level of inflation itself. Second, a sustainable fiscal policy, as enshrined in the Stability and Growth Pact, will contribute to fiscal consolidation in the EMU as a whole. In addition, as noted above, this means that in the long run risk premiums will come down. Nominal convergence and its implications in terms of nominal stability and diminishing uncertainty, however, cannot by themselves produce real convergence.

In spite of the short-term costs of compliance with the nominal convergence criteria, the existence of irrevocably fixed exchange rates (lower volatility), the obligation to secure price stability (ECB target: to keep inflation below the 2% ceiling in the medium term) and to hold the budget deficit below 3 percent of GDP (the Stability and Growth Pact), and the continuing inflow of structural and cohesion funds have helped accelerate the process of real convergence with the major European economies.

In the past forty years, Spain's per capita income has grown at a rate of 3.4 percent annually. After correcting for purchasing power parity (PPP), per capita income has risen by 30 percent more than the average of the European economies. That said, in 2000 Spain's per capita income was still only around 84 percent of the EU average.

GRAPH 12
SPAIN'S CONVERGENCE



Source: European Commission and BBVA.

After advancing rapidly up to 1974, the convergence process slowed during 1975–84 as a result of the uncertainty associated with the political transition, a wages shock, and the two oil crises. From 1986 onward, however, the rate of convergence sped up again, before strengthening further in the 1990s. If economic growth were to outpace the European average by one point (as has occurred on average for the past 40 years), it would still take more than fifteen years for Spain to converge with Europe.

What are the factors accounting for the real convergence of the Spanish economy? In order to illustrate them, per capita income is decomposed into a set of factors that reflect both the cyclical situation of the economy (productivity and the unemployment rate) and sociological (the participation rate) and demographic (working age population) aspects specific to each country.

This gives:

EQUATION 1:

$$\frac{Y}{POP} = \frac{Y}{L} * \frac{L}{L_s} * \frac{L_s}{WP} * \frac{WP}{POP}$$

where Y/POP is per capita income; Y/L productivity; L/Ls is: (1-unemployment rate); Ls/WP the participation rate and WP/POP is the working age population as a proportion of the total population.

An analysis of the above four factors shows that convergence has been greater in productivity than in per capita income, so that by 1996 productivity in Spain had virtually caught up with that of the EU as a whole. As regards unemployment, however, the process has been in the reverse direction, so that instead of convergence there has been divergence. After standing at below 1 point up to 1978, the unemployment rate differential between Spain and the EU had widened to 12 points by 1985, oscillating thereafter in line with the economic cycle, to stand at around 6 points in the year 2000. The participation rate, meanwhile, has remained stable in the EU, but fell in Spain during 1975–84, making a negative contribution to convergence. This comes as a surprise given the speed at which women entered the Spanish labour force over those years. This did not compensate, however, for the marked reduction in male participation rates. Finally, with regard to the demographic factor, the baby boom and a falling death rate have both helped raise growth in the working-age population and hence make convergence easier. Looking forward, however, the demographic factors are expected to make a negative contribution both in Spain and the EU, although more intensely in Spain.

What contribution have these factors made to developments in per capita income? TABLE 3 and TABLE 4 report the average growth rate of each of these four explanatory factors, as well

as per capita income in different sub-periods for both the Spanish economy and the EU as a whole.

Labour productivity has been the decisive factor behind Spanish per capita income growth, having risen in the past forty years by 0.3 points more than per capita income, although its contribution is lower than in the 1990s (see TABLE 3). The most negative contribution has come from unemployment, which subtracted approximately 0.5 points from the average growth of per capita income. Its negative contribution was particularly pronounced in the years 1976–85, when it subtracted over 2 percentage points. The evolution of the participation rate has had virtually no effect, although the effect of women joining the labour force has been positive in the last ten years. Finally, the demographic factor has provided a slight positive contribution of close to 0.2 percentage points, but will gradually weaken as population ageing makes itself felt.

TABLE 3
SPAIN: GROWTH RATE OVER THE PERIOD

	Y/POP	Y/L	L/Ls	Ls/WP	WP/POP
1960-1975	5,43	6,28	-0,62	-0,06	-0,17
1976-1985	0,70	3,06	-2,08	-0,80	0,53
1986-2000	3,02	1,54	0,55	0,64	0,29
1960-2000	3,38	3,71	-0,51	-0,01	0,19

Source: BBVA.

TABLE 4
EU: GROWTH RATE OVER THE PERIOD

	Y/POP	Y/L	L/Ls	Ls/WP	WP/POP
1960-1975	3,37	3,81	-0,11	-0,14	-0,19
1976-1985	1,73	1,94	-0,65	-0,15	0,59
1986-2000	1,78	1,53	0,06	0,15	0,05
1960-2000	2,44	2,56	-0,18	-0,03	0,09

Source: BBVA.

With respect to the European Union, in the past forty years per capita income has grown by 2.4 percent annually, a percentage point slower than in Spain. Productivity has risen by 2.6 percentage points, more than 1 point less than in the Spanish economy. The unemployment rate has also contributed negatively, but to a lesser extent than in Spain. Finally, the contributions of the participation rate and the demographic factor have on average been of the same sign, although in the latter case around half that of Spain.

The growth differential of Spain vis-à-vis the European Union, practically one point for the past forty years, may therefore be said to be almost entirely attributable to advances in productivity. Indeed, the increase in productivity observed in Spain would have resulted in a

quicker pace of convergence had it not been for the larger negative contribution from unemployment in Spain.

In addition to economic policies designed to clear the way for gains in productivity, the sources of growth and real convergence in the Spanish economy should be based on: (i) the demographic factor—given the projections based on fertility rates, any significant change to this variable will depend on an appropriate immigration policy; (ii) increasing participation (higher activity rates)—this calls for increasing numbers of women in the labour market and a raising of the retirement age (implying a reversal of recent trends in the Spanish economy); and (iii) lower unemployment—this requires carrying out major structural reforms in the labour market and a larger stock of physical capital to boost demand for labour.

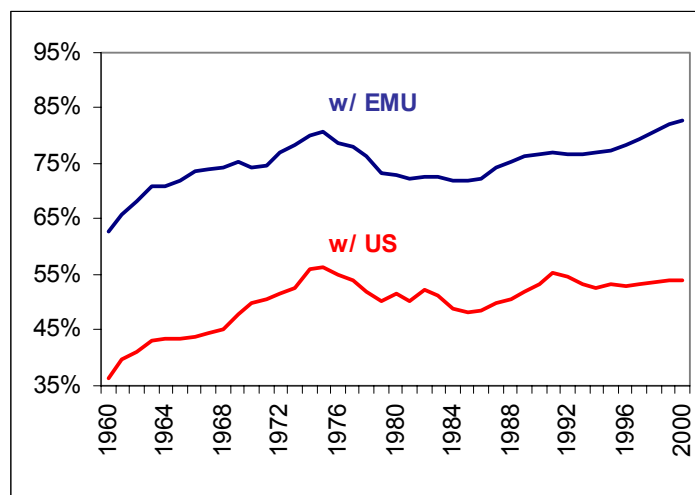
As already mentioned, the goal of economic and monetary integration in Europe, from an economic standpoint, is, first, to stimulate growth in EU countries as a whole and, second, to nurture the process of convergence between member countries. Spain's participation in EMU constitutes the culmination of the process of integration of the Spanish economy with the international environment. In this sense, compliance with the accession criteria for the Economic and Monetary Union, as laid down by the Maastricht Treaty, enabled the Spanish economy to converge nominally with the countries of the European Union. The momentum provided by this process has allowed per capita income to reach 84 percent of the EU average in 2000, up from 73 percent in 1986. Nonetheless, despite the great strides made, even if the Spanish economy were to grow at a 1-point faster rate than Europe in the years ahead, real convergence would still take more than fifteen years to achieve.

In order to assess the convergence process of the Spanish economy, it is important to look at the course of convergence over time. Up to the mid-1970s, the Spanish economy experienced a high degree of convergence. From then on, the process stalled. As a result of the changes that took place in Spain's economy and society, the ensuing decade was one of divergence rather than convergence. The process was not resumed until 1986, partly because of the impetus provided by membership of the European Union. After 1975, Spain's economic and institutional structure had to be modernized and internationalized, shifting from a highly rigid and controlled economy to a more flexible and open one. These years witnessed the industrial restructuring process, and the privatisation of state enterprises got underway, clearing the way for considerable gains in efficiency. The Spanish experience in this decade should serve as a reference for the eastern European countries that are now caught up in the process of modernising their economic structures and preparing their accession to the European Union. This suggests that, before the process of convergence with the rest of Europe begins, the Eastern European economies may experience a period of diminishing per capita income in relative

terms. The duration of this transitory period will depend on the magnitude and depth of the reforms that are undertaken.

From 1986 on, the Spanish economy has been converging continuously with Europe in real terms, though with the United States this process stalled in the 1990s, owing to the strength of U.S. economic growth over this period. GRAPH 13 shows Spanish per capita income vis-à-vis that of EMU and the United States. A look at the graph reveals how the process of convergence with the United States continued up to the mid-1980s, when real convergence ground to a halt. As a result, despite the considerable progress made, per capita income in the Spanish economy is still less than 85 percent of that of the European Union and under 55 percent of that of the United States.

GRAPH 13
CONVERGENCE OF SPAIN'S GDP PER CAPITA



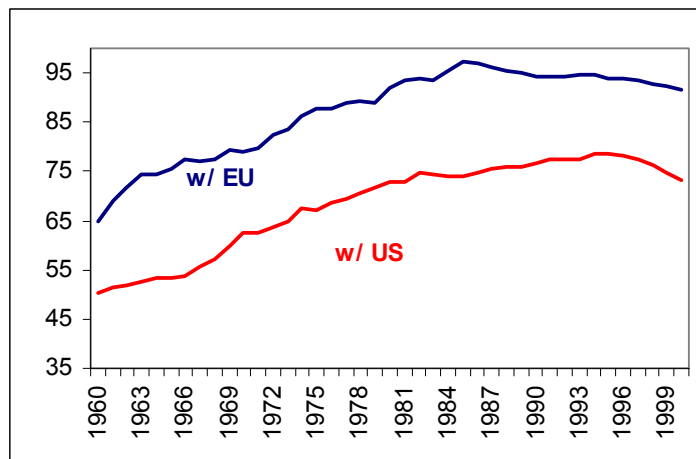
Source: European Commission.

Nonetheless, the long-term behaviour of per capita income is determined by developments in productivity. In this case the Spanish and European experiences have been more positive in relation to the United States than those of per capita income. In Spain the apparent productivity of labour has reached 75 percent of that of the United States and 80 percent in the European Union (although the trend in the past five years has been in the opposite direction). The advance in U.S. productivity in the 1990s, as a result of the impact of the technological shock connected with the 'New Economy', has led to a widening in the productivity gap between the United States and Europe.

For its part, the Spanish economy has registered even more spectacular gains in productivity than in per capita income, so that the productivity gap with Europe was almost closed by the mid-1980s. In 1960 the productivity of the Spanish economy was only 65 percent of that of

Europe and 33 percent of that of the United States. By 1985 the apparent productivity of labour had converged with that of the European Union (97%) and had risen to above 70 percent of that of the United States. Since then Spanish productivity has deteriorated vis-à-vis Europe, whereas the gap with the United States has remained unchanged. In the past few years, however, Spanish productivity has grown at very moderate rates, widening the gap with the United States and the European Union, which, in turn, has stopped converging with the United States.

GRAPH 14
CONVERGENCE OF SPAIN'S LABOUR PRODUCTIVITY



Source: European Commission.

Nonetheless, the convergence in productivity that took place during the 1980s was accompanied by a substantial rise in unemployment, which at one point climbed to above 20 percent. Likewise, the fall in the unemployment rate since 1995 has coincided with productivity gains of less than 1 percent annually. Estimates for the Spanish economy (De la Fuente and Doménech, 2000) suggest that a decline in the unemployment rate relative to the European average would push up the productivity gap by some 13 points, there being only a small impact on per capita income.

In TABLE 5 it is evident that the productivity growth differential with the United States of both Spain and the European Monetary Union, having been positive up to 1990, has now turned clearly negative. As noted earlier, not only has the European economy stopped converging in terms of productivity with the U.S. economy, but the gap is in fact getting wider. This development is particularly troublesome in Spain's case, since, with lower productivity growth rates than in EMU, the process of real per capita convergence with the euro area is also likely to slow down. If these trends continue in the period ahead, it would seriously jeopardize the convergence process of the Spanish economy.

For a more comprehensive analysis of the behaviour of Spanish productivity, we must examine the factors governing its growth. For a global view of the situation, the evolution of other factors of production (capital), the degree of substitution between them and total factor productivity (TFP), which reflects technical progress in the economy, must all be taken into account. We use a neo-classical growth model to assess the apparent productivity of labour, allowing us to disentangle the contributions of physical capital per worker from the quality of human capital and TFP, measured as the portion of productivity growth that cannot be accounted for by the other factors.

TABLE 5
LABOUR PRODUCTIVITY

	Spain	EMU	US
1961-1970	6,5	4,9*	2,3
1971-1980	4,1	2,9	0,9
1981-1990	2,3	1,9	1,3
1991-2000	1,5	1,6	2,0
1995-2000	0,7	1,2	2,4

* 1964-1970

Source: BBVA.

TABLE 6
TOTAL FACTOR PRODUCTIVITY

	Spain	EMU	US
1961-1970	3,2	2,2*	1,7
1971-1980	1,0	1,0	0,5
1981-1990	0,8	0,9	0,9
1991-2000	0,1	0,5	1,3
1995-2000	0,2	0,5	1,7

* 1964-1970

Source: BBVA.

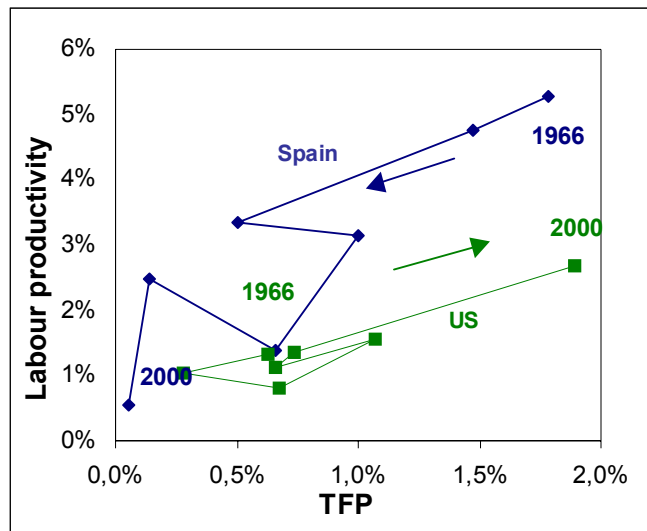
The evolution of TFP is similar to that of the apparent productivity of labour. In Spain, as in the EMU, TFP slowed down continuously from 1970 onward. This slowdown was much more intense in Spain in the second half of the 1990s, however. From 1995 to 2000 TFP grew at an average rate of 0.2 percent, lower than the 0.5 percent rate observed in the EMU. The slower growth rate of TFP in the second half of the 1990s (of the major EMU countries only France recorded a clear recovery in TFP in this period), combined with the advance in TFP in the United States, has widened the differential existing between the economic regions under consideration. These differences reflect the technological gap of the Spanish economy overall

relative to EMU, and, particularly, to the United States. In fact, Spain is far behind other countries in the promotion of R&D. Investment in R&D, as a percentage of Spain's GDP, has hardly grown in recent years, and has remained below 1 percent (compared with 2.6% in the United States or 2.2% in Germany). It remains at rates similar to Italy's spending on this heading in 1980 (see graph for R&D spending by country in 2000). For this reason it is impossible to state, at an aggregate level, that the Spanish economy, or to a lesser extent that of the EMU, is benefiting from the supply momentum created by the 'New Economy'.

The differences in the evolution of the apparent productivity of labour and total factor productivity between the United States and Spain are shown in

GRAPH 15. It is evident that, whereas in the United States both TFP and apparent productivity have steadily increased their growth rate during the last ten years, in Spain (with the exception of the crisis at the beginning of the 1990s) they have slowed continuously.

GRAPH 15
LABOUR PRODUCTIVITY AND TRP GROWTH



Source: BBVA.

Given the different behaviour of TFP in the United States, the EMU, and Spain, the convergence in productivity between these economies must reflect developments in the other factors of production: physical capital per employee and human capital.

TABLE 7
CAPITAL PER EMPLOYEE'S CONTRIBUTION TO LABOUR PRODUCTIVITY

	Spain	EMU	US
1961-1970	3,1	2,4*	0,4
1971-1980	2,7	1,7	0,3
1981-1990	0,9	0,8	0,4
1991-2000	0,9	0,8	0,6
1995-2000	0,0	0,4	0,6

* 1964-1970

Source: BBVA.

TABLE 8
HUMAN CAPITAL CONTRIBUTION TO LABOUR PRODUCTIVITY

	Spain	EMU	US
1961-1970	0,1	0,3*	0,2
1971-1980	0,3	0,3	0,2
1981-1990	0,5	0,3	0,1
1991-2000	0,5	0,3	0,1
1995-2000	0,5	0,3	0,1

* 1964-70

Source: BBVA.

TABLE 7 and TABLE 8 report the contributions of the stocks of physical and human capital to apparent productivity. The sharp increase in investment in the United States (investment in equipment and software has grown on average by 13.1% annually during 1995–2000) has translated into a substantial contribution of the stock of capital per worker to apparent productivity growth since the second half of the 1980s, overtaking in the 1990s the high points reached in the 1960s. In the EMU and Spain, the situation is very different. Not only have the rates of the 1970s, much higher in both cases than those of the United States, not been equalled, but also the contribution of the physical capital stock has continued to fall, and in the second half of the 1990s was clearly lower than in the United States. The situation is worse still in Spain, where the contribution of the physical capital stock to the apparent productivity of labour, as a reflection of the process of substitution of labour by capital that took place in Spain before 1985 and between 1989 and 1993, has slowed down during the last phase of expansion. This may be a reflection, on the one hand, of the wage containment of the second half of the 1990s, or, on the other hand, of the moderate increase in investment in relation to other economic expansions (an average of 8.4% annually in 1995–2000, compared with 13.9% in the second half of 1980s).

The stock of physical capital in Spain has increased twelve fold in the last forty years, while in the same period it has only increased eightfold in the EU and threefold in the OECD. This

represents an important impulse to convergence in this factor of production. The most important thrust took place in the second half of the 1980s, owing to the structural change that took place with Spain's entry into the European Community. Another factor (noted earlier) is the impact that the structural funds have had on the accumulation of capital in the Spanish economy (6% of Spanish public capital has been financed with European funds). The strong impulse toward convergence in the capital stock that took place in the second part of the 1980s had slowed considerably by the mid-1990s, with the result that convergence was not realized. The Spanish economy's physical capital stock is still around 70 percent of the EU average, and is only higher than that of Portugal, Ireland and Greece. As for public capital, the accumulated stock is a little higher than that of private capital (in EU terms), that is to say, 83 percent of the EU average.

All in all, technical progress and the stock of physical capital have contributed only moderately to growth in the apparent productivity of labour in Spain, especially in the last decade. Its meagre relative advance is attributable, fundamentally, to the improvement registered in the quality of human capital. Unlike in the EMU and the United States, human capital in Spain accounts entirely for the slight increase in apparent productivity. This fact is compatible with the increase in the percentage of the working population with advanced studies (in 1977 21% of the labour force had pursued their studies to a secondary or tertiary level; in 2000 this had increased to 71%). This permits certain optimism concerning the future evolution of productivity, as human capital will permit a more efficient use of the new technologies.

Despite this, Spain's accumulated human capital is still significantly lower than that of neighbouring countries (around 75% of that of the EMU). The challenge is to continue the process of convergence in human capital while increasing the participation rate to a European level.

A breakdown of the apparent productivity of labour using a production function also allows us to estimate the potential GDP of the economy. Thus, the potential GDP of the Spanish economy is between 2.6 percent and 2.8 percent, whereas that of the United States and the EMU, estimated using the same method, are around 3.5 percent and 2.2 percent, respectively. This implies that the income per capita in Spain will not converge in the medium term with that of the United States, and that, owing to the small growth differential with the EMU (approximately 0.5%), it will take several decades for Spain to achieve convergence in real terms with the EMU.

Moreover, although important advances have already been made in restructuring the production system, more far-reaching reforms are still necessary to guarantee a sustained future growth. As mentioned earlier, the reforms carried out in the decade 1975–85 caused a slowdown in the convergence of the Spanish economy, but made room for the subsequent acceleration and allowed Spain, first, to enter the European Community and, later, to join the EMU. In spite of

this, Spain still has one of the highest levels of regulation among OECD countries in both the labour market (collective bargaining, high firing costs, etc.) and in the goods and services market (regulation of trading hours, obstacles to the creation of companies, the slow judicial process). Thus a further impulse is necessary in order to place the Spanish economy among the most competitive in the world.

CONCLUSIONS

The Spanish experience within the EU has allowed its economy to become integrated internationally and to modernize, thus securing convergence in nominal terms with Europe. However, it still finds itself far from achieving one of its main objectives. In spite of the progress made, the Spanish economy has still to achieve convergence in real terms, reconciling convergence in productivity with that of other factors of production and with the creation of employment. In terms of convergence and growth in the long run, fifteen years will not be long enough. Moreover, Spain must aspire not to convergence with the European average, but with the most developed countries. And in this process, we still have a long way to go.

NOTES

1. The Preferential Agreement signed in 1979 between Spain and the countries of the EEC boosted Spanish exports.

2. Although important strides had already been made in tariff dismantling, as of then: (i) the quantitative restrictions still in place for a number of products (consumer goods) were eliminated; (ii) the **IGTE** and luxury taxes were replaced by VAT; (iii) final adjustments at the point of entry were scrapped; and (iv) the common external tariff was gradually adopted.

3. De la Dehesa, Ruiz, and Torres (1991), Buisán and Gordo (1997), and Doménech and Taguas (1997) review the role of taxation in Spain's external sector.

4. In 2000 the technology-intensive sectors represented 22.4 percent of total trade in manufactured goods, compared with 19.1 percent in 1999.

5. Integration in an exchange rate mechanism like the EMS generates a credibility and discipline effect that contributes to a reduction in inflation expectations.

6. Fearing a reduction in firing costs as a consequence of the 1994 labour reform, the trade unions scaled back their wage demands.

7. The official ECB interest rate in 2000 was on average 4.0 percent, whereas a Taylor-style monetary rule was recommending rates of over 6 percent for Spain. The Spanish economy is at a more advanced stage of the cycle than the EMU as a whole and higher interest rates were needed. Fiscal policy has not been restrictive enough to offset the expansionary monetary policy stance, so that the policy-mix is expansionary for the cyclical position of the Spanish economy.

8. An average increase in inflation of 1 percentage point is found to raise the level of steady-state income by between 0.5 percent to 0.75 percent. This effect doubles if inflation is below 5 percent.

9. A new labour market reform was approved in 2001 as an extension of the 1997 reform. The key issues such as collective wage bargaining, a generalized cut in firing costs, or changes to unemployment benefit were not addressed.

10. Tax revenue (including social security contributions) increased as a proportion of GDP by 1.4 percentage points.

11. In the case of the Spanish economy, estimates show that, in the event of a recession, the economic cycle is likely to swell the budget deficit by 1.5 percentage points of GDP, so that the maximum structural deficit compatible with the Stability and Growth Pact is of the order of 1.5 percent of GDP.

12. Doménech, Taguas, and Varela (1997) find that a 4-point increase in the national saving rate raises the rate of GDP growth by 0.3 percentage points.

13. This result holds when the structural deficit is used, since the coefficient for the Spanish economy is estimated to be -0.66 .

14. The creation of the cohesion funds was approved at the Maastricht summit in order to compensate for the efforts that countries with the lowest per capita income relative to the EU (Ireland, Greece, Portugal, and Spain) would need to make in the short run to comply with the nominal convergence criteria.

15. Spain is the biggest recipient of EU funds in absolute terms and, although when they are expressed in per capita terms the amount of funding decreases considerably, the differential with the EU is approximately 10 percent smaller than it would have been without such funds.

16. In the case of per capita income, the impact is measured in terms of deviations from the steady state that would have been reached in the absence of EU funding.

17. Inflation is assumed to fall from 5 percent to 2 percent, and the structural deficit from 6.6 percent to 2 percent; the degree of openness is assumed to rise at a constant 4 percent rate, and EU funds are assumed to increase public investment by 0.5 percent.

18. See Dolado, González-Páramo, and Viñals (1997) and Andrés, Hernando, and López-Salido (1998).

REFERENCES

- Andrés, J., and I. Hernando (1996): *¿Cómo afecta la inflación al crecimiento económico? Evidencia para los países de la OCDE*. Documento de trabajo, nº9602, Banco de España.
- (1997): ‘Does Inflation Harm Economic Growth? Evidence for the OECD’, Working paper, nº 9706. Research Department, Bank of Spain.
- Andrés, J., I. Hernando, and M. Krüger (1996): ‘Growth, Inflation and the Exchange Rate Regime’, *Economic Letters* 53, pp. 61–65.
- Andrés, J., I. Hernando, and D. López-Salido (1998): ‘The Long Run Effect of Permanent Desinflation’, Working paper, nº 9825. Research Department, Bank of Spain.
- Bachetta P., and M. Sebastián (1998): ‘Farewell to the Peseta: Macroeconomic Aspects’, *Situacion*. Research Department, Banco Bilbao Vizcaya, July, pp 89–105.
- Baldwin, R., J.F. Francois, and R. Portes (1997): ‘The Costs and Benefits of Eastern Enlargement: The Impact on the EU and Central Europe’, *Economic Policy*, April nº 24, pp 97–105.
- Balmaseda, M. et al. (2000): ‘The Spanish Economic “miracle”: A Macro Perspective’, *Situacion Spain*. Research Department, Banco Bilbao Vizcaya Argentaria, June, pp 19–24.

-
- Bosca, J.E., R. Doménech, and D. Taguas (1999): 'La política fiscal en al Unión Económica y Monetaria', *Moneda y Crédito* 2008, pp 267–324.
- De la fuente, A., and R. Doménech (2000): 'Human Capital in Growth Regressions: How Much Difference Does Data Quality Make?', CEPR, Discussion Paper, nº 2466, Centre for Economic Policy Research.
- Dolado, J.J., J.M. Gonzalez-Páramo, and J. Viñals (1997): 'A Cost-Benefit Analysis of Going from Low Inflation to Price Stability in Spain', Working paper, 9728. Bank of Spain.
- Dómenech, R., D. Taguas, and J. Varela (1997): 'The Effects of Budget Deficits on National Saving in the OECD', Paper presented at European Economic Association 1997 (Toulouse), Mimeo, Ministry of Finance.
- Dómenech, R., and D. Taguas (1999): 'El impacto a largo plazo de la Unión Económica y Monetaria sobre la economía española', in *El euro y sus repercusiones sobre la economía española*. Fundación BBV, pp 92–138.
- European Commission (1999): Report on progress towards convergence and recommendation with a view to the transition to the third stage of economic and monetary union. COM (1998).
- (2000): *Public Finances in EMU*, Reports and Studies, Nº 3.
- (2001): 'The Economic Impact of Enlargement', *Enlargement papers*, Directorate General for Economic and Financial Affairs.
- Hernansanz, C. et al. (2001): 'El enigma de la productividad', *Situacion España*, Research Department, Banco Bilbao Vizcaya Argentaria, June, pp. 25–31.
- Research Department, Banco Bilbao Vizcaya (1998): 'EU Structural Deficits', *Situacion*, March, pp 28–29.
- (1998): 'The Competitiveness of the Spanish Economy', *Situacion*, November, pp 47–48.
- (1998): 'Déficit públicos y tipos de interés reales', Informe anual, p. 120.
- (1999): '¿Se cumple la hipótesis Balassa-Samuelson para la economía española?', *Situación España*, December, pp 51–52.
- (1999): 'Los retos de la economía española', Informe anual, pp. 171–77.
- Sebastián, M., and D. Taguas (1998): 'Will EMU Affect Long-term Growth in Spain's Economy?', Working Paper, Research Department, Banco Bilbao Vizcaya.