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Spain: Selected Issues

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SPAIN

Selected Issues

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Approved by the European I Department

February 27, 1998

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Basic Data

Area	504,800 square kilometers
Population 1996	39.3 million
Labor force 1996	15.9 million
GDP per capita (in thousands of pesetas) 1996	Ptas 1,873 (US$12,793)

Use and supply of resources (1996)	In billions of pesetas	In percent
Private consumption	45,669.5	62.1
Public consumption	12,121.9	16.4
Fixed investment	14,871.0	20.2
Stockbuilding	268.6	0.4
Gross domestic expenditure	72,931.0	99.1
Exports of goods and services	18,761.7	25.5
Imports of goods and services	18,120.9	24.6
Gross domestic product	73,571.8	100.0

Selected economic indicators (annual percentage change)	1994	1995	1996
Real domestic demand	1.3	3.2	1.4
Real GDP at market prices	2.2	2.7	2.3
Unit labor costs in manufacturing	-2.4	-0.8	5.3
Consumer prices (period average)	4.7	4.7	3.6
Consumer prices (end-of-period)	4.3	4.3	3.2
Unemployment rate (period average)	24.2	22.9	22.2
Public sector accounts (in percent of GDP)			
General government			
Current revenue	40.4	39.1	39.7
Current expenditure	42.2	41.2	40.6
Capital expenditure (net)	4.5	4.4	3.5
Overall balance (Maastricht definition) 1/	-6.3	-6.6	-4.4
Balance of payments (transactions basis; in billions of pesetas)			
Trade balance	-1,967	-2,194	-1,886
Net invisibles	1,054	2,334	2,110
Current account balance	-913	140	224
(in percent of GDP)	-1.4	0.2	0.3

Exchange rate per U.S. dollar 151.70 on December 31, 1997

Sources: Data provided by the Spanish authorities; and Fund staff estimates.

1/ Figures do not add up because of statistical adjustment to obtain the overall balance on a Maastricht basis.

I. Persistent Geographic Unemployment Differences and the Wage Bargaining System[1]

A. Introduction

1. Spain's unemployment rate, at a staggering 21 percent in 1997, is the highest among industrial countries. Similarly striking is the variation of unemployment rates among its 17 regions, ranging from less than 14 percent in the Balearic Islands to more than 32 percent in Andalucía. Considering a finer level of geographical disaggregation, namely that of the 50 provinces (provinces are subsets of regions), unemployment rates vary even more widely, ranging from 8 percent in Lleida, Cataluña, to 36 percent in Jaén, Andalucía (Figure 1). In addition, these differences have persisted for several years and show no sign of abating.

2. Such large, persistent differences in unemployment rates may be considered a problem for three reasons. First, in the early stages of a recovery, wage pressures will arise in areas with relatively low unemployment. With limited labor mobility, high unemployment in other areas will not moderate those pressures, and higher inflation may soon spread to the whole country, with no commensurate decline in unemployment. In other words, large geographic differences in unemployment rates may cause the nonaccelerating inflation rate of unemployment (NAIRU) to be higher than otherwise. Second, persistent unemployment imbalances constitute evidence that the labor market does not function properly, in that adjustment to past shocks is exceedingly slow. They also suggest that there may be scope for reducing unemployment in those areas where it is more severe, thereby lowering the nationwide unemployment rate. Third, for a given national unemployment rate, the overall human cost of unemployment may be higher if the unemployed are not distributed evenly over the country's territory. In fact, social welfare is lower if one family has two members unemployed and another has both members employed than if both families have only one member unemployed.

3. This chapter analyzes the sources of the persistence of geographical unemployment imbalances and low speed of adjustment to regional labor demand shocks. It argues that, under present labor market arrangements, these imbalances are unlikely to be corrected in the near future. In particular, the current wage bargaining system appears to be excessively centralized and to result in nationally set wages that are too high to reduce unemployment in high-unemployment areas. To support that claim, this study provides new evidence that there are no significant differences in unit labor costs and real wages between high-unemployment and low-unemployment areas, resulting in muted incentives for firms to migrate and implying that incentives for workers to migrate are only provided by differences in unemployment. This study also estimates in detail how different groups of workers (five groups sorted by skill level, ranging from the illiterate to university graduates) respond to regional labor demand shocks, and relates their respective speed of adjustment to current features of the labor

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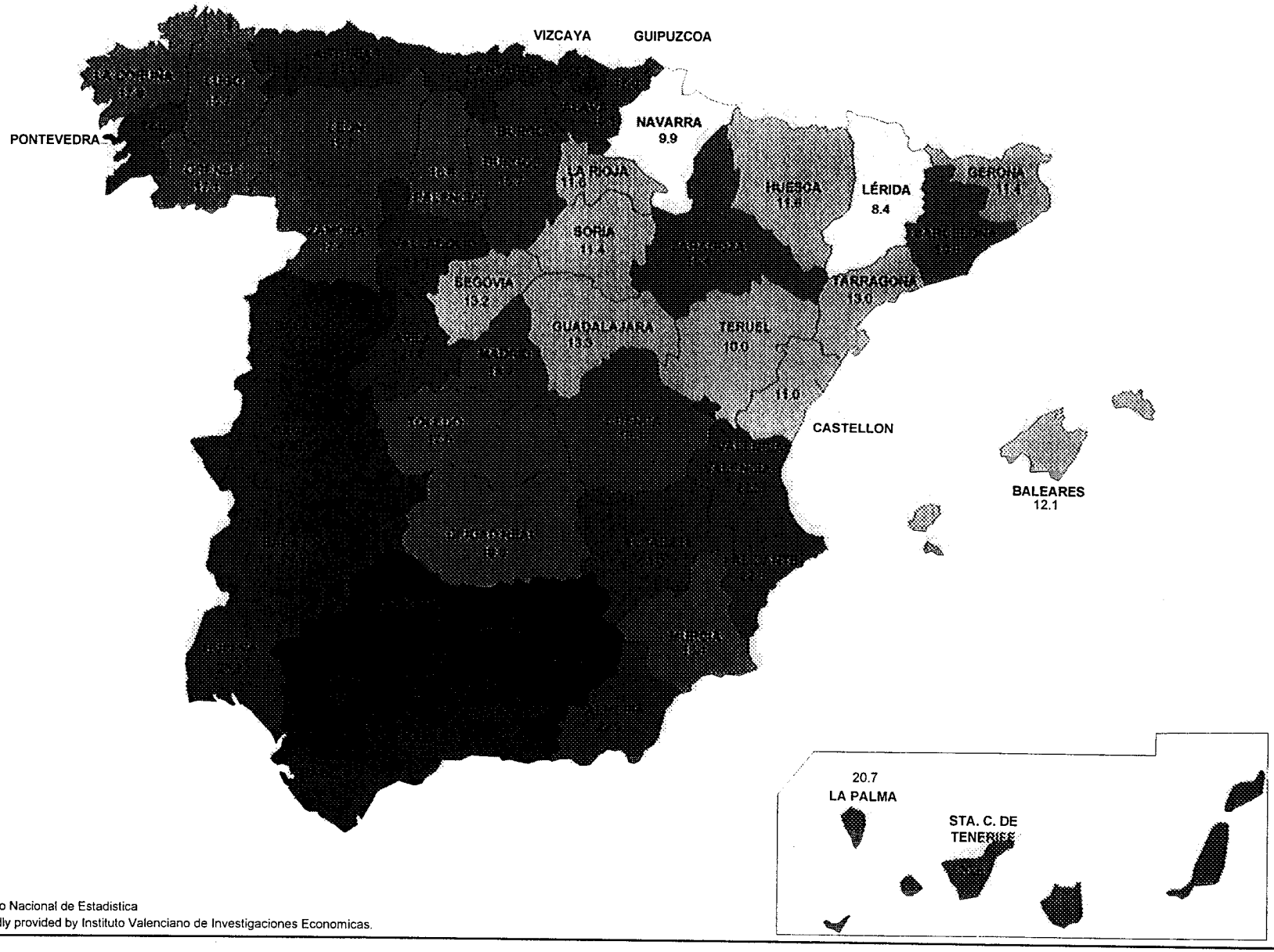
[1]Prepared by Paolo Mauro (EU1) and Antonio Spilimbergo (RES).

Figure 1. Spain: Unemployment Rate by Province - 1997, Second Quarter



Source: Instituto Nacional de Estadistica
Map frame kindly provided by Instituto Valenciano de Investigaciones Economicas.

market. It makes policy suggestions to reduce the NAIRU and promote faster adjustment to regional shocks. It argues that the wage bargaining system should be decentralized to the individual firm level. It also suggests a number of measures that are likely to have the greatest impact on the low skilled, where the problems are most serious.

B. Geographic Differences in Unemployment Rates, and Their Persistence

4. There is a wide range of unemployment rates among Spanish regions, though **patterns** in their distribution are not easy to identify. A broad generalization could be that the Southern, agricultural regions, such as Andalucía and Extremadura, and some of the Northern regions with declining industries, such as País Vasco, Cantabria, and Asturias, tend to have higher unemployment. At the same time, the geographical distribution of unemployment rates in Spain is not as straightforward as in other countries characterized by large regional differences.[2] In Spain, there is no clear North/South divide; there is no simple relationship between unemployment rates and proximity to the markets of the rest of continental Europe; the sectoral composition of output provides only a partial explanation for unemployment differences; and, finally, and perhaps most interestingly, the correlation between unemployment rates and GDP per capita or productivity is relatively low, as shown in Section D.

5. Nevertheless, even though generalizations may not be easy, it is clear that a regional dimension of the unemployment problem exists: in fact, regional dummies explain individuals' employment status to a significant extent when controlling for personal characteristics such as age, gender, and education. In addition to the large differences among regions, there is also substantial variation in unemployment rates among provinces *within* regions. Again, it is difficult to identify clear patterns, but provinces dominated by large cities seem to have somewhat higher unemployment rates than provinces with only small urban centers.

6. Whatever the determinants of the geographic distribution of unemployment rates, however, there is compelling evidence that the current pattern has **persisted** for a long time. The sharp increase in unemployment experienced by the country as a whole since the late 1970s has affected all regions. There have been almost no changes in the regions' ranking by the unemployment rate, and absolute differences in unemployment rates have widened considerably. Figure 2 reports the unemployment rates for Spain's 17 regions and shows that (a) there are only few points where lines intersect, and (b) the spread is much wider at the end of the period than at the beginning.

7. Scatter plots of the average survey unemployment rates in 1980 and 1995 for provinces reveal a remarkable correlation between the provinces that have higher

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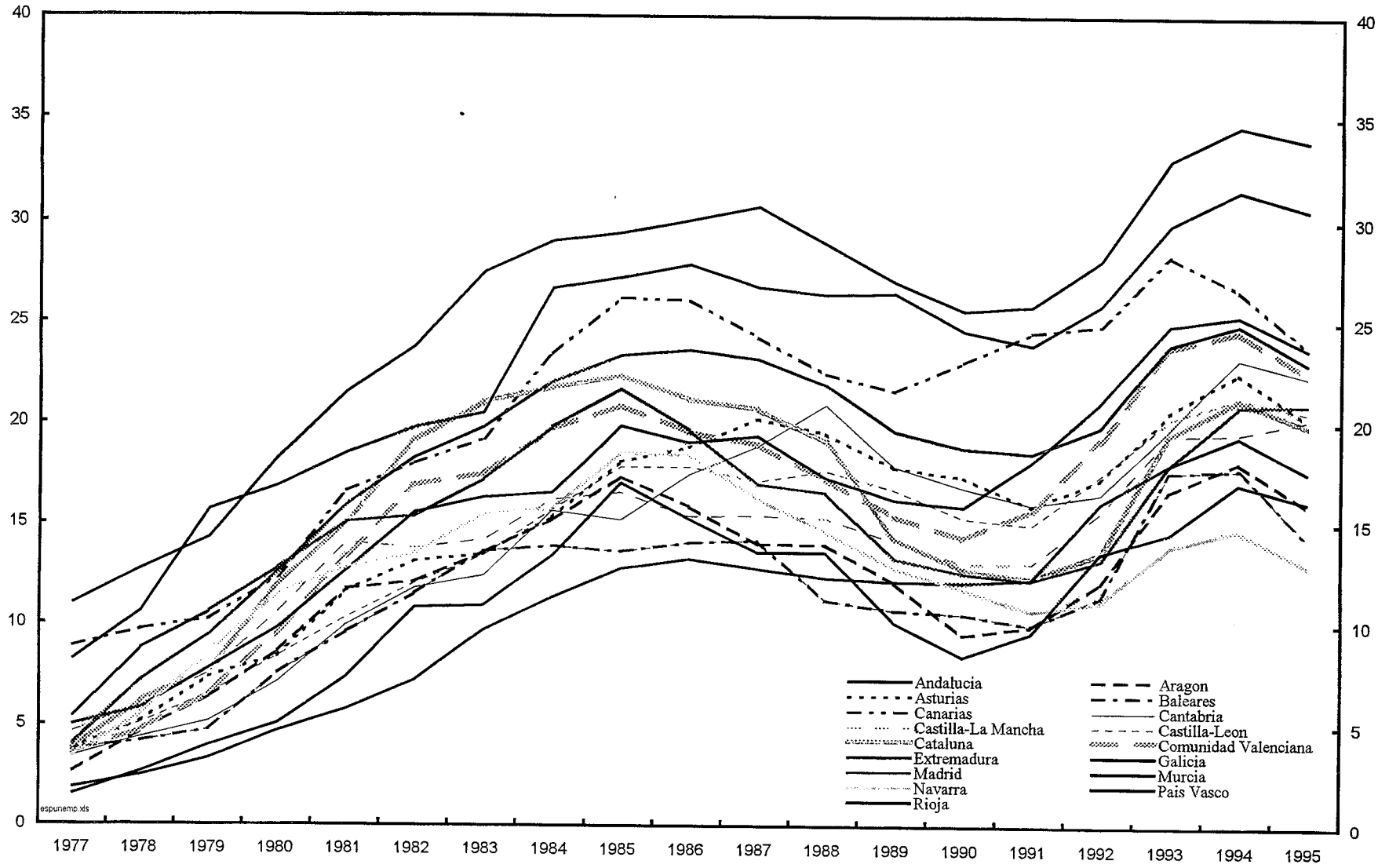
[2]The picture in Spain is not as clear as in Italy, for instance, where unemployment is higher in the Southern regions, which are further from the markets of the rest of Europe, more agricultural, and less prosperous.

Figure 2. Spain: Unemployment Rate, 17 Regions, 1977-95



Source: Instituto Nacional de Estadistica

unemployment rates today and those that had higher unemployment rates one and a half decades ago (Figure 3, top panel).[3] In other words, areas that suffered from above-average unemployment in the past continue to have above-average unemployment today. These correlations are much higher in the case of Spain than for the United States, and somewhat higher than for other European countries, especially the United Kingdom Decressin and Fatás, 1994, Obstfeld and Peri, 1998). These persistent imbalances in unemployment rates constitute prima facie evidence that something is not functioning properly in the Spanish labor market.

8. There is little doubt that geographic unemployment differences are large and persistent, in spite of uncertainties surrounding the "real" unemployment rate and the size of the underground economy in Spain. At the same time, a brief discussion on the **reliability of the data** is in order. The most important question in this context is whether high *measured* unemployment in certain areas might simply reflect a larger underground economy. In that respect, the most widely used measure of unemployment—that based on the National Statistical Institute's survey, which is conducted along internationally accepted guidelines—seems reliable. Workers in the underground economy are not asked, nor have any incentive to, report themselves as unemployed in the survey. Nevertheless, in light of the extremely high unemployment rate—21 percent for the country as a whole—estimated by the survey, it has been argued that the registered unemployment rate, which amounts only to 13 percent, might be a more reliable measure. In principle, those employed in the underground economy could well register themselves as unemployed, but in practice the checks conducted by the unemployment benefit offices may help reduce this problem. Using data from this alternative source, the same pattern of large and persistent geographic unemployment differences remains quite striking (Figure 3, bottom panel). Registered unemployment rates ranged from 11 percent in Rioja to more than 20 percent in Andalucía among Spain's 17 regions, and from 7 percent in Lleida, Cataluña, to 24 percent in Cádiz, Andalucía, among Spain's 50 provinces, in 1995.[4]

9. The degree of persistence of geographical differences in unemployment varies depending on the labor force participants' **skill levels**, providing clues as to the policy measures that would help reduce unemployment imbalances. On the whole, based upon a unique data set produced by the *Instituto Valenciano de Investigaciones Económicas* (see Data Appendix), the low skilled seem to display greater unemployment persistence than the high skilled, as shown by scatter plots of the unemployment rate in 1977 and 1992 (the last year for which data are available) in the 50 Spanish provinces for five groups of labor force participants: illiterate, primary-school educated, middle-school educated, high-school educated, and college educated (Figure 4). The relationship between unemployment in the

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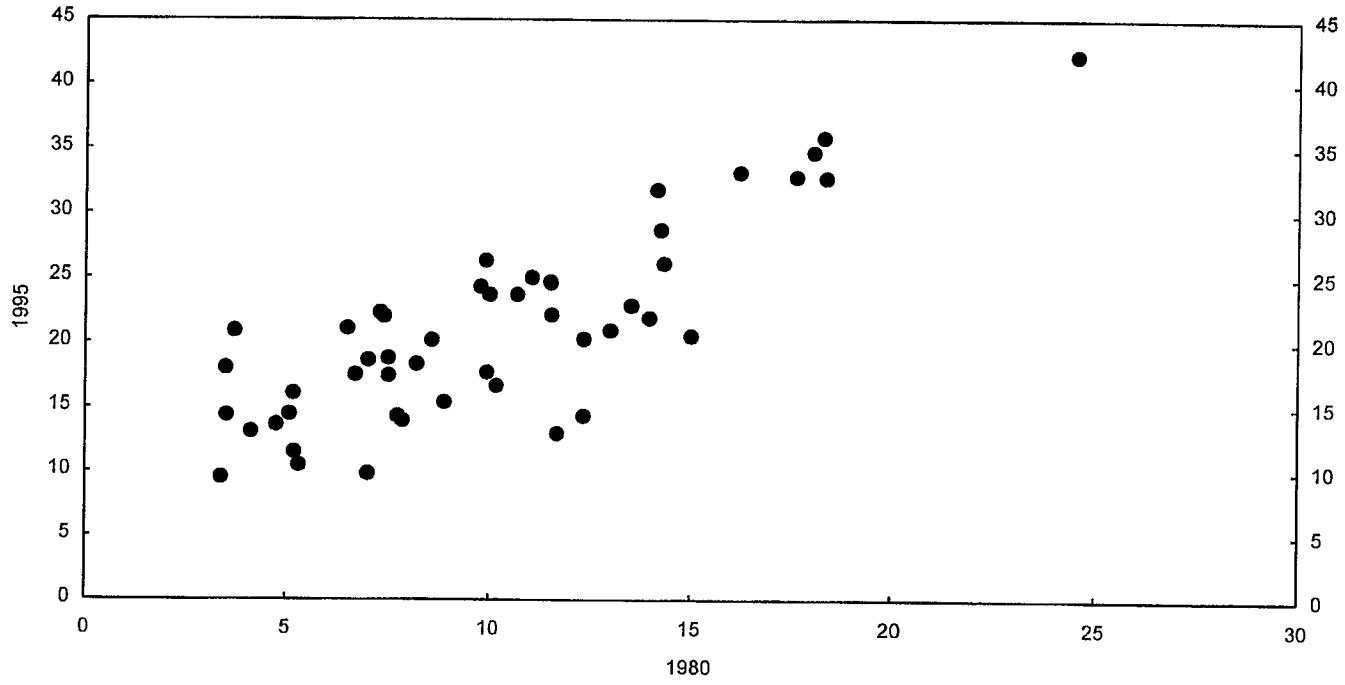
[3]The scatter plots are similar for the case of the regions.

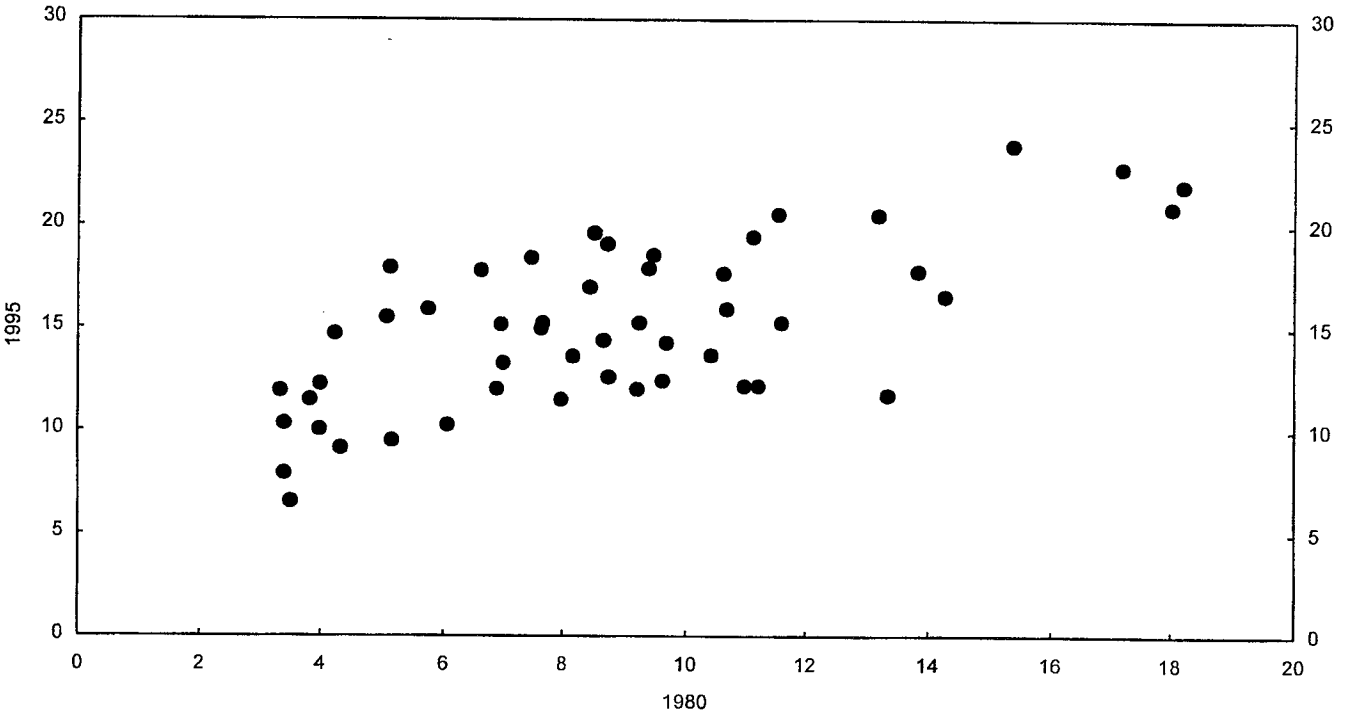
[4]Registered unemployment tends to underestimate the differences in unemployment because it excludes the 250,000 people covered by the rural employment program in Extremadura and Andalucía even at times when they are not working, often a large proportion of the year.

Figure 3. Spain: Persistence of Unemployment, 1980-95

PROVINCES SURVEY



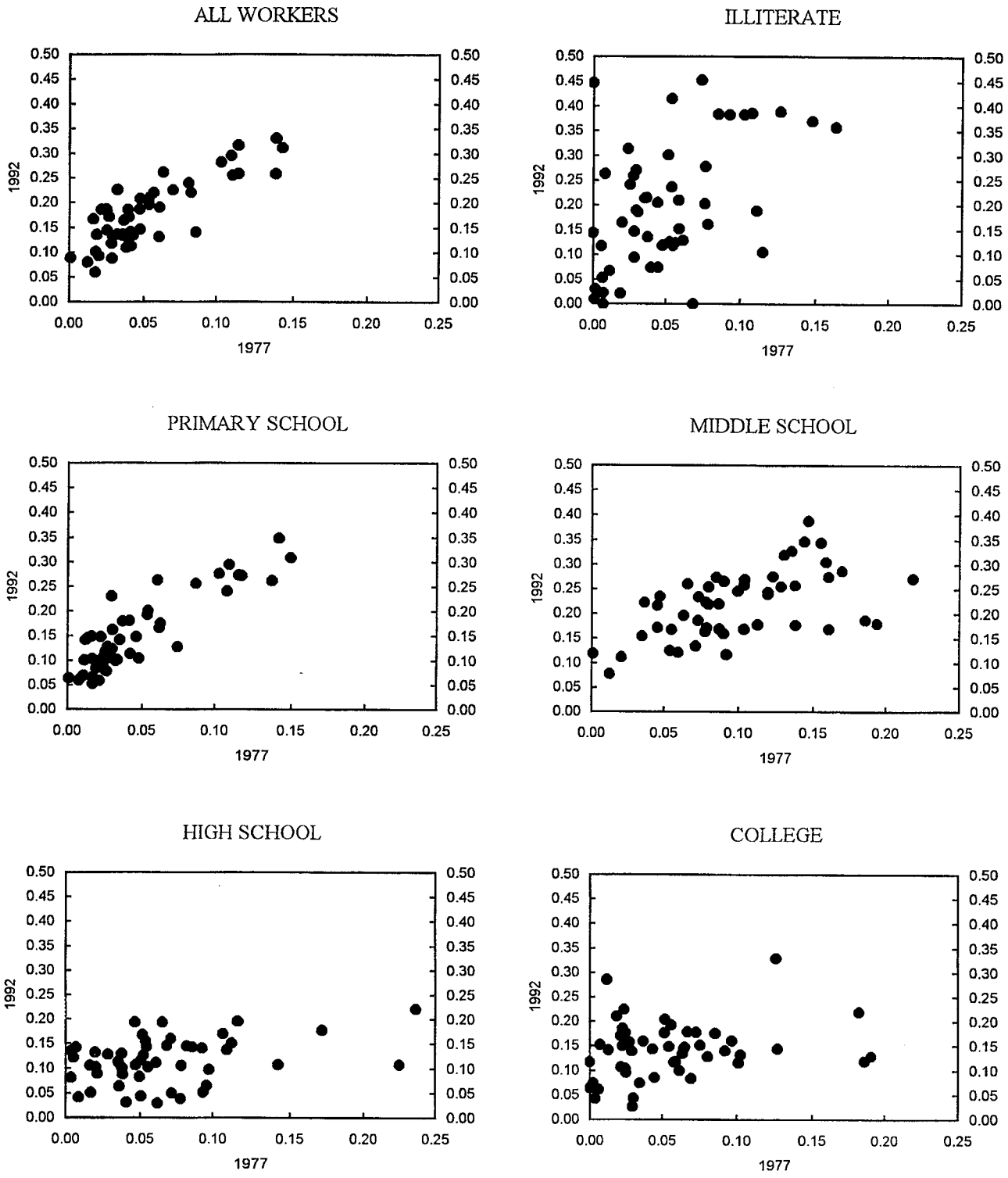
PROVINCES REGISTERED



Sources: Instituto Nacional de Estadistica; and Instituto Nacional de Empleo.

espunemp.xls

Figure 4. Spanish Provinces: Unemployment Rates, by Skill Level, 1977 and 1992



Source: Instituto Valenciano de Investigaciones Economicas.

rawdata3.xls

past and unemployment today tends to be closer among the low-skilled, and looser among the high-skilled. Table 1 reports, for each educational group, the coefficient of correlation between unemployment in 1977 and unemployment in 1992, as well as each group's share of the total labor force in 1977 and 1992.

Table 1. Spain: Unemployment Persistence by Educational Group, 1977–1992

Skill level	Coefficient of correlation	Share in the total labor force	
		1977	1992
All groups	0.83	100.0	100.0
Illiterate	0.50	4.1	1.4
Primary school	0.88	74.8	43.8
Middle school	0.56	15.1	42.8
High school	0.35	3.4	5.9
College	0.24	2.7	6.1

Sources: *Instituto Valenciano de Investigaciones Economicas;* and Fund staff estimates.

10. The coefficient of correlation between unemployment in 1977 and unemployment in 1992 tends to be higher, the less educated the labor force participants of a given group, with the exception of the illiterate, a small group for which the quality of the data is the worst.[5] Since unemployment is most persistent among the low skilled, policy efforts to raise the speed of adjustment of the labor market should focus on the less educated. This finding also provides an additional argument in favor of raising the educational quality of the workforce.

C. Potential Adjustment Mechanisms

11. In a well-functioning labor market, one would expect that geographical unemployment differences resulting from past shocks be reduced, if not altogether eliminated, relatively quickly. This section briefly describes the potential adjustment mechanisms.

• **Migration of firms.** Ample availability of unemployed labor in a given area should encourage firms to move there, particularly if widespread, persistent unemployment has reduced wages and this labor is now cheaper (adjusting for differences in productivity) than elsewhere. This is a relatively unexplored mechanism, owing to the limited availability of

[5]The results need to be interpreted bearing in mind that, other things being equal, larger groups (in the present case, the primary-school and the middle-school educated) will tend to show a better fit simply because they are subject to fewer idiosyncratic changes.

information on the migration of firms, but in a well-functioning market it could play a major role in reducing unemployment differences.

• **Creation of new jobs by existing or new local firms.** Following a decline in labor demand, if lower wages were to result from the new availability of unemployed workers, job creation by existing or new local firms would be encouraged, thereby beginning to reverse the initial fall in labor demand.

• **Changes in the labor force participation rate.** When an area is characterized by high and persistent unemployment, it is likely that some unemployed workers will become "discouraged" and drop out of the labor force. Of course, this is a less desirable way to reduce unemployment than through other mechanisms.

• **Migration of workers.** When unemployment is very high in a given area, it is reasonable to expect that unemployed workers will migrate to seek jobs elsewhere. Unemployment itself is obviously the most powerful incentive to migrate. However, if a decline in labor demand were to be accompanied not only by higher unemployment, but also by a decline in wages, the incentives for the unemployed to leave the area would be even greater. Since this last mechanism played an important role through the 1960s, it may be interesting to analyze why it has ceased to do so.

12. Migration flows, both toward other countries and within Spain, were very large in the 1960s, but they dropped sharply beginning in the late 1970s. The main reason for this decline is likely to be that **absolute unemployment rates** rose in the whole country as well as in the rest of Europe, as it is well known that workers tend not to migrate, regardless of how bad prospects are in their current location, if the chances of finding a job once they reach their destination are low. This phenomenon of falling migration at a time of rising absolute unemployment has been well documented not only in the case of Spain , but also in other countries, including Germany, Italy, and the United Kingdom. However, the rise of the absolute unemployment rate does not provide a full explanation for labor force participants' reluctance to move, since less than half of unemployed workers declare that they would be willing to fill a vacancy in another region.

13. In sum, a number of mechanisms could be expected to reduce imbalances in unemployment rates, but they have failed to operate in the case of Spain. Among them, wage flexibility plays a key role. Section D analyzes the extent to which wages respond to local labor market conditions.

D. To What Extent Do Wages Adjust?

14. In spite of large and persistent differences in unemployment, unit labor costs and real wages do not differ much in the high-unemployment and the low-unemployment areas. This is contrary to what one would expect in a well-functioning labor market, in which wages in areas

that have been bedeviled by high unemployment for a few years would normally fall to attract firms and encourage workers to leave, thereby correcting unemployment imbalances.

15. Section B has shown that there are large imbalances in unemployment rates among the Spanish regions and provinces. There are also considerable differences in salaries, prices and productivity among the various parts of the country. For example, consider the differences between the province of Barcelona, one of Spain's most economically advanced cities, which has an unemployment rate of 18 percent, and the province of Badajoz, Extremadura, in the agricultural south, which has an unemployment rate of 32 percent. Nominal wages are 21 percent higher in Barcelona than in Badajoz, but consumer prices are 16 percent higher, resulting in real wages that are only 5 percent higher. Productivity is 37 percent higher in Barcelona than in Badajoz, resulting in unit labor costs that are 16 percent *lower* in the former than in the latter.[6]

16. The comparison between Barcelona and Badajoz illustrates three simple points. First, there are considerable differences in wages, prices, and productivity, as well as in unemployment rates, among the various parts of the country. Second, even when there are large differences in nominal wages, differences in prices and in productivity can imply that differences in real wages or in unit labor costs are much smaller, or even in the direction of promoting further geographic divergence in unemployment. Third, differences in unemployment rates do not seem to be closely associated with differences in real wages or unit labor costs, as shown below by more systematic analysis.

17. A simple, systematic way of analyzing the relationship between unemployment and real wages or unit labor costs is to rank the 50 provinces by their unemployment rate, split the sample in half, and observe cross-sectional averages of the variables for the two groups. Using this procedure and previously unexplored data (see Data Appendix), it is found that low-unemployment provinces do not have significantly lower real wages or unit labor costs than high-unemployment provinces, in an economic or a statistical sense. This would not be a matter of concern in a country where unemployment rates were fairly uniform or merely temporary, but in a country where unemployment differences are large and persistent, it would be desirable for wages (adjusted for consumer prices and productivity) to reflect such differences. Lower wages in high-unemployment than in low-unemployment areas would constitute a helpful market mechanism to correct unemployment imbalances.

18. **Real wages** are only marginally higher in the 25 provinces with lower unemployment than in the 25 provinces with higher unemployment, as slightly higher nominal wages are

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[6]Higher productivity in Barcelona than in Badajoz may reflect a host of factors, including better infrastructure, a more highly qualified workforce, a larger share of advanced sectors in total output, and more modern production plants.

offset to a considerable extent by higher prices (Table 2).[7] The real wage differential is insignificant both in an economic and a statistical sense, and is insufficient to encourage workers to move away from high-unemployment provinces.

Table 2. Spain: Real Wage and Unit Labor Cost Differentials, and Their Sources

(Percent differences between low-unemployment and high-unemployment areas, 1989–95 averages)

	Unempl Rate 1/	Nominal Wages	Prices	Real Wages	Productivity (GDP per worker)	Unit Labor Costs	GDP per person	Employment/ Population Ratio
All 50 Provinces (25 low-un. provinces vs. 25 high- un. provinces)	**-10.79** (0.01)	**0.49** (0.9)	**0.17** (0.89)	**0.33** (0.92)	**2.06** (0.69)	**-1.53** (0.73)	**19.81** (0.01)	**17.39** (0.01)
17 Provinces with own CPI level data (8 low-un. provinces vs. 9 high- un. provinces)	**-8.53** (0.01)	**9.22** (0.18)	**3.89** (0.05)	**5.13** (0.40)	**12.13** (0.09)	**-2.59** (0.69)	**26.40** (0.01)	**12.73** (0.01)
All 17 regions (8 low-un. regions vs. 9 high- un. regions)	**-7.77** (0.01)	**1.86** (0.77)	**2.01** (0.32)	**-0.14** (0.98)	**7.19** (0.34)	**-4.97** (0.44)	**20.54** (0.01)	**12.42** (0.01)

Source: Own calculations from *Instituto Nacional de Estadistica* data. See data appendix for details.

The data are 1989–95 averages. There are 17 regions and 50 provinces in Spain. Provinces are subsets of regions. The numbers presented in bold are the differences (in percent) between the cross-sectional averages for the low-unemployment and high-unemployment groups of provinces (or regions). The numbers in parentheses are p-values of the test of the null that the two cross-sectional averages are equal. The two groups are defined by ranking the provinces (or the regions) on the basis of the unemployment rate, and splitting the whole sample in half. All averages are geometric, to maintain the approximate validity of the identities: real wages=nominal wages-prices, and unit labor costs=nominal wages-productivity, GDP per person=productivity + employment/population ratio for the average of the differences. CPI level comparisons across provinces are only available for 17 provinces. Provinces within the same region are assumed to have the same CPI level. Nominal wages are based on survey data.

1/ Difference in percentage points.

[7]Within price indices, large differences are observed only in the case of housing prices.

19. **Unit labor costs** are even somewhat *lower* in provinces with low unemployment, as higher productivity more than offsets slightly higher wages. Even though the unit labor cost differential only amounts to 1.53 percent and is not statistically significant, the signal to firms is—if anything—to move *away* from high-unemployment areas. The same patterns are observed if the analysis is conducted at the level of regions rather than provinces (Table 2, third row).[8] Thus, even though sometimes there are large differences in real wages and unit labor costs among Spanish provinces (and regions), these differences are not systematically linked to differences in unemployment rates, so that they do not foster a correction of unemployment imbalances.[9]

20. These comparisons of unit labor costs must be interpreted with caution, owing to two types of data limitations. First, the data refer to *average*, rather than *marginal*, unit labor costs. The latter are the relevant measure for an entrepreneur choosing where to locate a new firm, and may differ considerably from the former, as in the case of a very modern plant being set up in a relatively backward area. Second, the data refer to overall unit labor costs, rather than to unit labor costs for a particular type of worker in a specific sector.[10] Therefore, there could be significant differences in unit labor costs between high-unemployment and low-unemployment areas for certain types of workers and sectors, though they would be offset by opposite differences for other workers and sectors.

21. The current patterns of real wages and unit labor costs therefore do not bode well for a prompt reduction in geographic unemployment imbalances. In this respect, the situation in Spain bears a striking resemblance with the case of Italy, another country characterized by large imbalances in unemployment rates among its regions. In Italy, the unemployment rate stood at 22 percent in the South, compared with 8 percent in the North, in 1996. Unit labor costs were 2½ percent higher in the South than in the North in 1996, implying that firms had—if anything—an incentive to migrate *away* from the South. At the same time, the incentives for firms to migrate away from high-unemployment areas are lower than in Germany, where unit labor costs are about 30 percent higher in the east than in the west, in spite of the fact that the unemployment rate is much higher in the east (18 percent) than in the west (11 percent).

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[8]These patterns are also observed when national accounts data on the total employee wage bill (instead of survey data) are used to compute average wages in the various regions, and when value-added data are used instead of gross domestic product data.

[9]Scatter plots and regression analysis also fail to find a close association between unemployment rates and real wages or unit labor costs.

[10]The results are broadly similar when the analysis is conducted on data for industry only.

22. Not only are wage *levels* too similar in high-unemployment and low-unemployment areas to facilitate a correction of unemployment imbalances, but also there are no significant differences in **wage *growth rates*** between high-unemployment and low-unemployment provinces, suggesting that there is no tendency for the situation to improve. The average wage increases settled over 1992–1995 in all agreements between trade unions and entrepreneurs in the 25 provinces with higher unemployment rates was identical to that in the 25 provinces with lower unemployment rates (both amounted to 5.14 percent).[11] This result is consistent with other findings that wage increases do not seem to respond to local labor market conditions.[12]

E. How Does the Labor Market Adjust to Shocks?

23. The previous sections have shown that, especially in the case of the low skilled, geographic unemployment differences are large and persistent, suggesting that the labor market adjusts exceedingly slowly to local shocks. This section analyzes in detail that adjustment process, by estimating the extent to which migration takes place, the unemployment rate rises, and the participation rate falls, in response to a drop in labor demand in a given province. It traces these effects through time, comparing the immediate impact with the outcomes observed after a number of years. It also shows that the role played by the various adjustment mechanisms (migration, and changes in the unemployment rate and the participation rate) depends on the skill level of the workers that lose their jobs.

24. The questions above are addressed by estimating a vector autoregression **system** (VAR) of employment growth, the employment rate, and labor force participation, for the 50 Spanish provinces over 1964–1992. The framework adopted is identical to that developed by Blanchard and Katz (1992), who first applied it to the United States, and similar to that applied by Decressin and Fatás (1995) to Europe, and Bentolila and Jimeno (1995) to the 17 Spanish regions on quarterly data for 1976–94. As a consequence, the results obtained can be compared to those of the foregoing studies.

The system is the following:

$$\text{Employment growth:} \quad \Delta e_{it} = \alpha_{i1} + \beta_1(L)\,\Delta e_{it-1} + \gamma_1(L)\,le_{it-1} + \delta_1(L)\,lp_{it-1} + \epsilon_{iet}$$

$$\text{Employment rate:} \quad le_{it} = \alpha_{i2} + \beta_2(L)\,\Delta e_{it} + \gamma_2(L)\,le_{it-1} + \delta_2(L)\,lp_{it-1} + \epsilon_{iut}$$

$$\text{Labor force participation rate:} \quad lp_{it} = \alpha_{i3} + \beta_3(L)\,\Delta e_{it} + \gamma_3(L)\,le_{it-1} + \delta_3(L)\,lp_{it-1} + \epsilon_{ipt}$$

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[11]The cross-sectional standard deviation of the 1992–1995 average wage increase settlements for the 50 provinces amounted to 0.27 percentage point. The data refer to wage increase settlements reported to the Ministry of Labor, which includes the vast majority of agreements signed by trade unions and employers (see Data Appendix).

[12]Using data on wages from national accounts at the regional/sectoral level, Bentolila and Jimeno (1995) confirm that wages do not respond to regional unemployment rates, though they respond somewhat to productivity.

where all variables are differences between province *i* and the national average, in order to focus on developments at the provincial level that are not due to nationwide developments: $\Delta e_{i,t}$ is the first difference of the logarithm of employment; $le_{i,t}$ is the logarithm of the ratio of employment to the labor force; and $lp_{i,t}$ is the logarithm of the ratio of the labor force to the working-age population. There are two lags for each right-hand side variable, to allow for feedback effects from labor force participation and the employment rate to employment growth. (For example, a decrease in labor force participation could lower wages, thereby facilitating an increase in employment growth.) The system is estimated by pooling all observations, though allowing for different province-specific constant terms in each equation, since some provinces may have higher average employment growth, employment rates, and labor force participation rates than others, for reasons that are not captured by the explanatory variables.[13]

25. The effects of a fall in employment can be traced through time by analyzing the impulse response graphs based upon the estimated parameters of the system above. Those effects can be interpreted as resulting from of a decline in labor *demand*, under the reasonable assumption that most of the year-to-year changes in employment reflect changes in labor demand, rather than labor supply.[14]

26. The **immediate response** to a decline in labor demand in a given Spanish province does not differ much from that observed in other countries, though the effects on labor participation are higher in some cases. In response to a one percentage point negative shock to employment growth, the unemployment rate immediately increases by 0.31 percentage point, while the participation rate decreases by 0.65 percentage point (Figure 5). The remaining adjustment to the fall in employment is accounted for by migration. The simultaneous impact on the unemployment rate is similar to that estimated by existing studies for both the United States and Europe. The immediate response of the participation rate is similar to that observed in Europe, but much higher in Spain than in the United States, suggesting that the phenomenon of the "discouraged worker" plays a larger role in the former than in the latter.

27. There are more important differences between Spain and other countries in the extent and composition of adjustment to a negative employment shock **after several years**. In the case of Spain, migration is not sufficient to bring the unemployment rate back to its pre-shock level even after more than a decade. The participation rate rises back toward its pre-shock level, which it reaches after ten years. These results contrast sharply with those obtained by other studies for both the United States and the rest of Europe, where unemployment rates

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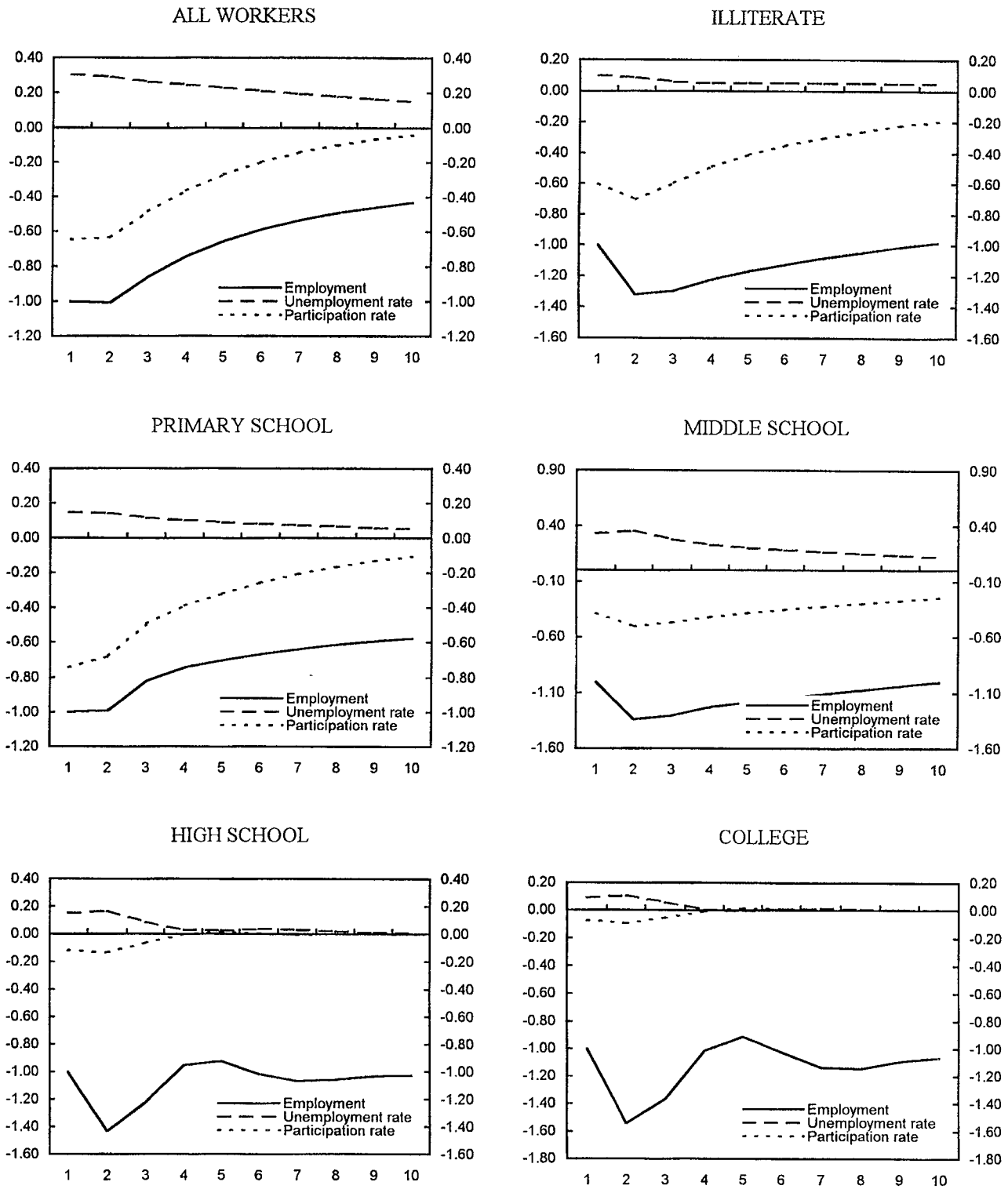
[13]Further technical issues are addressed in the Technical Appendix.

[14]Formally, the identifying assumption is that ϵ_{iet} can be interpreted as an innovation in local labor demand. Correspondingly, current innovations in local employment growth are allowed to affect local employment rates and local participation rates, but not vice versa.

Figure 5. Spain: Response to One Percent Negative Employment Shock in a Given Province



Sources: Instituto Valenciano de Investigaciones Economicas; and staff estimates.

var.xls

return to their pre-shock levels after about five years. In the United States, adverse employment shocks result in a relatively small decline in the participation rate, a small increase in the unemployment rate, and rapid migration, in the first few years. After about five years, both the participation rate and the unemployment rate are back at their pre-shock levels, and employment remains permanently at (or below) the level attained through the initial shock, with migration being entirely responsible for that full adjustment. In the rest of Europe, the overall pattern of the response to an adverse employment shock is fairly similar to that observed in the United States, though the effects on the participation rate and the unemployment rate are much larger in Europe than in the United States during the first few years, as migration is more sluggish in the former than in the latter.

28. The analysis conducted above is also applied to each of the five educational groups for which data are available, showing how workers of different **skill levels** respond differently to local shocks. Five separate systems are estimated, each of which uses data for only one of the educational groups. The results are relevant not only for the case of Spain, but also for other countries, since this is the first study (on any country) that analyzes the response to local labor market shocks *by skill level*, thanks to the unique data set compiled by IVIE. Figure 5 presents the impulse response graphs for each of the five educational groups, based upon the estimated parameters of the corresponding systems, for a one percentage point fall in the respective group's employment. The results are summarized in Table 3.

29. There are striking differences in the **immediate responses** among the various groups, particularly with respect to the participation rate and migration. In response to a one percentage point fall in employment, the unemployment rate immediately rises by 0.10–0.30 percentage point for all groups. However, while the participation rate drops by 0.60 percentage point or more in the case of the illiterate and the primary-school educated, and 0.40 percentage point in the case of the middle-school educated, it falls only by 0.10 percentage point in the case of the two top educational groups. This result is consistent with the possibility that the less educated are more likely to become "discouraged workers." Conversely, while some low skilled migrate in response to an adverse labor demand shock, migration takes place much more rapidly among the high-school educated and the college-educated, for whom the opportunity cost of not being employed is larger, since their salaries tend to be higher.

30. Considerable differences can also be observed in the extent and composition of the adjustment to a fall in labor demand, **after several years**. Rapid migration implies that the unemployment rate returns to its pre-shock levels after only three years for the high-school educated and the college-educated. By contrast, in the cases of the illiterate, the primary-school educated, and the middle-school educated, about half of the initial increase in the unemployment rate persists after a decade. In all cases, the participation rate tends to return toward its pre-shock level, but in the case of the high-school educated and the college-educated it reaches it after only three years, perhaps because the initial impact is relatively small, while in the other cases the initial effects are not fully reversed even after ten years.

Table 3. Spain: Impulse Responses to One Percentage Point Negative Employment Shock in a Province

Group	Variable	Year 1	Year 3	Year 5	Year 10	Year 20
All workers	Employment	-1.00	-0.86	-0.66	-0.43	-0.35
	Unemployment rate	0.31	0.27	0.23	0.15	0.06
	Participation rate	-0.65	-0.48	-0.27	-0.04	0.02
	Migration	-0.04	-0.11	-0.16	-0.24	-0.31
Illiterate	Employment	-1.00	-1.30	-1.17	-0.98	-0.82
	Unemployment rate	0.10	0.06	0.05	0.05	0.03
	Participation rate	-0.60	-0.60	-0.41	-0.19	-0.04
	Migration	-0.30	-0.64	-0.71	-0.74	-0.75
Primary School	Employment	-1.00	-0.82	-0.70	-0.58	-0.52
	Unemployment rate	0.15	0.12	0.09	0.05	0.02
	Participation rate	-0.74	-0.49	-0.31	-0.10	0.00
	Migration	-0.11	-0.21	-0.29	-0.42	-0.49
Middle School	Employment	-1.00	-1.30	-1.18	-1.00	-0.79
	Unemployment rate	0.33	0.28	0.20	0.13	0.05
	Participation rate	-0.38	-0.47	-0.38	-0.24	-0.10
	Migration	-0.29	-0.55	-0.59	-0.63	-0.64
High School	Employment	-1.00	-1.22	-0.92	-1.03	-1.04
	Unemployment rate	0.15	0.09	0.03	0.01	0.00
	Participation rate	-0.11	-0.06	0.01	0.00	0.00
	Migration	-0.72	-1.07	-0.91	-1.02	-1.04
College	Employment	-1.00	-1.37	-0.91	-1.06	-1.09
	Unemployment rate	0.09	0.06	0.00	0.00	0.00
	Participation rate	-0.07	-0.05	0.01	0.00	0.00
	Migration	-0.84	-1.25	-0.92	-1.07	-1.09

Source: Staff estimates on data from *Instituto Valenciano de Investigaciones Economicas.*

F. Current Arrangements that Hinder Labor Market Adjustment

31. The empirical analysis in the previous sections shows that the labor market adjusts exceedingly slowly to shocks and geographical imbalances in unemployment. This section points to those current policies and arrangements that prevent rapid adjustment to shocks. It also relates each of these features of the labor market to the groups of workers (skilled versus unskilled) that they seem to affect the most.

32. The key barrier to the reduction of existing geographical unemployment differences and the prompt adjustment to local labor demand shocks seems to be the current wage bargaining system. This barrier affects labor force participants of all groups. A number of other current policies and arrangements in the labor market policies hamper the mobility of the low skilled, even though probably not that of other groups. These include programs to help agricultural workers in specific depressed areas (Andalucía and Extremadura), minimum wage legislation, and the unemployment benefit system. Finally, a number of current policies and arrangements in the housing market, and other goods and factor markets also hamper labor market adjustment for workers of all skill levels.

Labor market policies and institutions

Policies and institutions that affect all workers

- **The collective bargaining system**

33. The collective bargaining system, which covers a large majority of workers and firms,[15] plays an important role in preventing wages from falling sufficiently in the areas with high unemployment. Information on exactly how many workers are covered by each type of bargaining arrangement is scarce, but perhaps the most representative type of arrangement is one in which a given economic sector (e.g., banking) has its own national round followed by regional and/or provincial rounds. By international standards, the bargaining system in Spain is considered to have an intermediate degree of centralization (see Box 1).

34. On the surface, the complex patchwork of national, regional, provincial, and firm-level negotiations might appear to provide ample scope for geographic flexibility of wages, particularly when one considers that more than half (by number of workers) of the agreements that are signed take place at the provincial level (Table 4), and that there appears to be consensus that the number of bargaining units is, if anything, excessive. However, bargaining takes place according to a *cascading system*, in which the outcomes of agreements at the

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[15]Collective agreements are legally enforceable and apply to all workers in a given firm whether they are unionized or not. It is estimated that about three quarters of firms and workers are covered by collective bargaining agreements, even though the workers' unionization rate (10–15 percent) is low by international standards.

Box 1: The Degree of Bargaining Centralization—International Experience

Theory and Cross-Country Studies

In a seminal study that initiated a burgeoning literature, Calmfors and Driffill (1988) argued that a fully centralized national bargaining system, or a fully decentralized system with wage setting at the level of the individual firm, were better than an intermediate system in which negotiations took place at the national/sectoral level. To support that claim, they presented empirical cross-country evidence of a hump-shaped relationship between countries' degree of bargaining centralization and their *macroeconomic performance* (the latter measured by *nationwide* unemployment and inflation outcomes). The rationale for that empirical observation, they argued, was that negotiators at the national/sectoral level attempted to raise relative wages for their sector without taking into account the negative external effects (in terms of higher national wages) that they imposed on other sectors. (An additional argument could be that nationwide trade unions and entrepreneurs' associations may play a helpful role in containing wages as a part of disinflation programs.) By contrast, firm-level negotiations yielded free-market outcomes, and negotiators at the economy-wide level internalized any effects on all sectors.

Spain is usually judged to have an intermediate degree of bargaining centralization (Layard, Nickell, and Jackman, 1991). Given the large differences in unemployment rates among the various areas of the country, Spain might benefit from opting for a fully decentralized wage bargaining system. Under that system, it would be possible for wages to fall in high-unemployment areas, thereby fostering the creation of more jobs in those areas. Such decentralization becomes even more important as Spain enters EMU and consolidates its low-inflation regime, where relative price adjustment may become more difficult.

The experience of the United Kingdom

At the beginning of the 1980s, the United Kingdom was also characterized by sharp differences in unemployment rates between its northern regions, which suffered from the decline of manufacturing industry, and its southern regions, which managed to create new jobs in the services sector. In 1980–84, the United Kingdom undertook a comprehensive and deep labor market reform, which effectively decentralized the wage bargaining system from the industry or regional level to the firm level. Regional differences in unemployment have fallen sharply since then. For example, the unemployment rate dropped from 15 percent in 1984 to 8 percent in 1997 in the North of England, whereas it declined more slightly in the South-East of England, from 8 percent in 1984 to 6 percent in 1997. However, it remains uncertain whether that decentralization played an important role, especially because (a) it was accompanied by other measures; (b) the reforms may have not eliminated insider-power (Ramaswamy and Prasad, 1994); and (c) wages may still fail to respond to local conditions, as large firms pay uniform wages to their employees, regardless of the geographic location of their various plants (Walsh and Brown, 1990).

Table 4. Spain: Agreements by Type, 1995

(in percent of total)

	Agreements	**Firms**	**Workers**
Total Agreements	100.00	100.00	100.00
Firm-Level agreements	72.01	0.35	13.61
Firms in one province	62.62	0.31	6.17
Firms in one region	1.75	0.01	0.76
Firms in more than one region	7.64	0.04	6.68
Above-Firm-Level agreements	27.99	99.65	86.39
Sectoral	26.71	99.63	86.05
Within a province	24.52	78.24	55.25
Within a region	0.55	4.54	2.65
In more than one region	0.09	0.11	0.14
National	1.55	16.74	28.01
Non-sectoral	1.28	0.02	0.34
Within a province	0.99	0.01	0.14
Within a region	0.09	0.00	0.03
In more than one region	0.20	0.00	0.17

Source: *Anuario de Estadisticas Laborales y Asuntos Sociales 1995*, Ministry of Labor.

broader levels are *de facto* accepted as minimum standards for the narrower levels. For example, nationwide sectoral agreements set wage floors that are binding on all firms in the sector. The labor market reform of 1994 made it possible for firms to opt out of these agreements, though only in cases where firms' economic viability would be endangered by applying the sectoral wage increase, and with the mutual consent of employers and workers. Not surprisingly, this opportunity has been used very seldom. In any case, only about 10 percent of wage earners are covered by firm level agreements, while about 65 percent are covered by industry-wide agreements.[16]

35. In addition, to the extent that there is scope for wage flexibility, the bargaining parties may have chosen not to use it to its full extent. Perhaps, the two main trade union confederations (*Unión General de Trabajadores* and *Comisiones Obreras*) have pursued a strategy of "equal work, equal pay," resulting in a low dispersion of wage-rate increases, even since 1986, when the last economy-wide wage agreement was signed. Employers may have chosen to accommodate this strategy in order to preserve social peace, and to adopt more capital-intensive technologies.

36. The April 1997 agreement between trade unions and entrepreneurs does not explicitly call for a change in the degree of centralization of the bargaining system, but its implementation could provide the opportunity to make improvements in that area. The social partners agreed in principle to examine ways of streamlining the bargaining system. Their main concern is that, at present, the same aspects of a contract (e.g., working conditions, or wages) are often negotiated at several levels of bargaining (e.g., national/sectoral, provincial/sectoral, and firm-level), which leads to duplication of effort and confusion. The agreement lends itself to various interpretations, but one positive aspect is that it states that negotiations about wages *can* take place at the firm level. Nevertheless, there remains much uncertainty as to how the agreement will be implemented.

Policies and institutions that affect low-skilled workers

- **Programs to help workers in depressed areas**

37. Programs to help workers in depressed areas reduce incentives for these workers to accept lower wages (thereby attracting new firms) or to seek jobs elsewhere. An example is the agricultural employment plan (*Plan de Empleo Rural*), which provides farm workers in Andalucía and Extremadura with temporary jobs in state-financed infrastructure projects and unemployment assistance for a substantial portion of the remainder of the year. Under that program, which covers about 250,000 workers and accounts for about 5 percent of total expenditure on unemployment benefits in Spain, as few as 40 days' work a year entitle workers to 75 percent of the statutory minimum wage for 40–360 days a year (depending on

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[16]This is an approximation, since the data from the Ministry of Labor refer to *all* agreements, with no information on which workers are covered by more than one agreement, as is very often the case.

their age). This program reduces workers' willingness to migrate or to take up low-paying jobs in sectors other than agriculture, and represents an institutional barrier to labor market adjustment with important consequences on the low skilled in the regions where it is available.

• Minimum wage legislation

38. Spain's statutory, minimum wage, currently at 32 percent of the average adult wage (after gradually declining from 40 percent in 1985),[17] is not high by international standards.[18] Nevertheless, it may play some role in preventing wages from falling sufficiently to encourage the creation of new jobs at the low end of the pay scale. Its importance in determining labor force participants' willingness to take up jobs is increased by the fact that it affects the level of unemployment assistance and the ceiling and floor for unemployment benefits. Moreover, Spain's minimum wage is nationwide, with no adjustments for differences in the cost of living in the various areas of the country. While this institutional feature of the labor market is probably of little consequence for the high skilled, it may have important consequences for the low skilled, particularly in areas where productivity and the cost of living are low.

• The unemployment benefit/assistance systems

39. Spain's unemployment benefit system is fairly generous by international standards, though not sufficiently to explain why Spain's unemployment rate is higher than in other countries.[19] Gross replacement rates are higher than the EU average in the first month of unemployment, and net replacement rates are close to the EU average in the first month of unemployment, but below the EU average in the sixtieth month of unemployment. Unemployment benefit duration is equal to one third of the last job's tenure, up to a maximum of two years;[20] therefore, it does not stand out compared with other countries. Benefits amount to 70 percent of the previous wage for the first 6 months, and 60 percent thereafter

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[17]Workers of ages 18 and under who are employed under training contracts can be paid 85 percent of the statutory minimum wage.

[18]It is well below the average—of more than 50 percent of the average adult wage—for EU countries that have a statutory minimum wage. It is also below the average of the minimum wages set through collective agreements in EU countries that do not have a statutory minimum wage.

[19]In particular, a thorough comparison between the unemployment benefit systems and other labor market institutions in Spain and Portugal reveals that the differences between these two countries are rather limited, raising the puzzle of why unemployment is so much worse in the former than in the latter (Blanchard and Jimeno, 1995).

[20]A worker must have been employed for at least 12 months in the past 6 years to be eligible for unemployment benefits.

(with a floor of 75–100 percent of the minimum wage, and a ceiling of 170–220 percent, depending on the number of children). Once eligibility for unemployment benefits expires, workers are entitled to means-tested unemployment assistance for another 3–30 months (depending on age, number of years' work prior to dismissal, and number of children), which amounts to 75 percent of the statutory minimum wage. The Spanish unemployment compensation system is rendered particularly generous by the possibility of cumulating unemployment benefits paid by the State with generous dismissal benefits paid by the employer.[21]

40. The availability of relatively generous unemployment protection tends to reduce unemployed workers' job search efforts and to raise the participation rate, thereby contributing to high unemployment and low labor mobility. Such adverse effects are particularly important among the low skilled, because benefits are capped. One positive feature of the current design of the unemployment benefit system is that benefits are determined as a percentage of the previous wage. Therefore, if policy measures such as the decentralization of the wage bargaining system were to be undertaken, resulting in lower wages in high-unemployment areas, unemployment benefits in those areas would fall correspondingly.

Housing market arrangements

41. Current arrangements in the housing market also contribute to limiting the geographic mobility of labor. In particular, the market for rental housing is relatively undeveloped and illiquid in Spain, with more than three quarters of the population living in owner-occupied housing, compared with about 60 percent in a sample of more than twenty OECD countries (Oswald, 1997). The most striking restriction is that the minimum duration of a rental contract is five years. Illiquid rental markets make it difficult for workers to move, especially for the less affluent groups of workers, that is, typically the low skilled.[22]

Policies and institutions in goods and other factor markets

42. While it is difficult to assess the flexibility of goods markets and the degree of capital mobility in Spain relative to other countries, some current institutional obstacles seem to be

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[21]Permanent workers hired before May 1997 typically receive their full salary for 45 days per year worked, up to a maximum of 42 weeks, if they are dismissed for "unjustified" economic causes, which tends to be the majority of cases.

[22]On the basis of cross-country regressions, Oswald (1997) has suggested that undeveloped markets for rental housing may contribute to explaining higher unemployment rates, because workers find it more difficult to move to a new location where jobs might be available. However, his results may be due to the fact that high unemployment reduces migration, implying that a higher share of the population lives in owner-occupied housing.

important. To take just one example, it is often difficult to obtain permits to open new large retail outlets. Such rigidities in goods and factor markets also matter in determining the speed of adjustment to labor demand shocks. For instance, suppose that the demand for labor falls in a given region, and wages fall as a result. Lower wages might attract new firms to that area, but if there are institutional obstacles to this (as would be the case for large retail outlets), then adjustment to the initial shock will take a long time.

G. Conclusions

43. There are large and persistent differences in unemployment rates among Spanish regions, and there are no signs that these differences can be reduced in the near future under current policies and arrangements. Labor market adjustment to shocks is sluggish, especially among the low skilled. This study has identified a number of measures that would facilitate reducing unemployment in depressed regions and foster the speedy adjustment to shocks.

44. Several labor market institutions should be reformed to make it easier for the labor market to respond to shocks and for unemployment differences to be corrected rapidly. The most important reform seems to be the decentralization of the wage bargaining system to permit wages to fall in high-unemployment areas, thereby attracting firms there and providing an additional incentive for the unemployed to migrate. A successful reform to decentralize the wage bargaining system could only be undertaken with the consensus of the social partners, who would have to implement it. This measure would benefit workers of all skill levels. It becomes even more urgent as Spain joins EMU and consolidates its low-inflation environment, where relative wage adjustment may become more difficult.

45. In order to permit a better informed choice of policies to reform the wage bargaining system, it is necessary to establish exactly its current degree of centralization (e.g., by estimating more precisely the proportion of wage settlements that are affected by negotiations at the national level). To that end, it would be very useful for the trade unions and the entrepreneurs' associations to undertake a census of bargaining practices in Spain, a project that is needed anyway, if the social partners wish to implement effectively their agreement in principle to streamline the bargaining system.

46. Other measures to reform the labor market can be initiated by the government and can have significant effects among the low skilled, where the problem is worst, even if they have little impact on the high skilled. To provide the right incentives for people to take up employment, it would be desirable to eliminate programs that help workers in specific sectors in depressed areas, continue reducing the minimum wage as a ratio of the average wage, and tighten further the eligibility for unemployment benefits. These actions could be combined with targeted social welfare programs to protect the truly needy sections of the population.

47. Enhanced competition in other goods and factor markets would also help speed up the adjustment to new labor market shocks and the correction of past shocks, thereby contributing to the reduction of geographic unemployment differentials. In particular, liberalization should

be undertaken in the housing market, especially at the low end of the market, where restrictions may be higher and which would benefit the low skilled. Finally, the evidence presented in this study provides an additional reason to promote an increase in the educational level of the workforce.

48. A decentralization of the wage bargaining system combined with the other foregoing measures would lead to a considerable decline in wages in Spain's high-unemployment areas, with a corresponding decline in unit labor costs. Entrepreneurs would exploit this new opportunity by setting up new firms in those areas, leading employment to increase. Eventually, unit labor cost differences would disappear, but in the meantime unemployment differences would be reduced, too.

Data Appendix

49. This chapter makes use of a number of relatively unexplored data sets on the Spanish provinces, including on nominal wages, prices, and productivity; on wage settlements by province; and on population, labor force and employment data by province and skill level.

50. The data on working age (16–65) **population, labor force and employment** by province, by skill level, for 1964–1992, are drawn from Mas, M., F. Pérez, E. Uriel, and L. Serrano, 1995, *Capital Humano, Series Históricas, 1964–1992*, Fundación Bancaja, Spain. This is a unique data set, in that nothing comparable to it exists for other countries. It provides working-age population, active population and employment data for the 50 Spanish provinces, for people belonging to 5 groups of people with different skill levels: illiterate, primary school, middle school, high school, and college and above. The data are based on a very comprehensive data collection project conducted by the *Instituto Valenciano de Investigaciones Económicas* (IVIE). Since 1977, the basic source of information used for that project are the individual replies to the labor force survey by INE. These individual replies include information on the respondent's educational attainment, which is typically not reported with any geographical disaggregation by the INE, but constitutes the focus of the IVIE study. Prior to 1977, the information is based on less disaggregated information from the labor force survey, and other sources including censuses and statistics on schooling. All in all, while some judgment may have been applied (particularly for the illiterate in the period prior to 1977) to correct the series obtained from such a wide range of sources, the data seem very reliable.

51. Nominal **wages** data for 1989–1995, which are published only by region, were kindly supplied by province by Mr. Miguel Angel de Castro of the *Instituto Nacional de Estadística* (INE) for this project.

52. The data on relative **prices** at a given point in time are only available by region and were drawn from the *Encuesta Regional de Precios 1989*, and kindly supplied by INE. The data for 1989–1995 by province were constructed using the provincial price indices relative (time-series) to 1990=100, assuming as a starting point for each province the relative (cross-sectional) price index in 1989.

53. Data on **productivity** by province for 1989–1995 are drawn from *Contabilidad Regional de España 1989–1995, INE.*

54. The data on **wage settlements** by province, for 1992–1995, are drawn from *Anuario de Estadisticas Laborales*, Ministerio de Trabajo, Madrid, Spain. They refer to the average of all wage settlements reported to the Labor Ministry.

Technical Appendix

55. This appendix describes some key features of the individual series of employment growth, the unemployment rate, and the participation rate, and addresses a number of technical issues related to the estimation of the VAR system in Section E.

Characteristics of individual series

56. This section provides summary statistics on employment growth, the unemployment rate, and the participation rate for all workers and the five educational groups, and estimates the extent to which individual provincial series covary with national ones. It also reports the results of unit root tests.

57. **The 1964–92 average** employment growth was lowest for the illiterate and the primary-school educated, as the working-age population belonging to these groups decreased sharply during the past decades. Unemployment rates did not differ systematically by educational group over the period as a whole, since in the 1960s and early 1970s unemployment rates were extremely low for the low skilled. This is in sharp contrast to the current situation, where high unemployment rates are strongly associated with low education. The participation rate has always been much higher, the higher the educational level, ranging from 19 percent for the illiterate to 81 percent for the college educated over the period (Table 5).

58. Changes in employment growth, the unemployment rate, and the participation rate at the provincial level can be decomposed into a **national and a provincial component**. To determine the relative magnitude of the provincial components, the following regression is run for each of the 50 Spanish provinces:

$$X_{i\,t} = \alpha_i + \beta_i X_t + \eta_{i\,t} \quad \text{where } I = 1...50$$

Where $X_{i\,t}$ is the provincial variable (namely, employment growth, the unemployment rate, and the participation rate) at time t, and X_t is the same variable at the national level. Table 5 reports the weighted average (by each province's share of Spanish population) of the adjusted R^2 for the 50 regressions, for each variable, and each group of labor force participants.

Table 5. Individual Series Average Levels and Covariance with the National Variables

	All workers	Illit.	Pr. Sch.	Mid. Sch.	High Sch.	Coll.
Employment growth						
Average empl. gr. (%)	2.8	-6.0	-2.0	9.0	4.0	5.0
Average of adjusted R^2	.46	.37	.39	.56	.32	.34
Unemployment						
Average un. rate (%)	11	11	9	16	8	8
Average of adjusted R^2	.94	.76	.93	.93	.88	.88
Participation rate						
Average part. rate (%)	50	19	49	49	65	81
Average of adjusted R^2	.50	.91	.84	.95	.53	.31

59. In the case of all workers, the average adjusted R^2 amounts to 0.46 for the employment growth rate, 0.94 for the unemployment rate, and 0.50 for the participation rate. In other words, only about half of the changes in provincial employment growth and the participation rate are explained by movements in the corresponding national variables.[23] By contrast, unemployment rates at the provincial level are extremely highly correlated with nationwide unemployment rates, suggesting that unemployment rates seem to vary in near-unison throughout the country, though some provinces have always much higher unemployment rates than others. The covariance of provincial and national variables is similar for all educational groups in the case of employment growth and the unemployment rate, but is much higher for the low skilled than for the high skilled in the case of the participation rate.

60. Augmented Dickey-Fuller **unit root tests** yield the following results. Employment *levels* are integrated of order one. Unemployment rates typically have a unit root, another sign that they are persistent over time.[24] The evidence on whether participation rates have unit roots is rather mixed.

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[23]For the 50 U.S. states, Blanchard and Katz (1992) find an average adjusted R^2 of .60, suggesting that aggregate shocks explain local developments to a slightly greater extent in the United States than in Spain.

[24]This result is consistent with Bentolila and Jimeno (1995), who find high persistence in local Spanish unemployment rates. It contrasts sharply with the evidence on the United States, where unemployment rates are not persistent.

Technical issues on the VAR System

61. The specification of the VAR system estimated in Section E follows exactly Blanchard and Katz (1992), to permit international comparison of the results. Nevertheless, a number of alternative specifications were estimated to show that the results are robust to specification changes. The results are broadly similar if the system is estimated by using differences rather than levels of the employment rate, or differences of employment growth and levels of the other two variables. The results are very similar to the ones reported in Section 5 if three or four lags of all the variables are used, instead of two lags.

62. Finally, current innovations in provincial employment growth are allowed to affect provincial employment rates and provincial participation rates but not vice versa, consistent with the interpretation of ϵ_{iet} as an innovation in provincial labor demand. The covariance matrix of the residuals confirms that the contemporaneous correlation between ϵ_{iet} with the innovations in the employment rate, ϵ_{iut} and in the participation rate, ϵ_{ipt}, is very low by comparison with the variation in ϵ_{iet}. In other words, the first elements of the second and third row in the covariance matrix reported below are very small compared with the first element in the first row.

Covariance Matrix of the Residuals (all educational groups)

7.4514e-004		
3.3023e-007	1.7100e-004	
-3.2700e-007	-1.6334e-004	1.8686e-004

The covariance matrices for the other systems for the five educational groups are similar to the one reported above.

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II. A Note on the May 1997 Labor Market Reform[25]

63. Spain's Achilles' heel remains its labor market. The unemployment rate stood at 21 percent—the highest among industrial countries—in 1997. Moreover, 34 percent of wage earners—a far larger proportion than in any other European country—are currently under temporary contracts with a duration of no more than three years (Table 6 and Figure 6).[26] These workers have little job security, and entrepreneurs have few incentives to train them. Following an agreement between trade unions and employers' associations, the government introduced a labor market reform package in May 1997, which aims to reduce Spain's high unemployment rate and its large share of temporary employment.

64. The thrust of this labor market reform is to reduce effective dismissal costs, which are high by international standards. The main methods are a clarification of the causes for "justified" dismissals, which carry lower costs, and the establishment of a new type of permanent contract with lower dismissal costs. Accompanying measures are intended to promote the use of the new permanent contracts and to restrict somewhat the use of temporary contracts. The purpose of this chapter is to review the main characteristics of the reform. To help assess its usefulness, the next section briefly compares a number of key features of Spain's labor market with those of other countries. The chapter ends with a description of recent indicators on labor market performance, even though it is too early to provide a full evaluation of the effectiveness of the reform.

A. Brief International Comparison of Labor Market Arrangements

65. Although it is difficult to assess the precise extent to which labor market policies and arrangements are responsible for Spain's high unemployment rate and its large share of temporary employment, it may be useful to compare three key features of the Spanish labor market with those of other countries. First, Spain stands out among industrial countries, including European countries, with respect to high **dismissal costs**. Average dismissal costs amounted to three times the already high EU average in 1995. Statutory dismissal costs for "unjustified" dismissals (the norm in Spain) were two and a half times the EU average prior to

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[25]Prepared by Paolo Mauro.

[26]The share of temporary workers in total employment was not particularly high by international standards in the early 1980s, but it doubled after the 1984 labor market reform promoted the use of temporary contracts in an attempt to curb the rise in unemployment.

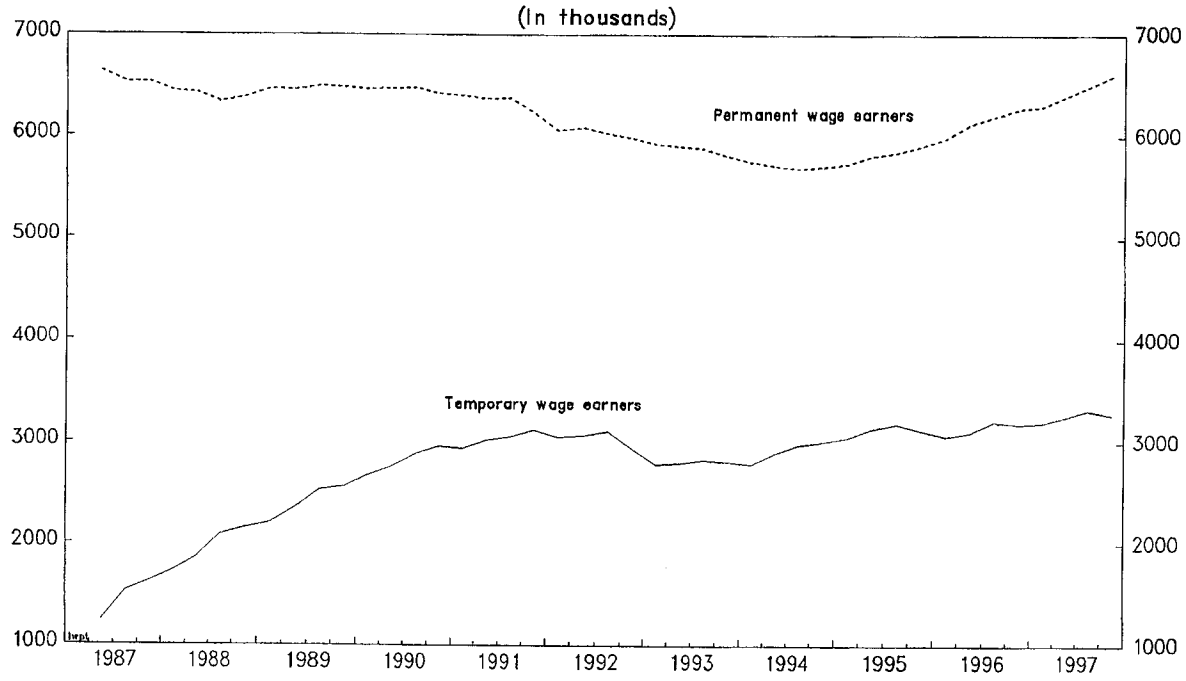
Table 6. Spain: International Comparisons of Dismissal Costs, the Share of Temporary Wage Earners, and Minimum Wage Regulations

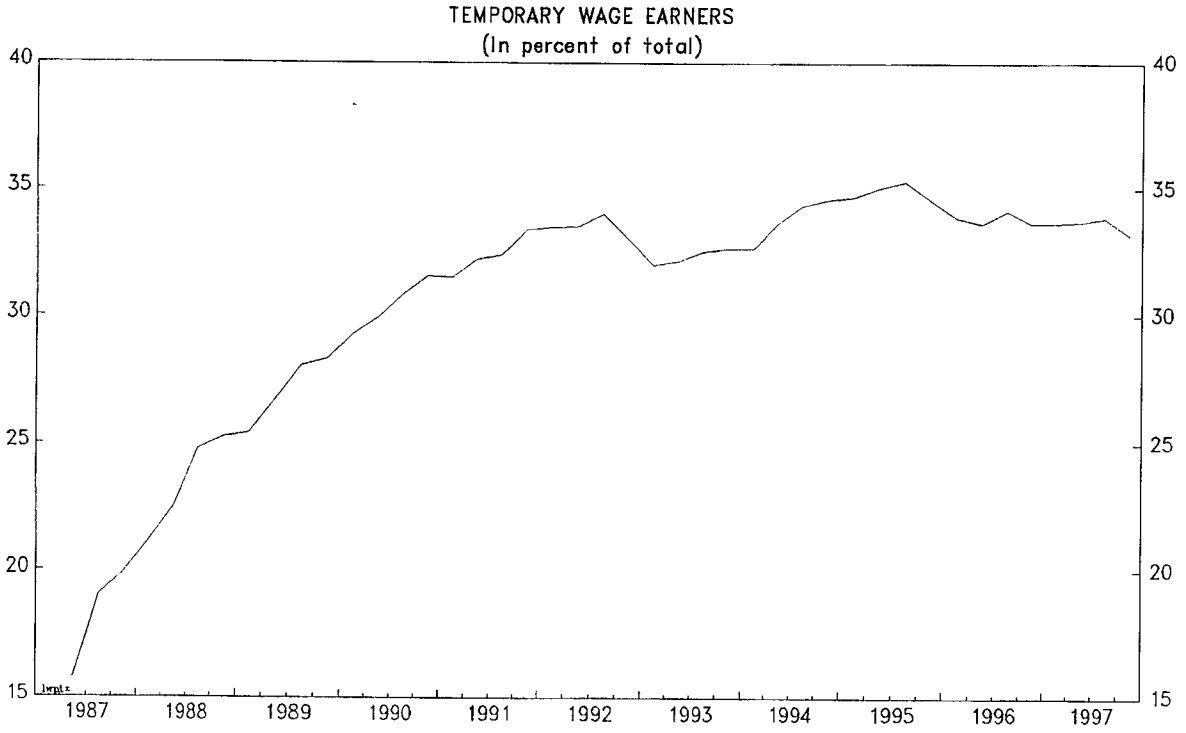
	Maximum cost of unjustified dismissals for economic causes (in days)		Average redundancy pay in 1995 (in days)	Share of wage earners with temporary contracts in 1994 1/ (in percent)	Minimum wages legislation	Minimum wages as a share of average wage, for adults /2 (in percent)
Austria	270		147	...	No statutory; set in collective agreements	0.62
Belgium	180		154	4.2	Yes	0.60
Denmark	273		91	10.8	No statutory; set in collective agreements; 40% if <18	0.54
Finland	600		91	13.0	No statutory; set in collective agreements	0.52
France	450		119	9.4	Yes; some aut. adj. for av. wage growth; 80% if 16; 90% if 17	0.50
Germany	540		91	9.1	No statutory; set in collective agreements	0.55
Greece	720		203	5.5	Yes; set nationally by negotiation between social partners	0.62
Ireland	728		70	7.2	None (with exception of a few sectors)	0.55
Italy	420		315	5.2	No statutory; set in collective agreements	0.71
Netherlands	... 3/		77	9.5	Yes; some aut. adj. for avg. wage growth; 30% if 15, to 85% if 22	0.51
Portugal	600		90	6.7	Yes, reviewed annually; 75% if <18	0.45
Sweden	960		105	12.0	No statutory; set in collective agreements	0.52
United Kingdom	360		147	5.4	None (with some exceptions in agriculture)	0.40
Average	508		131	8.2		0.55
	Old Contracts	**New Contracts**				
Spain	**1260**	**720**	**381**	**33.8**	**Yes; 85% for apprentices below 18**	**0.32**

Sources: Instituto Nacional de Estadistica; OECD, *Employment Outlook*; CEOE; *Tableau de Bord*, European Commission; Dolado et al. (*Economic Policy*, 1996); and staff estimates

1/ The definition of temporary contracts is identical for some, but not all countries.
2/ In countries where there is no statutory minimum wage, refers to minimum wages set as part of collective agreements in relevant sectors.
3/ No binding provisions; covered by collective agreements

Figure 6. Spain: Temporary and Permanent Wage Earners, 1987-97





Source: Bank of Spain.

the reform.[27] Such high dismissal costs may well help explain the relatively large share of temporary employment in Spain (Table 6).

66. Second, unemployment compensation in Spain is not significantly more generous than in other EU countries, though this is not to say that the European average is necessarily a desirable target. While the gross replacement rate is somewhat higher than average, the net replacement rate is slightly below average, especially for the long-term unemployed (Table 7). At the same time, incentives to search for a job may be relatively low for Spanish workers who have been dismissed after a long tenure because they collect not only unemployment benefits, but also very generous dismissal compensation. Third, minimum wages are relatively low in Spain by international standards. In sum, it seems that high dismissal costs are the labor market feature with respect to which Spain is furthest from industrial country averages. Not surprisingly, their reduction has been the main focus of the May 1997 reform.

B. Dismissal Costs Prior to the May 1997 Reform

67. For permanent contracts signed before May 1997, the cost of dismissals undertaken for *economic, technical, organizational, or production-related causes* depends on whether the labor courts judge them to be justified or unjustified. Compensation amounts to 20 days per year worked (with a maximum of 12 months) for justified dismissals, and 45 days per year worked (with a maximum of 42 months) for unjustified dismissals. Dismissal compensation in justified cases is not out of line with the EU average, but that in unjustified cases far exceeds it, as shown above. The courts judge that dismissals are unjustified in almost three fourths of cases.

68. Therefore, the main reason that average dismissal costs are high in Spain may be that the definition of justified dismissals is not sufficiently clear. This shortcoming was already recognized in the 1994 labor market reform, which attempted to clarify and expand the possible reasons for justified dismissals by including organizational and production-related causes.[28] Nevertheless, that change in definition proved to be insufficient to alter the courts' behavior significantly. In fact, in the first half of 1997, 70.9 percent of the dismissal cases ruled upon by the courts resulted in decisions at least partially in favor of the worker, a proportion only marginally lower than that observed in 1993 (72.8 percent).

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[27]Dismissals settled through the "mediation, arbitration, and conciliation" procedure (approximately a third of all dismissals) resulted in average dismissal costs amounting to about 13 months of average pay in 1996 (see Table 6 and Figure 7). Survey evidence shows that dismissal costs often exceed the statutory 42 months of pay for unjustified dismissals, as employers seek to avoid lengthy and costly legal proceedings.

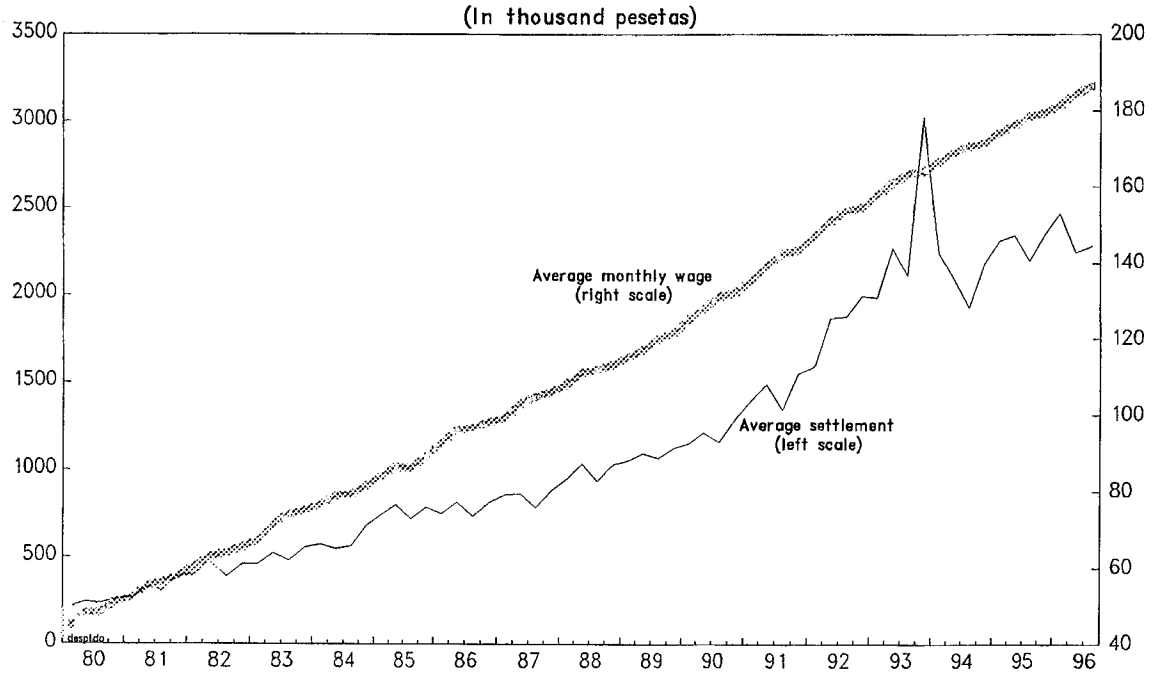
[28]The 1994 reform is described in detail in SM/95/25.

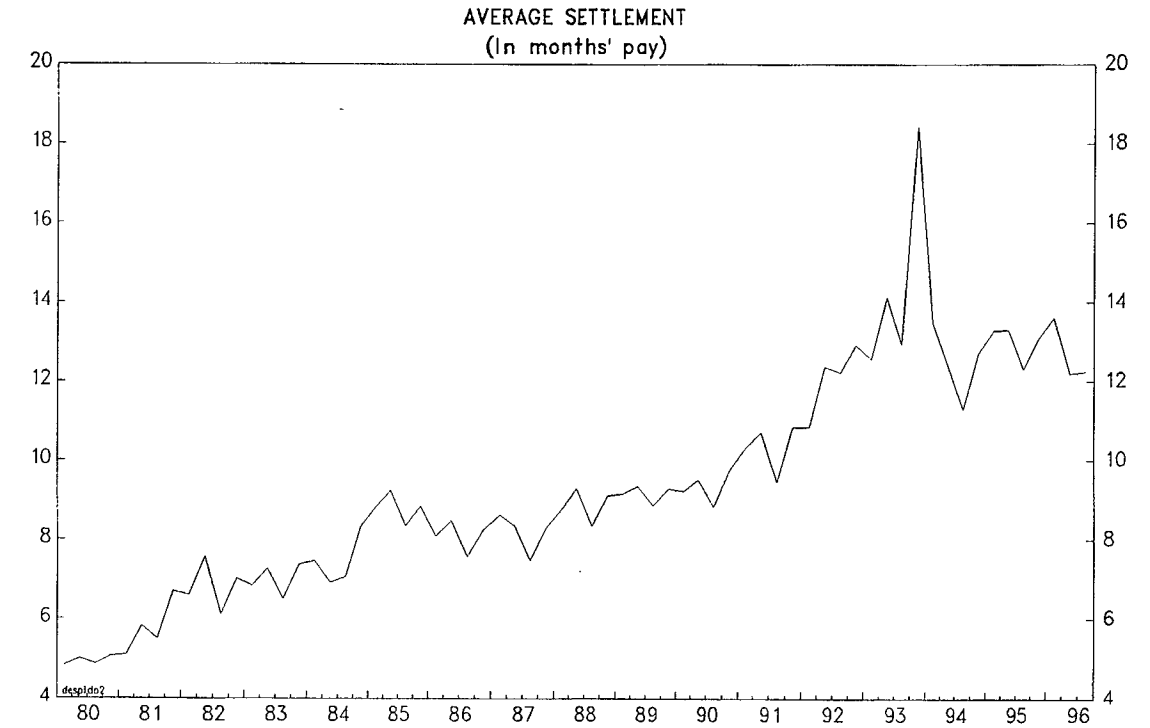
Table 7. Spain: International Comparisons of Replacement Rates

	Gross replacement rates for single worker, no social assistance, at the average level of earnings, first month of unemployment	Net replacement rates for single-earner couple, 2 children, no social assistance, at the average level of earnings, first month of unemployment	Net replacement rates for single-earner couple, 2 children, including social assistance, at the average level of earnings, 60th month of unemployment	Duration of unemployment benefit entitlements
		(in percent)		
Non-EU countries				
Australia	22	71	71	Unlimited assistance benefit
Canada	55	67	47	50 weeks insurance, then social assistance
Japan	37	42	68	90-300 days insurance, then social assistance
United States	50	68	17	26 weeks insurance, then general assistance
Average	41	62	51	
EU countries				
Belgium	46	66	70	unlimited insurance if dependents, declining otherwise
Denmark	60	83	83	5 years insurance, then social assistance
Finland	53	88	98	500 days insurance, then social assistance
France	57	80	65	27 months insurance, then declining for 33 months
Germany	37	78	71	6-32 months, then unlimited unemployment assistance
Ireland	23	64	64	15 months insurance, then unemployment assistance
Italy	30	47	11	6 months insurance, no subsequent benefits
Netherlands	70	84	80	6-54 months insurance, then social assistance
Sweden	80	89	99	300-450 days insurance, renewable
United Kingdom	16	77	77	12 months insurance, the unemployment assistance
Average	47	76	72	
Spain	**70**	**74**	**46**	2 years insurance, then 30 months assistance

Source: OECD, *Employment Outlook.*

Figure 7. Spain: Average Dismissal Costs, 1980-96





Sources: Ministry of Finance; and Instituto Nacional de Estadistica

Average dismissal costs refer to dismissals for which an agreement is reached between entrepreneur and worker through the obligatory "mediation, arbitration, and conciliation" procedure. About a third of dismissal procedures are resolved in this manner.

C. Main Points of the May 1997 Reform

69. The May 1997 reform recognizes the need to reduce effective dismissal costs. In an attempt to do so, it introduces a further clarification of the reasons for justified dismissals, which would in itself render the reform successful if it led to a significant reduction in the share of dismissals that are deemed unjustified. However, in light of the uncertainty surrounding the impact of that clarification, the reform includes other measures, the most important of which is the introduction of a new type of permanent contract that carries lower dismissal costs.

70. The reform consists of a number of new measures and modifications of existing legislation, which are listed in order of potential importance.

• **Clarification of the reasons for justified dismissals**. The text of the reasons for justified dismissals for *technical, organizational, or production causes* was modified as follows:[29]

Old text: "to guarantee the future viability of the firm and of its workforce through a better organization of its resources."

New text: "to better organize resources in order to overcome difficulties that impede the firm's well-functioning, whether related to its competitive position in the market or to demand requirements."

Although this change in text is usually described as a clarification, it expands somewhat the range of reasons for justified dismissals, to include cases where firms are not doomed to future bankruptcy in the absence of job cuts, but may be facing difficulties of a more temporary nature. At the same time, it remains uncertain whether this change will lead to an increase in the share of dismissals that are deemed justified, because the burden of proof remains on the employer, and the new definition still seems to allow ample room for interpretation by the courts.

• Establishment of a **new permanent contract** available to groups of people who have encountered particular difficulty finding permanent jobs: (i) unemployed persons between the ages of 18 and 29, or above 45; (ii) persons who have been unemployed for more than a year; (iii) persons who are handicapped; and (iv) workers who are currently employed under a temporary contract. The cost of unjustified dismissals under the new contract will be 33 days per year worked (with a maximum of 24 months), compared with 45 days per year worked

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[29]Article 52.c) of the *Estatuto de los Trabajadores*. The *economic causes* remain unchanged: "to overcome a negative economic situation" (usually interpreted as loss-making).

(with a maximum of 42 months) for the existing permanent contracts, which are unaffected.[30] Therefore, statutory dismissal costs remain well above the EU average on both existing permanent contracts and the new type of permanent contract (Table 6).

• Introduction of **fiscal incentives** designed to encourage the use of the new permanent contracts. Entrepreneurs' social security contributions will be reduced for the first two years of the contract by 40 percent for new permanent hires of workers below age 29 or long-term unemployed and by 50 percent in the case of conversions of temporary, apprenticeship, and training contracts into permanent contracts. In the case of new permanent hires or conversion of temporary contracts for unemployed workers above age 45, handicapped workers, or women in certain sectors where they are underrepresented, the reductions will amount to 60 percent for the first two years and 50 percent thereafter, with additional incentives for the hiring of handicapped workers. Moreover, owners of small and medium-sized firms will receive incentives in the form of lower personal income taxes (IRPF). In fact, for the purpose of IRPF calculations, these firms (whose revenues are usually imputed on the basis of indicators such as the number of employees and the area of the establishment) will not be required to report workers who are hired under the new permanent contracts, for the first two years of the contract.[31]

The government estimated that the yearly cost of all these incentives would be about Ptas 100 billion (0.1 percent of GDP), under the assumption of 200,000 new permanent contracts of this type a year. Savings of Ptas 16 billion would result from the elimination of existing incentives to temporary contracts. There is no indication of savings elsewhere, though some might result from the decrease in unemployment.

• Substitution of a new ***training contract*** for the unpopular *apprenticeship contract*, which was eliminated. The most notable change is the reduction in the maximum age for eligible workers from 25 years to 21 years. Other differences seem to be relatively small: the maximum duration of the apprenticeship contract is reduced from three years to two years, but may still be extended to three years through collective agreement;[32] the minimum and maximum duration of the contract (six months and three years, respectively) will be enforced more strictly than in the past; entrepreneurs who do not provide the minimum amount of formal training under the contract will be charged with fraud; benefits will now be provided to trainees in case of temporary inability to work; for workers above 18 years of age, in some

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[30]The cost of justified dismissals (20 days per year worked, with a maximum of 12 months) also remains unchanged.

[31]The imputed yearly revenue for the purposes of IRPF calculations would ordinarily amount to Ptas 2,000,000 (about US$14,000) for each employee.

[32]For practical purposes the duration of the two contracts is likely to be broadly the same.

cases salaries will be slightly higher as a proportion of the minimum salary for adults.[33] This last change, though minor, seems to be in the wrong direction, as other countries, such as the Netherlands, appear to have curbed youth unemployment through bold reductions in the minimum wages for young workers (see Box 2).[34]

Box 2. Labor Market Reform in the Netherlands[1]

In the Netherlands, the OECD-standardized unemployment rate fell from 11.0 percent in 1983 to 5.4 percent in 1992. The unemployment rate among youth dropped from 24.9 percent to 7.8 percent over the same period. It is tempting to attribute these positive results at least in part to labor market measures, though there is a fervent debate on whether this is justified. Some of the salient points of the reform can be summarized as follows.

• Since 1982, unions and employers have agreed to moderate wage growth in order to stimulate employment creation. The government also reduced the civil servants' wage bill as a share of GDP, by containing wages and the number of employees.

• The government reduced the wedge between gross labor costs and net wages, particularly at the low end of the wage spectrum. For the average worker, real gross wages declined by 1.1 percent over 1983–96 and real net wages grew by 11.6 percent.

• Unemployment and disability benefits were reduced, and eligibility was tightened. The duration of unemployment benefits was reduced from 2½ years to ½ year for workers below age 23, with smaller but still substantial cuts for older workers. Benefits were cut from 80 percent of the last earned wage to 70 percent (in 1986).

• Minimum wages were reduced, particularly for youth. The minimum wage as a ratio to the minimum wage for an adult currently amounts to 30 percent for a 15-year-old, 45.5 percent for an 18-year-old, and 85 percent for a 22-year-old. For adults, the minimum gross wage was 51.1 percent of the average gross wage in 1995.

[1] Further details on labor market reform in the Netherlands are provided in SM/97/139.

[33]Under the old apprenticeship contract, workers above 18 years of age received salaries amounting to at least 70 percent of the minimum interprofessional wage (*salario minimo interprofesional*—SMI) during the first year of the contract, 80 percent during the second year and 90 percent during the third year. Under the new training contract, workers above 18 must be paid at least the SMI for adults (with some adjustment for the number of hours worked). Workers below 18 years of age will continue to receive salaries of at least 85 percent of the SMI *for their age*, which is roughly two thirds of that for adults.

[34]At the same time, a recent study (Juan Dolado et al., "Minimum Wages: The European Experience," *Economic Policy*, October 1996) finds only very limited evidence that the cut in minimum wages in the Netherlands contributed to an increase in youth employment.

• **Clarification of the conditions for the use of temporary contracts,** in an attempt to avoid abuse. For the *contract for specific works or activities*, the new wording adds that it is intended for activities "with their own autonomy within the operations of the firm, and whose duration, while limited, is uncertain." For the *contract for special production circumstances* (intended for ordinary activities of the firm in the presence of unusually high demand), whose basic duration of 6 months could be extended—previously with no specified limit—through collective agreement, an absolute limit of 18 months has now been set.

• **Elimination of the *contract for new activities***, which, according to the social partners, had proved detrimental to permanent employment. This contract was temporary (six months to three years) and had no dismissal costs, but had to be converted into a permanent contract (with ordinary dismissal costs) after three years if the worker was to remain employed by the same firm. It was accessible only to new firms or existing ones that launched a new activity. Its initial rationale had been ultimately to promote the creation of new permanent jobs by entrepreneurs who faced considerable uncertainty in the early stages of a new activity and might have been deterred from hiring workers by the high dismissal costs attached to ordinary permanent contracts. In practice, abuse of this contract appears to have been widespread and few workers saw these temporary contracts converted into permanent jobs.

• **Establishment of a bipartite commission** (involving representatives of the trade unions and employers' associations) to follow up on the implementation of the agreement and its effectiveness, provide a forum for ongoing efforts to improve the labor market, and suggest possible additional steps and corrective measures over the next few years.[35]

• **Statement of principle on the streamlining of the bargaining system**, to analyze ways in which the overlapping of several layers of labor market negotiation (national, sectoral, provincial, firm level) can be avoided. The parties signing the agreement (CEOE, CEPYME, UGT, CCOO) stated that clarification was needed on which level should deal with which aspect of the negotiations. An effort would be made to find out whether all participants in a given sector conducted negotiations according to the system that the sector had chosen (e.g., national/sectoral, provincial, or firm-level negotiations) and to assess whether the current system was appropriate. For example, an issue that the employers' associations and trade unions would raise with the entrepreneurs and workers they represented was whether it would be desirable for the national/sectoral level to address wage structure while leaving decisions on the actual wage increase at the firm level.

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[35]A tripartite commission (including representatives of the government) has been established to analyze the temporary work agencies.

D. Early Indicators on the Impact of the Reform and Recent Developments

71. Since the reform took effect, the number of permanent contracts signed has increased sharply, both in absolute terms and as a share of the total number of contracts signed. The number of permanent contracts signed between May 1997 and January 1998 amounted to 670,000 contracts (of which 460,000 contracts, i.e., 68.7 percent, were of the new type—153,000 new contracts and 307,000 conversions of temporary contracts) compared with 259,000 contracts between May 1996 and January 1997.[36] Moreover, permanent contracts as a share of all contracts signed rose from 3.8 percent in May 1996–January 1997 to 8.5 percent in May 1997–January 1998.

72. Although part of the sharp increase in the number of permanent contracts since May 1997 may be due to the fact that entrepreneurs waited for the reform to take effect before making new hires, this factor appears to have played only a limited role. In fact, the number of permanent contracts signed did not decline in the months prior to the reform (Figure 8). Another major factor underlying the popularity of the new type of permanent contracts may have been the considerable fiscal incentives associated with them, but it is difficult to determine their exact role.

73. Employment survey data indicate a slight decline in the share of temporary employment, from 33.6 percent in the second quarter of 1997 to 33.2 percent in the fourth quarter of 1997.[37] These early results, cannot be conclusively attributed to the reform, they are consistent with the view that the reform has had beneficial effects on permanent employment.

74. Beyond the immediate impact in terms of the creation of permanent jobs, a positive aspect of the reform is that it reflects and fosters a climate of social peace. The number of hours lost to strikes has fallen sharply in recent years (Figure 9, top panel) and wage demands by the trade unions have been very moderate since 1994, leading to wage settlements almost in line with expected inflation (Figure 9, bottom panel). These broader developments are likely to promote job creation and economic growth.

75. While expressing satisfaction with the early effects of the May 1997 reform, the government has recently stated that it would welcome further measures to reform the labor market. In particular, it has singled out two areas for possible complementary measures, namely unemployment compensation and part-time contracts. Concerning the latter, there

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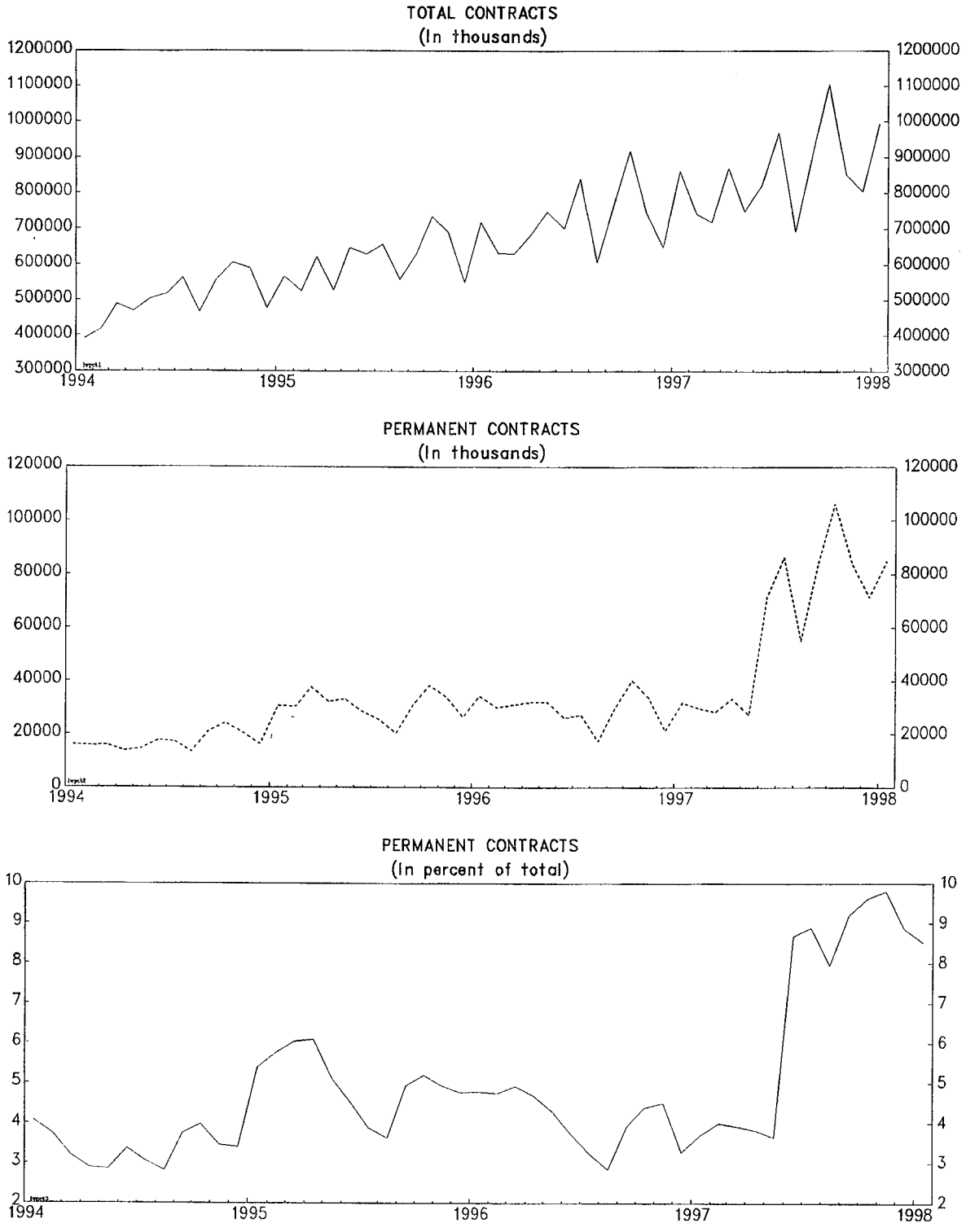
[36] The data refer to the gross flow of contracts registered with the Ministry of Labor.

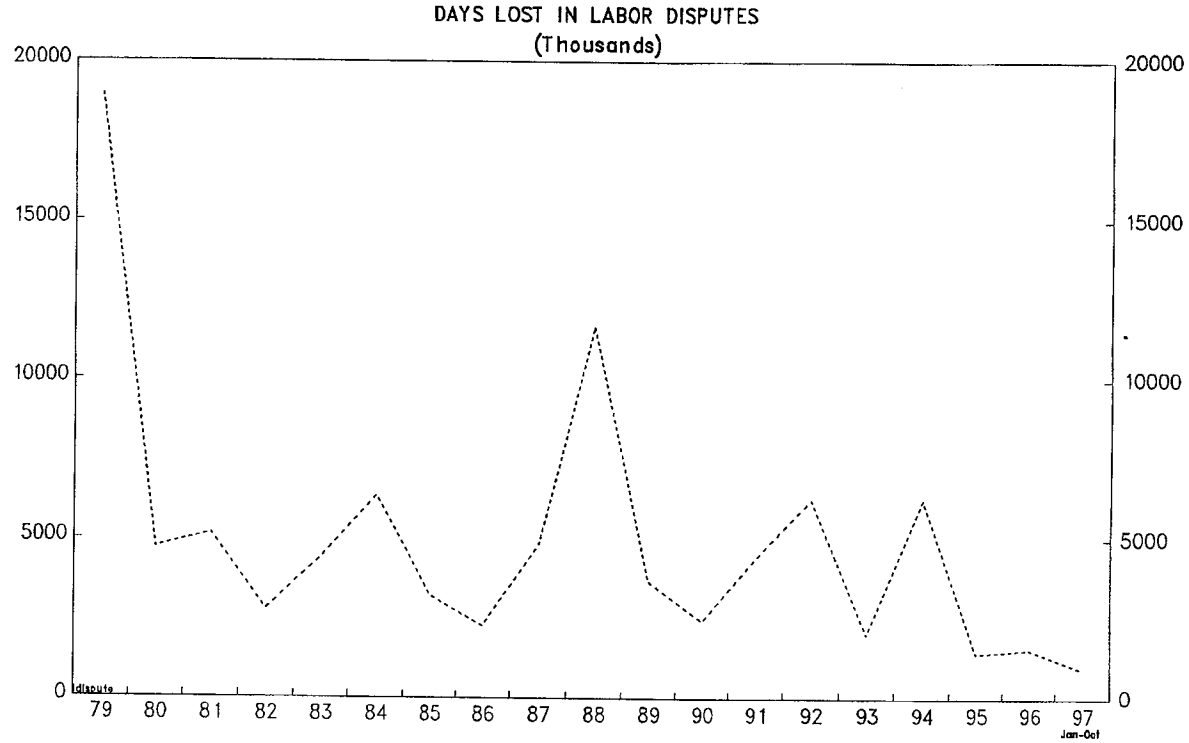
[37] The data are from the National Statistical Institute's Survey of Active Population. Permanent employment in the survey data appears to have risen somewhat less than might have been expected on the basis of the data on contracts registered with the Ministry of Labor. It is still too early to determine the reasons for the apparent discrepancy between these two distinct data sources.

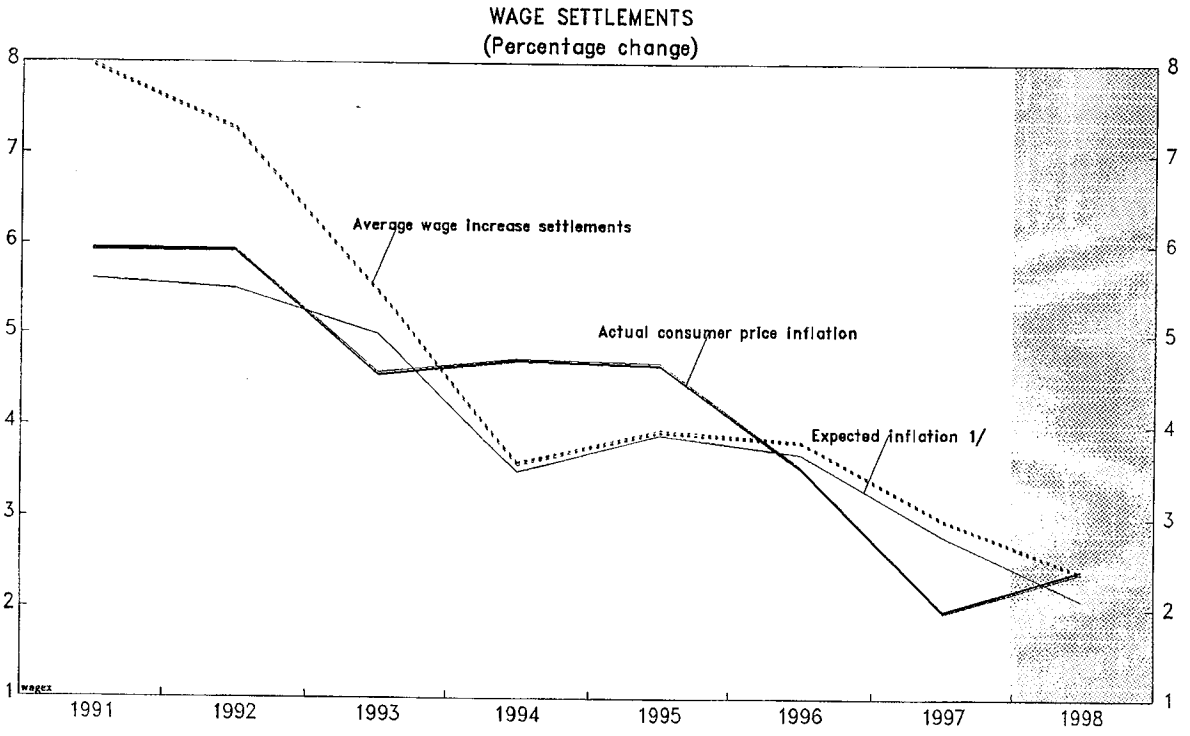
Figure 8. Spain: Registered Contracts, 1994-98



Source: Boletin de Estadisticas Laborales, Ministry of Labor.

Figure 9. Spain: Industrial Relations, 1979-98





Sources: Bank of Spain; and WEO forecast.

1/ Expected inflation is that included in the budget, which acts as a focal point in the negotiations.

seems to be considerable potential for further employment growth through the creation of part-time jobs. In fact, in spite of a relatively rapid increase in part-time employment since the early 1990s (Figure 10), Spain's share of part-time employment remains only about half of the EU average (Table 8).

E. Preliminary Assessment

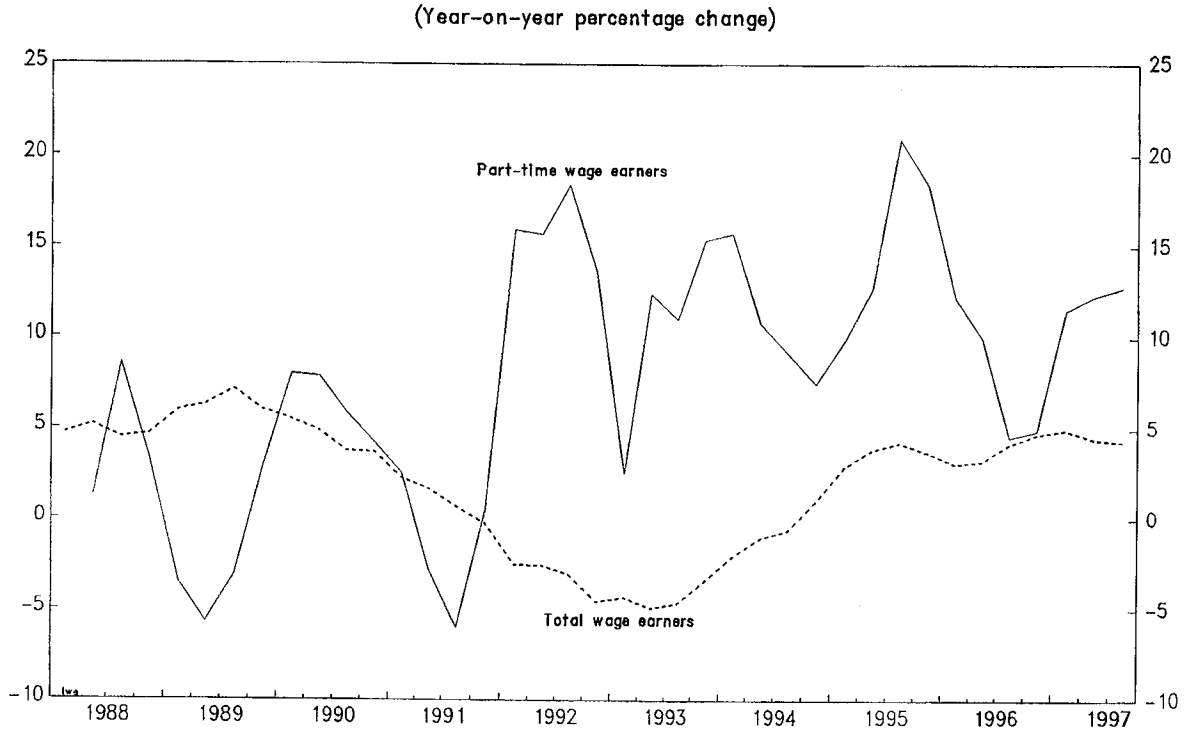
76. The May 1997 labor market reform took place against the background of improved industrial relations, which may contribute to the growth of output and employment. Overall, the reform seems to be a significant step in the right direction. It may lower the share of temporary employment, a desirable objective in itself. In addition, it may reduce the frictional unemployment that results from the continual rotation of workers between temporary jobs. At the same time, it remains uncertain whether the reform will be sufficient to make a major dent in unemployment.

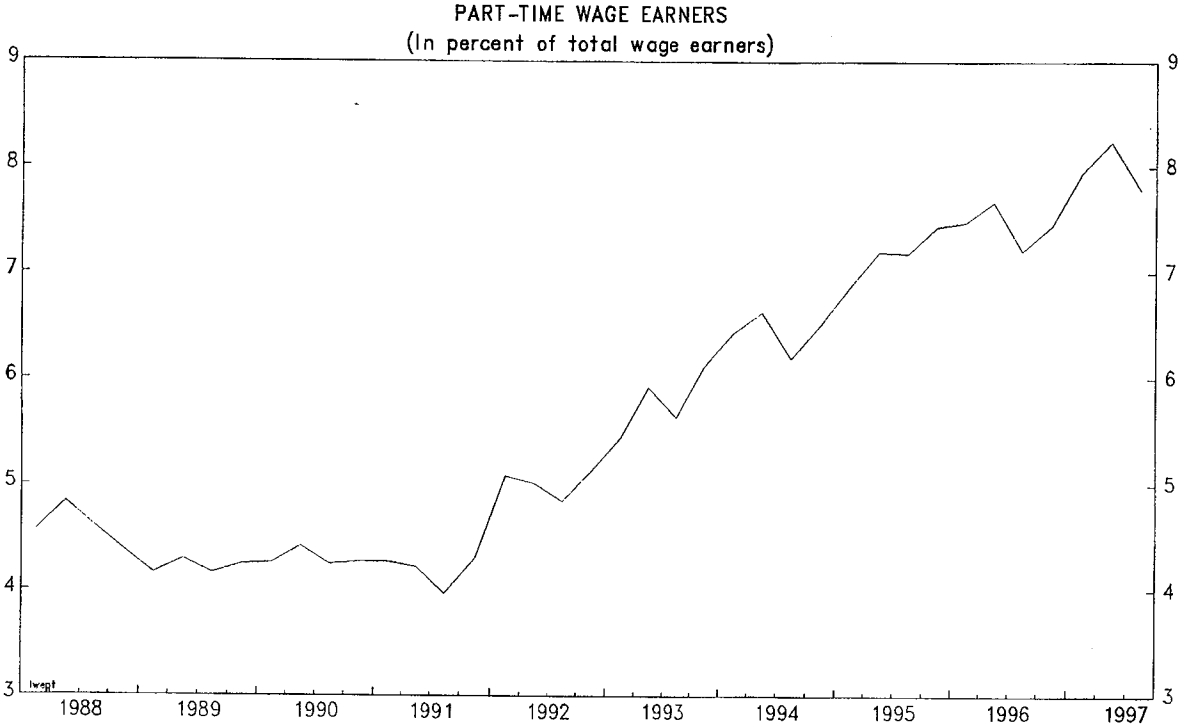
77. In the absence of reliable information on the share of dismissals that are deemed justified by the courts since the reform took effect, the most important measure as of this time seems to have been the introduction of the new permanent contract with lower dismissal costs. The sharp increase in permanent contracts signed since May 1997 bodes well for a reduction in the share of temporary employment, although the initial popularity of the new type of permanent contract could partly reflect the associated fiscal incentives and the unwinding of some delay in hiring during the months leading up to the reform. On the negative side, the new type of permanent contract still carries dismissal costs that are about 50 percent above the already high EU average.

78. The reform also includes some additional restrictions on the use of temporary contracts, most notably by imposing a maximum age of 21 for the new training contract, compared with 25 for the apprenticeship contract that was eliminated. While the spirit of these measures is to avoid abuse and to ensure that employers make use of the new permanent contracts when possible, rather than unnecessarily rolling over temporary contracts, such restrictions may slightly reduce opportunities to curb unemployment, especially among youth.

79. Most important, the May 1997 reform leaves several key areas untouched, including the generosity and duration of unemployment benefits. Spain does not stand out among industrial countries in this respect, but the magnitude of its unemployment problem implies that it could gain the most from increasing labor force participants' incentives to take jobs. Recent statements by the government that it will consider further measures to reform the labor market are therefore welcome.

Figure 10. Spain: Part-Time Wage Earners, 1988-97





Source: Bank of Spain.

Table 8. Spain: Part-time Employment as a Share of Total Employment

(In percent)

	1986	1996
Austria	7.3	13.9
Belgium	9.0	13.3
Denmark	23.9	21.6
Finland	7.9	11.8
France	11.3	15.6
Germany	12.5	16.3
Greece	5.6	4.8
Ireland	5.7	12.1
Italy	4.4	6.4
Netherlands	21.2	37.4
Portugal	6.7	7.5
Sweden	24.9	27.0
United Kingdom	21.6	24.1
Spain	**5.6**	**7.5**
EU Average	12.4	16.0
United States	17.7	18.9
Japan	17.4	21.4

Source: *Eurostat*, Labour Force Survey.

III. DISINFLATION IN SPAIN[38]

A. Introduction and Summary

80. Until recently, Spain was regarded as a country of **moderate but persistent inflation**. Indeed, after the long and sustained disinflation experienced from 1977 to 1987, Spain's inflation rate seemed to stabilize on a plateau between 4 percent and 6 percent (Figure 11), increasing with the overheating period in the end of the 1980s and decreasing with the slowdown of the early 1990s. Even in the wake of the severe recession of 1992–93, while unemployment increased by about 5 percentage points to exceed 24 percent of the labor force, inflation did not decline below 4 percent. As a consequence, inflation differentials between Spain and other countries of the European Monetary System remained significantly positive, contributing to the successive devaluations of the peseta until 1995, and to lingering doubts about Spain's qualification as a founding member of the European Monetary Union.

81. In contrast, Spain's **inflation declined substantially** in the last few years, from 5.0 percent in 1995 to 2.0 percent in 1997, well below the Maastricht reference value. The growth in industrial prices also decreased sharply, from 6.4 percent in 1995 to 1.3 percent in 1997 (Figure 11). Finally, nominal wage growth fell significantly, from 4.5 percent in 1995 to 3.3 percent in 1997 (Figure 12). Contrary to the traditional view that maintained that lower productivity gains and less competition in the nontradable sector were sources of inflation persistence, disinflation was observed in all sectors of the economy, in almost exactly the same proportion, with a decline of about 3.5 percentage points between the average of 1987–95 and 1997. Food prices, services prices, and industry prices contributed by about a 1.1 percentage point to the fall in inflation (Table 9 below).

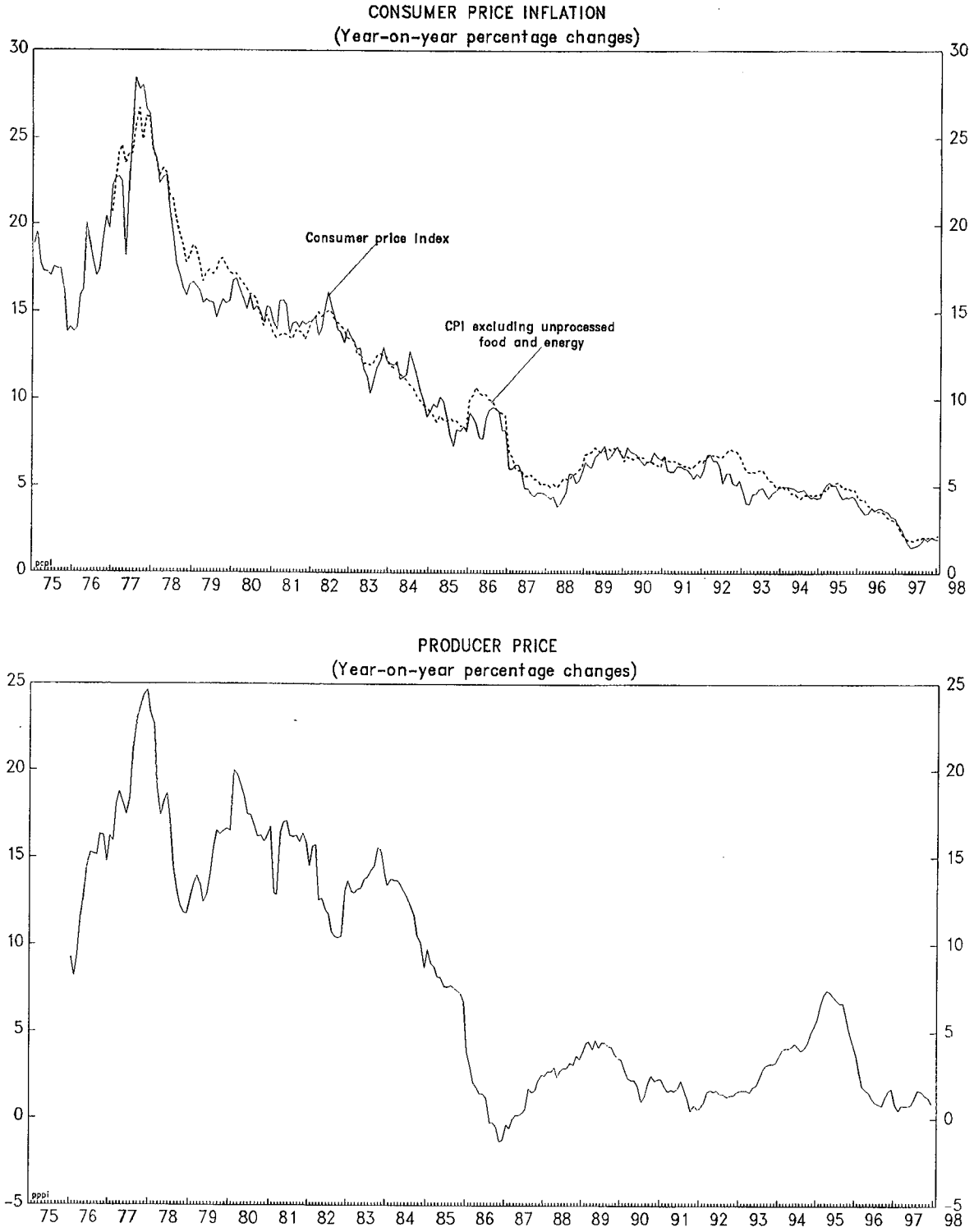
Table 9. Spain: Components of Total CPI

(In percent)

	Inflation	Energy	Food	Industry	Services
	(weight in the index)	7.1	29.4	32.9	30.6
Dec-97	2.0	0.6	1.5	1.4	3.5
Average 87–95	5.5	4.0	4.7	4.5	7.3
Disinflation	-3.5	-3.3	-3.2	-3.2	-3.8
Contribution to the decline in total inflation		-0.2	-0.9	-1.0	-1.2

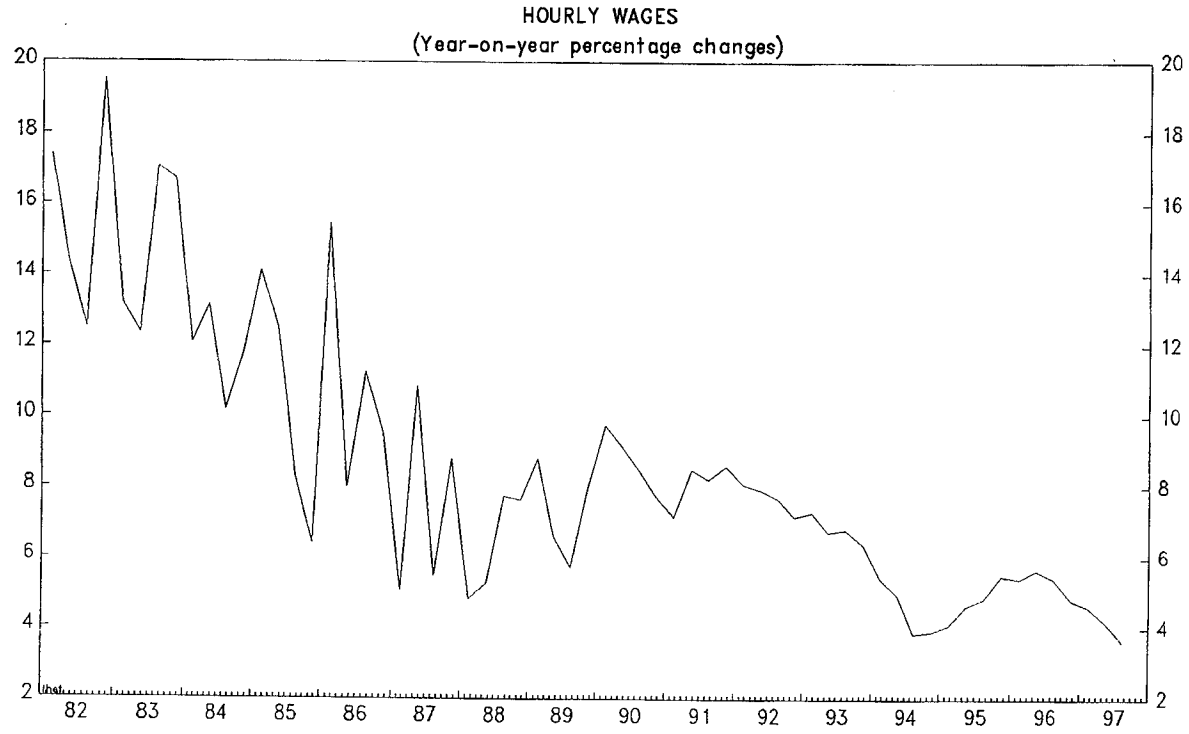
[38]Prepared by Nicolas Sobczak.

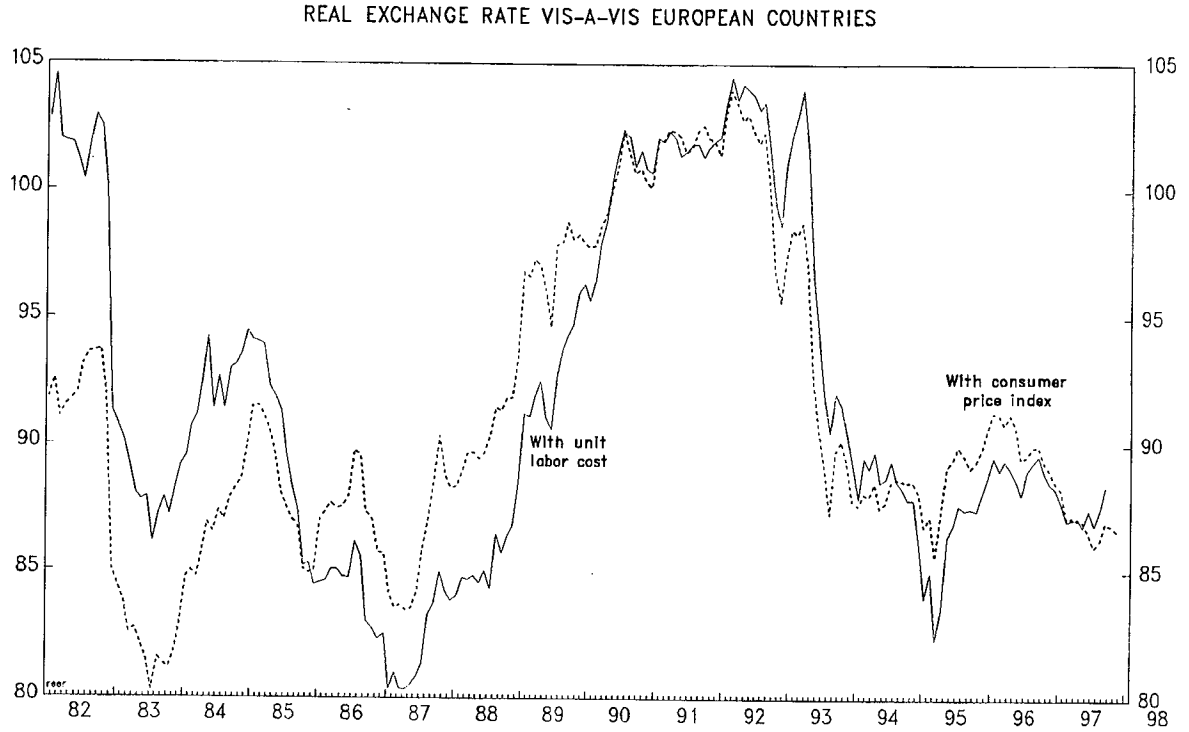
Figure 11. Spain: Inflation, 1975-98



Source: Bank of Spain.

Figure 12. Spain: Wages and Exchange Rate, 1982-98





Source: Bank of Spain.

82. This chapter investigates the **causes of this rapid disinflation**. In a standard Phillips curve model, three major aggregate shocks could explain the fall in inflation: an adverse demand shock that raises unemployment, a positive supply shock resulting from relative price adjustments or structural improvements in the labor market, or a credibility shock that lowers inflationary expectations.

83. Lacking a full structural model capable of disentangling the individual contribution of shocks to inflation in Spain, the **methodology** followed in this chapter consists of several building blocks: (i) the estimation of a Phillips curve to assess the roles played by demand and relative price shocks; (ii) the estimation of a VAR system to determine the possible contribution of the labor market and expectation shocks to disinflation; (iii) the examination of dissagregated price data to detect influence of relative price shocks on inflation; (iv) the analysis of proxies of inflationary expectations to gauge the credibility effect of a new monetary policy framework; and (v) the comparison of Spain's disinflationary episode with Italy's and Portugal's, so as to ascertain the common disinflationary effect of the commitment to EMU participation from the start.

84. The **main findings** of this chapter are as follows:

(1) The severe recession of 1992–93 and its lingering effects on the output gap are unlikely to have been behind the sharp fall in inflation in 1996–97. A simple Phillips curve relationship between inflation and the output gap that seems stable prior to 1995, breaks down afterwards.

(2) Supply side shocks do not seem to have played a determinant role in Spain's latest disinflationary episode. Although food prices fell importantly in early 1997 and temporarily lowered inflation, total inflation fell by more than food prices can account for. Simple dissagregated price indicators do not reveal the existence of supply side shocks. Most important, wage moderation, while evidently present in the last few years, does not seem to have played a leading role in lowering inflation.

(3) It appears that the main factor underlying Spain's recent disinflation is a fall in inflation expectations. The common experience of Spain, Italy, and Portugal would suggest that inflation expectations were reduced thanks to the commitment—and policy actions geared to—the participation in EMU from the start. Gains in credibility by the Bank of Spain are also likely to have contributed to the decline in inflation expectations.

85. An important feature of the disinflationary episode under review is that all the contributing factors, regardless of their specific contribution, affected inflation with some **complementarity effects**. Each factor induced lower inflation, reinforcing the influence of other factors. This complicates the task of disentangling their effects, but must have been crucial for the positive outturn.

B. A Simple Framework of Analysis

86. This section presents a simple **inflation model** that will be tested subsequently. Inflation is determined by aggregate demand and supply and it results in a traditional augmented Phillips curve. It is derived from the process of wages and prices formation, with imperfect competition in products market, wage bargaining, and equilibrium unemployment. In the long run, the Phillips curve is vertical: actual unemployment equals structural unemployment, which is only affected by supply side factors, and actual inflation equals inflation expectations. In the short term, there is a negative relationship between inflation and activity: if there is an adverse demand shock (a cyclical trough for example) inflation declines below expected inflation.

87. With imperfect competition, **prices** are determined as a markup over labor costs:

$$p=w-a+z_{ps}$$

Where p stands for the level of prices, w for the level of nominal labor cost, a for the level of labor productivity, and z_{ps} for all factors that might affect the markup[39] over wages, as for example the degree of competition in products market or the costs of other factors of production (oil prices, non-oil commodity prices, real interest rate).

88. The **wage-setting curve** results from the bargaining framework between unions and employers, as for example in Layard, Nickel and Jackman (1991). Unions target the expected real wages to be a markup on labor productivity. This desired markup depends on several features of the labor market that define the relative power of negotiation of unions and employers and determine cost-push-factors. These features include the level and duration of unemployment benefits, the presence of a tax wedge, firing costs, and other labor regulations. In addition, when unemployment increases, unions' bargaining power declines because the probability to be unemployed increases in case of failure in the negotiation. In its log-linearized version, the relation can be written in the following way:

$$w=p^{e}+a-\gamma.U+z_{ws}$$

where U is the unemployment rate, p^e is the expected level of prices, and z_{ws} represents all the "labor-cost push" factors.

89. Combining the two relations, prices can be expressed as follows:

$$p=p^{e}-\gamma.U+z_{ws}+z_{ps}$$

---

[39]All variables are in logarithm, except for unemployment and the output gap.

subtracting the level of prices in the previous period on both sides, one gets the traditional form of the **augmented Phillips curve**:

$$\pi=\pi^{e}-\gamma.U+z_{S}$$

where π^{e} is expected inflation and z_s summarizes the influence of all supply side factors included in z_{ws} and z_{ps} .

90. In the **long run**, actual and expected inflation coincide, and the unemployment rate is equal to the equilibrium unemployment rate (to which we will refer as the NAIRU).

$$\pi=\pi^{e} \qquad U^{*}=\frac{Z_{S}}{\gamma}=\frac{Z_{ws}+Z_{ps}}{\gamma}$$

where Z stands for the long run value of z. In this model, the NAIRU depends only on the long-term values of the various supply side factors described before. It increases for example with cost-push factors and with the markup of prices over labor cost. This means that an adverse shock on relative commodity prices (e.g., oil prices) will push the NAIRU up, as a low degree of competition in products market will spur higher equilibrium unemployment.

91. In the **short run**, the equation can be rewritten as follows:

$$\pi=\pi^{e}-\gamma.(U-U^{*})+\zeta_{S}$$

where ζ represents the transitory component of supply shocks in the short term ($z = Z + \zeta$). Using a simple Okun relation between output and unemployment, the output gap can also be substituted for the unemployment gap:

$$\pi=\pi^{e}+\beta.OGAP+\zeta_{S}$$

92. As argued in Chadha, Masson and Meredith (1991), **inflation expectations** are a weighted average of forward-looking and backward-looking elements, which implies some inertia in inflation. Inertia may be imparted by partially nonrational expectations, or by the existence of overlapping wage contracts.

$$\pi^{e}=A(L).\pi_{-1}+(1-A(1)).\pi^{*}$$

where $A(L)$ is a polynom in the lag operator L, and π^{*} is the long-run forward looking component of expectations, independent from past inflation (the innovation). The latter

component moves essentially with the credibility of monetary policy, and foreign inflation. Allowing for short-run dynamic effect of the output gap, the equation may be written as follows:

$$\pi = A(L).\pi_{-1} + (1 - A(1)).\pi^* + B(L).OGAP + \zeta_S$$

93. According to this specification, the **main factors behind the decline in inflation** are (a) a demand shock that increases unemployment above its equilibrium level, (b) a positive supply shock, or (c) a decline in the forward-looking component of inflation expectations. This simple model captures the main factors that may underlie the decline in inflation in Spain in recent years. It will be used to investigate the possible impact of each factor, beginning with a standard Phillips curve with demand effects, and then incorporating supply side and credibility factors.

C. Demand Effects

94. In the short run, a decline in inflation tends to be associated with a contraction of output and a rise in unemployment. A tightening of monetary policy tends to reduce domestic demand through higher interest rates and depresses external demand through an appreciation of the exchange rate. This **negative demand shock** leads to an excess of supply in domestic product markets and allows prices to decline, while the subsequent fall in employment moderates wage increases. This section investigates whether a negative demand shock was the main factor underlying the recent fall of inflation in Spain. The question is addressed by examining the data, computing a simple ratio of the output costs of disinflation, and estimating a Phillips curve.

95. A close look at the data on inflation in Spain reveals that there were **two episodes of disinflation** since the early 1990s. Inflation declined from a peak of 6½ percent in early 1990 to 4½ percent in 1993. Subsequently, the rate of inflation remained stable until mid-1995, when a second disinflationary period ensued with inflation falling to 2 percent in late 1997. The first disinflationary episode was associated with a severe recession and a strong rise in the unemployment rate, from about 16 percent at the end of 1990 to 24½ percent in the beginning of 1994. In contrast, the second episode was marked by accelerating activity and falling unemployment, to 20½ percent at end-1997. On the surface, it would appear that the output-inflation relationship differed between the two episodes.

The sacrifice ratio

96. To compare the two episodes discussed above, this section computes, in a very simple manner, the **output cost of disinflation**, i.e., the sacrifice ratio. Using quarterly data, the

sacrifice ratio relates the change in the output gap[40] relative to the change in year-on-year inflation. Allowing for some dynamic and lags in the interaction between inflation and the output gap, the ratio computes the difference between the highest and lowest output gap to the highest and the lowest inflation rate, even if the numerator and denominator dates do not coincide exactly. If the output-inflation tradeoff was stable, then the sacrifice ratios in the two disinflation episodes should be similar.[41]

97. The sacrifice ratio of the first disinflation episode (1990–93) stands at 2.7 percent of GDP, which falls in the range of 0.6–1.0 percent of GDP per year estimated by Dolado, Gonzalez-Páramo and Viñals (1997) for Spain (in case of a demand shock). In contrast, the sacrifice ratio for the second disinflation episode is ten times lower, at 0.28 percent of GDP (Table 10). This **dissimilar behavior** of the output costs of disinflation between the two episodes suggests that the factors associated with the decline in inflation during these episodes differed.

Table 10. Spain: Sacrifice Ratios

(In percent)

	First episode (1990–1993)	Second episode (1995–1997)
Decline in inflation	2.7	3.3
Decline in the output	7.3	0.9
Increase in the unemployment rate	8.7	-2.2
"Sacrifice ratio"		
in terms of: output	2.7	0.3
unemployment	3.2	-0.7

[40]Potential growth is here estimated by a log-linear trend since 1975, with a break in 1984. The trend is 2.7 percent since 1984. This method gives fairly the same result than more elaborate filtering like the Hodrick-Prescott filter, and the output gap is close to the values proposed by the OECD and the WEO for Spain.

[41]The sacrifice ratio computed here differs from the standard ratio that relates the *accumulated* output loss to the decline in inflation (see, for example, Ball (1994)). The standard ratio assumes backward looking price expectations, and this may not be an adequate representation of price formation in Spain.

A simple Phillips curve

98. To assess the role of demand shocks, this section estimates a simple **Phillips curve.** The year-on-year inflation rate is regressed on its past values, past values of the output gap, and foreign inflation (in pesetas). To avoid simultaneity problems, the contemporaneous value of the output gap is not included in the regression. The equation is estimated with quarterly data for two periods: a long period covering 1977–97, and a shorter period spanning 1987–95.

99. To distill information on the output-inflation tradeoff over the course of several business cycles, the estimation should cover a long period. However, several **econometric problems** impede obtaining a meaningful estimation of the Phillips curve in Spain. The equation below provides estimated coefficients (students' statistics are indicated in parenthesis below the coefficients):

$$\pi = \underset{(0.9)}{0.20\%} + \underset{(8.5)}{0.92}\,\pi_{-1} + \underset{(0.5)}{0.05}\,\pi_{-2} + \underset{(0.1)}{0.001}\,\pi_f + \underset{(1.0)}{0.24}\,gap_{-1} - \underset{(-0.6)}{0.15}\,gap_{-2} + \underset{(0.0)}{0.000}\,(\pi_{energy}-\pi) + \underset{(3.1)}{0.03}(\pi_{commodities}-\pi)$$

$$R^2 = 0.97 \qquad \sigma = 0.98\%$$

These results, which are consistent with previous estimations, (see SM/ 95/25), include a coefficient on lagged inflation that is not significantly different from one, and a coefficient on the output gap that is not significantly different from zero. This is the case even after controlling for the relative price of non-oil commodities and the relative price of energy, which helps capture the effects of the oil price shocks of the 1970s. The equation was also checked for residual autocorrelation, as the use of the year-on-year inflation rate may introduce a statistic correlation between contemporaneous and lagged inflation due to the existence of overlapping quarters.

100. The **difficulty in fitting a simple Phillips curve** with data for the last 20 years stems from the fact that inflation has not been stationary in Spain. Non stationarity results in a coefficient on lagged inflation that is close to one. Therefore, it may be impossible or even spurious to relate the inflation rate to the output gap or any other stationary variable. In this context, any estimation that includes lagged values of inflation is likely to describe the moving-average process followed by inflation rather than provide accurate estimates of the Phillips curve.

101. The problems posed by **nonstationarity** could be solved by estimating a cointegrating relationship between inflation and expected inflation, as implied by the simple theoretical model developed above. The Phillips curve would then result from a short-run relationship between two cointegration residuals, which are, by definition, stationary: the first one relates inflation to expected inflation; and the second one relates unemployment to structural unemployment (or output to potential output). Most researchers use past inflation as a proxy

for expected inflation, but this approach rules out testing for shocks to expectations, a possibility that should not be discarded a priori.

102. Turning to a more modest task, that of estimating the **output-inflation relationship during the more recent period** when expected inflation is likely to have remained stable, the issue is which estimation period should be chosen. As noted earlier, with the end of a long disinflation process and the absence of major supply disturbances, inflation stabilized after 1987, following Spain's entry in the European Community. In effect, during the period from 1987 to 1997, the estimation of the Phillips curve did not exhibit unit root, while all the estimations performed on periods beginning before 1987 and ending in 1997 exhibited a unit root. Thus, the shorter period of estimation, chosen due to the seeming stability of the Phillips curve, is 1987 through 1995.

103. Given the smaller number of observations, the estimation does not allow for a rich dynamic specification, and simply regresses inflation on its lagged value, foreign inflation in pesetas, and the lagged value of the output gap and of the change in the output gap. The **estimation** produced the following results (students' statistics are shown in parenthesis below the estimated coefficients):

$$\underset{}{\pi} = \underset{(5.7)}{2.5\%} + \underset{(4.9)}{0.42}\,\pi_{-1} + \underset{(1.8)}{0.03}\,\pi_f + \underset{(5.2)}{0.18}\,gap_{-1} + \underset{(2.4)}{0.40}\,\Delta gap_{-1}$$

$$R^2 = 0.81 \qquad \sigma = 0.41\%$$

Parameter constancy forecast tests:

```
using \Omega Chi^2(8)=   53.337 [0.0000]** F(8,31)=   6.6671 [0.0000]**
using  V[e]  Chi^2(8)=   39.549 [0.0000]** F(8,31)=   4.9436 [0.0005]**
using  V[E]  Chi^2(8)=   24.719 [0.0017]** F(8,31)=   3.0899 [0.0111]*
```

The coefficient on lagged inflation is significantly different than one, which illustrates the absence of unit root. The static long-run solution is as follows:

$$\underset{}{\pi} = \underset{(17.1)}{4.5\%} + \underset{(1.8)}{0.06}\,\pi_f + \underset{(6.1)}{0.32}\,gap$$

which gives an estimate of the sacrifice ratio equal to 3.2, close to the simple ratio computed above.

104. As shown in Figures 13 and 14, this equation tracks quite satisfactorily the observed inflation rate, both in a static and a dynamic **simulation** from 1987 to 1995. It advances the view that inflation responded closely to the domestic cycle during the period.[42] Such fit would also rule out major supply side influences on inflation (shocks to commodity prices,

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[42]Similar results are obtained when the unemployment rate (which can be considered as stationary during this period) is substituted for the output gap.

Figure 13. Spain: Static simulation of the Phillips curve

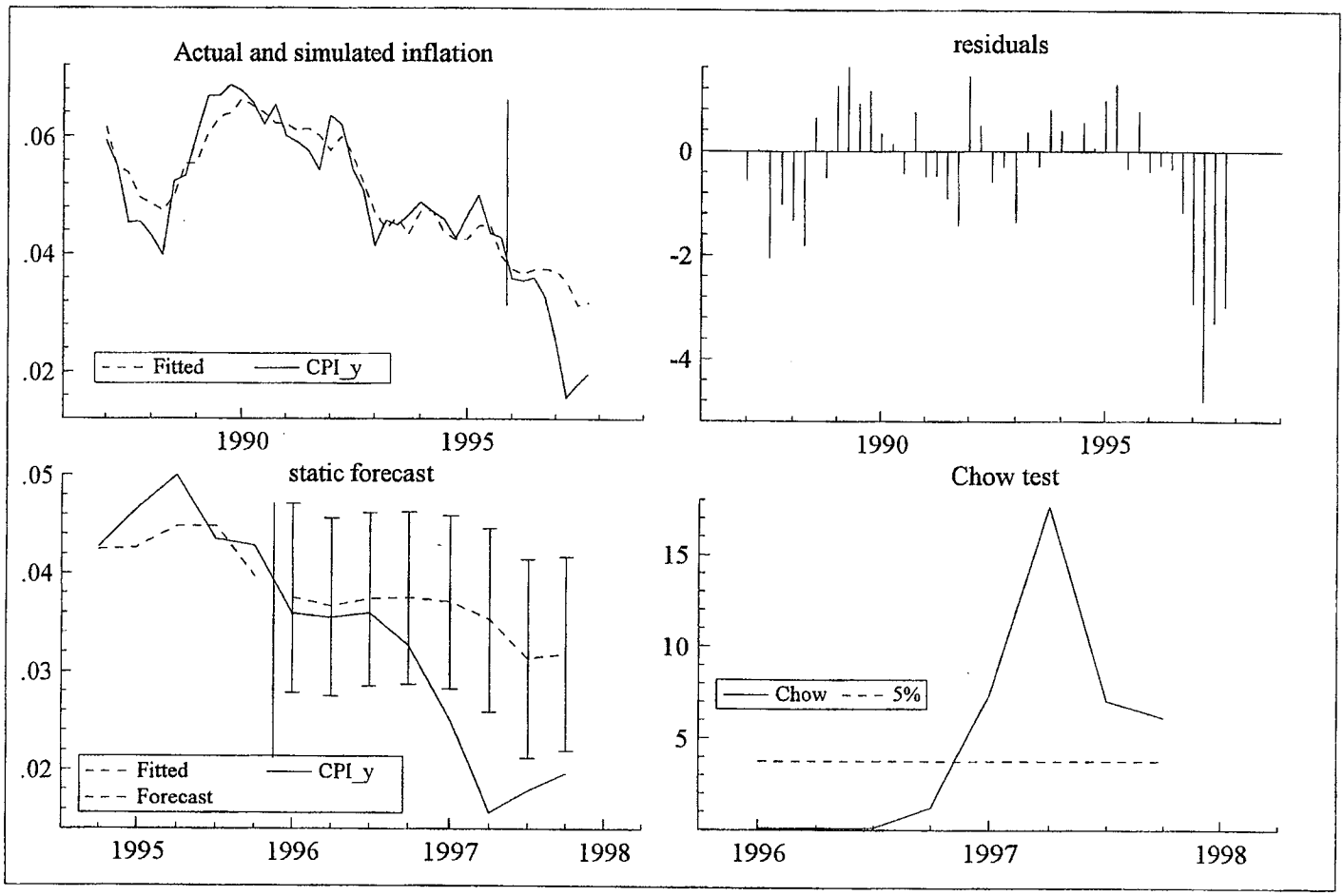
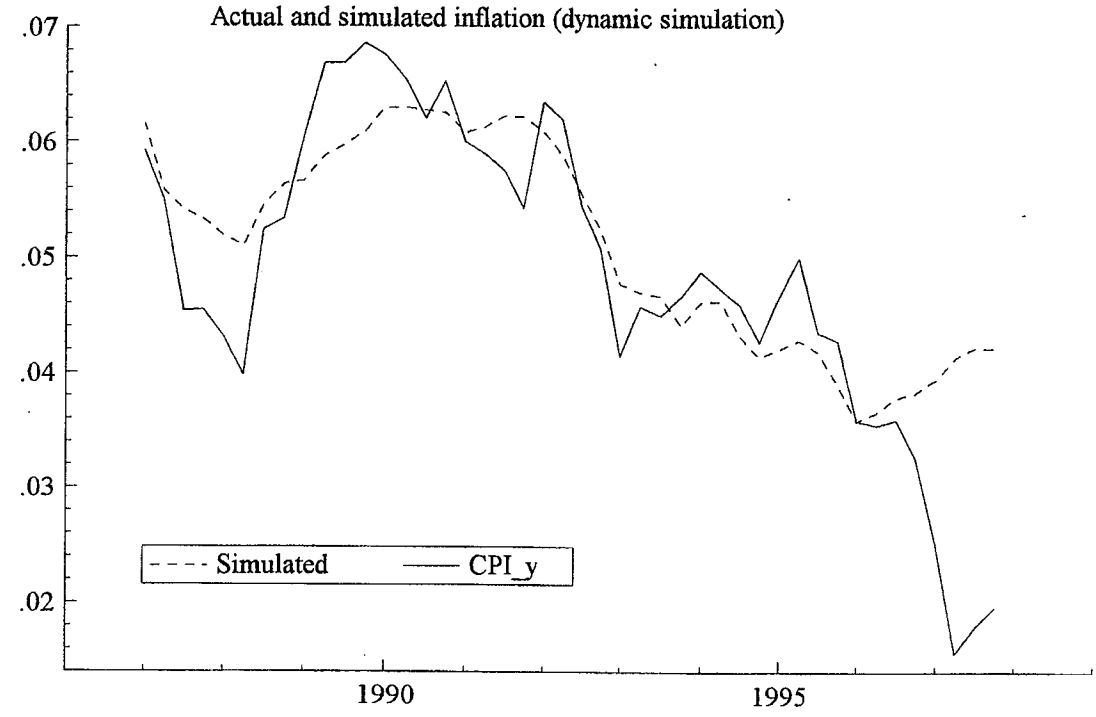
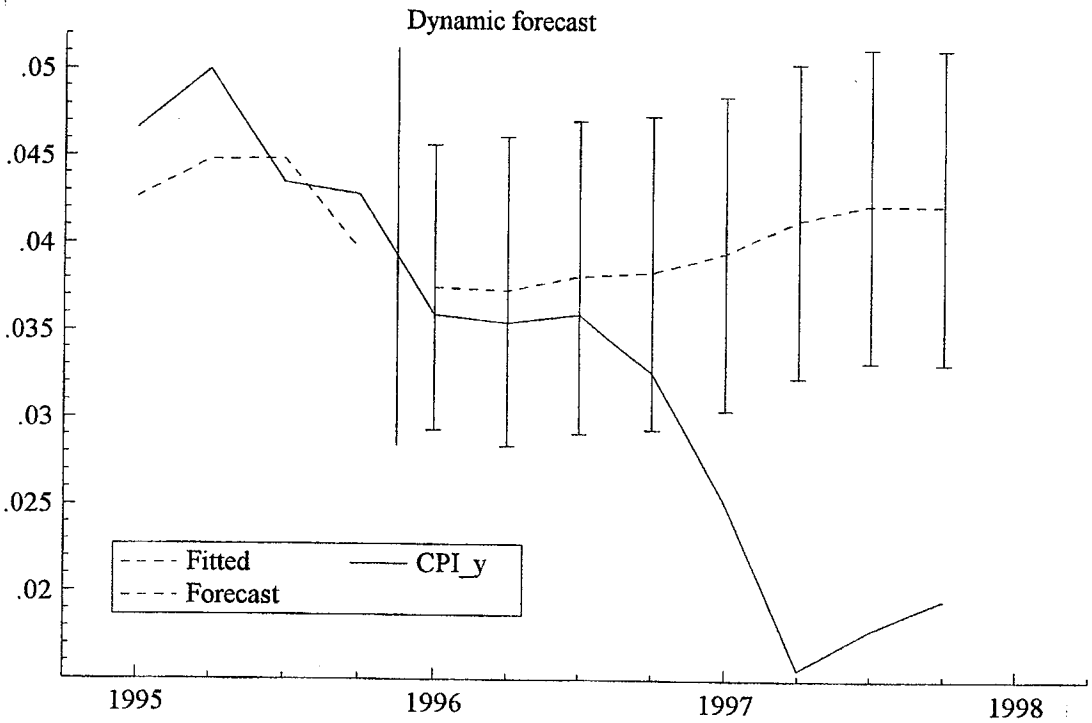


Figure 14. Spain: Dynamic simulation of the Phillips curve





deregulation in product markets, changes in the NAIRU). Long-term inflation expectations were stable around 5 percent, even though in the short term their adaptive component made them follow partially past inflation, and foreign inflation seems to have hardly influenced the behavior of domestic inflation.

105. After 1995,[43] all tests of parameter stability show a **structural break**. Neither the dynamic simulation, nor the static one, are able to reproduce the considerable decline in inflation from 1995 to 1997. The residuals turn significantly negative, and a Chow test rejects the absence of a break in the equation.

106. In sum, the evidence presented in this section lends support to the hypotheses that (a) inflation in Spain was mainly determined by demand-side factors in 1987–95, and (b) the simple relationship between inflation and unemployment broke down after 1995. This would tend to **rule out a demand shock** as the main factor behind Spain's disinflation after 1995. It is possible, however, that demand factors indeed contributed to the latest disinflationary episode, but that the methodology used here is not capable of capturing them. Such would be the case if long-lasting effects of the 1992–93 recession had exerted a disinflationary influence in 1996–97. The following sections turn to the question of what factors other than demand shocks may have induced the recent fall in inflation.

D. Supply Side Factors

107. Several developments in the supply side of the economy could have contributed to the decline in inflation of the recent years. Specifically, commodity prices were subdued in international markets, and food prices declined strongly in Mediterranean countries. Furthermore, structural reforms aimed at increasing competition in product markets may have also facilitated a decrease in inflation. Most important, reforms in the labor market or the effects of the recession in 1992–93 might have increased the sensitiveness of wages to unemployment and induced wage moderation. This section investigates the influence of supply side factors in reducing inflation after 1995, through **two main channels**: relative price adjustments, and changes in the labor market.

Relative prices adjustments

108. It could be argued that **relative price shocks** had an important impact on the fall in inflation after 1995. In particular, (i) non-oil commodity prices in U.S. dollars deaccelerated sharply in 1995–97, although the pattern is not as clear when prices are measured in domestic currency; (ii) energy price inflation also declined and fell significantly more rapidly than total

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[43]The figure actually shows a failure of the equation from the beginning of 1996 rather than from 1995. Yet, a one-point increase in the VAT rates along with a rise in excise duties, pushed transitorily the inflation rate up during 1995, with a maximum impact close to 0.7 percent in a year.

inflation in the beginning of 1997; and (iii) food price inflation dropped from an annual rate at about 5 percent in 1995 to 0.5 percent in 1997. To assess the contribution of relative price shocks to falling inflation, this section presents two alternative ways of evaluating the question. The first is to expand the Phillips curve estimation to include relative price inflation and the second is to examine the statistical characteristics of price changes.

109. When the **Phillips curve** includes the relative inflation of non-oil commodities, energy, and food, only the relative price of food is significant, with a long-run elasticity close to the weight of food prices in the CPI index. However, the inclusion of this variable does not improve the performance of the simulation during 1996 and 1997. Out of sample forecasts continue to be significantly different from actual values, which would argue against considering relative shock as the main determinant of the fall in inflation in 1996–97.

110. A second method used to assess the possible effect of relative price adjustments on inflation is to examine **general indicators of supply-side shocks**, such as the variance of price changes across sectors or the skewness of the distribution of inflation across sectors. An increase in the variance of inflation would indicate relative prices adjustments, and point to supply side shocks as a source of change in total inflation (see, for example, Fisher (1981)). Similarly, a skewed (i.e., asymmetric) distribution of relative prices may be correlated with inflation (see Ball and Mankiw, 1995). In a model with menu-cost for price adjustment, firms adjust prices in face of large shocks but not small shocks. This means that only firms in the upper and the lower tail of the distribution of desired price changes actually change their price. If the distribution of relative prices is symmetric, the net effect of relative price adjustments is zero on total inflation. But if the distribution is skewed to the right, the upper tail weighs more than the lower one and thus total inflation increases. In this context, a larger variance of price changes will also entail higher inflation as it magnifies the asymmetry in the tails. Loungani and Swagel (1996) confirm these correlations in a VAR estimated for industrial countries.

111. As in Ball and Mankiw (1995), we examine at each date the **distribution of relative inflation** for industrial prices (the difference between an industry inflation rate minus the total PPI inflation rate). We use monthly disaggregated Producer Price Index from 1975 to 1997. Our sample is less disaggregated because it contains 23 PPI components only.[44] The first panel in Figure 15 shows the range of values that relative inflation has taken: at each date, we keep the maximum and the minimum value of relative inflation, which provides two curves (the "envelope" of the distribution). The second panel plots the standard deviation of relative inflation at each date. The third panel plots the skewness.[45]

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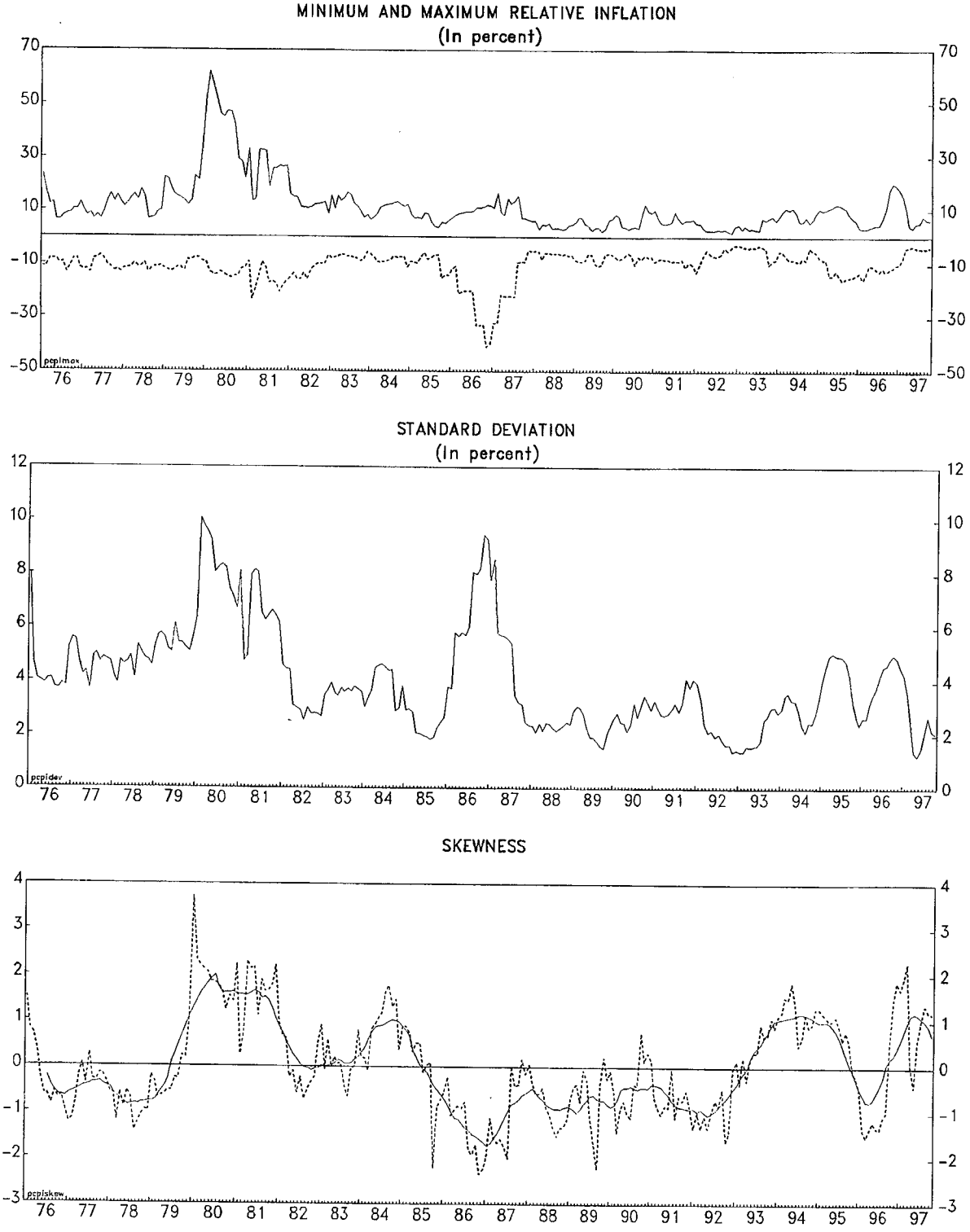
[44]After initial computation with the 24 components of PPI, we eliminated an obvious outlier (industry of metal extraction). Its weight is only 0.2 percent in the total PPI.

[45]If the distribution is symmetric, then the skewness equals zero. If the distribution is skewed toward positive values, then the skewness increases, and vice versa. We also smoothed the initial series with a moving average filter.

Figure 15. Spain: Distribution of Sectoral Inflation in Industry, 1976-97



Sources: Producer price indices, Instituto Nacional de Estadistica; and Fund staff estimates.

112. These proxies of the importance of supply shocks in the economy illustrate the importance of the two biggest supply shocks during the period examined: the second oil shock at the end of 1979 and the decline in oil prices in 1986. They also confirm the existence of a more stable inflation period after 1987, with **no major supply shock**. The standard deviation remained close to its lowest level at 2.0 percent, while it had reached almost 10.0 percent during the two oil shocks, and the skewness stood close to zero. For 1995–97, the data do not show a significant contribution of supply shocks to disinflation. Price dispersion slightly increased in 1995–97, but the skewness stood at a higher level at end-1997 than in 1987–95, which would indicate the absence of disinflationary pressures coming from supply shocks.

113. In sum, the evidence suggests that the impact of relative price adjustment on falling inflation in 1996–97 **has not been substantial**. This preliminary conclusion is based on (a) continued evidence of a break in the Phillips curve even after including supply side shocks, and (b) indicators that disinflation was common to all—and not only some—prices in the economy.

The labor market

114. A second type of supply-side shock examined is a **shock to wages**. Specifically, wage moderation may have induced a decline in inflation. Such a moderation would be consistent with the evidence presented above that the distribution of inflation across sectors was not significantly altered during Spain's latest disinflation episode. The purpose of this section is to ascertain whether the decline in wage growth since 1995 was a major factor in pulling inflation down.

115. **Wage growth** has declined substantially. In industry and services, hourly wage growth fell from 8 percent in 1992 to less than 4 percent by end-1997 (Figure 12). Compared to the average growth during 1987–95, nominal wages growth fell in parallel with total inflation. At 3.7 percent in the third quarter of 1997, wage growth was 3.5 percentage points below average growth in 1987–1995.

116. Wage moderation may be traced to **two very distinct sources**. First, it could be argued that the labor market reforms of 1994 and 1997 created a climate of improved industrial relations that yielded lower wage demands on the part of unions in exchange for the prospects of more employment creation, and higher stability of employment. In this case, wage moderation would have resulted from structural changes in the labor market. In contrast, a second hypothesis would sustain that wage moderation was the consequence of the hike in unemployment that accompanied the severe recession of 1992–93. This view would advance that labor market insiders consented more easily to wage moderation as employment conditions worsened while the public sector strongly contained public wages.

117. Independently of the sources of Spain's recent wage moderation, the most difficult issue to address is that of **price and wage causality**. Did wage moderation lead to a fall in

inflation, or was it the result of falling inflation expectations in the economy? To attempt answering this question, this section examines (a) the behavior of real wages and (b) trends in the share of labor income in GDP. Finally, it estimates a four-variable vector autoregression.

118. The **behavior of real wages** provides an inkling to the issue of price-wage causality. Simply put, if wage moderation induced a fall in inflation, then, *ceteris paribus*, the incomplete adjustment of prices to wages in the short-term would induce some reduction in real wage growth and rise in employment. In contrast, if wages simply followed prices, then real wages would have increased transitorily. Available evidence indicates that real wage growth increased in 1996–97, while labor productivity grew very slowly, which would run counter to the hypothesis that wage moderation induced a fall in inflation. A different behavior was observed in the earlier disinflation episode of 1992–95, when real wage growth declined, most likely because the deep recession induced wage moderation.

119. A second way to examine the link between prices and wages is to trace **the share of wage income in GDP**. This share rose in the latest disinflation episode, from 45.9 percent in 1995 to an estimated 46.3 percent in 1997. As with real wages, the behavior of the share of wage income in GDP during the latest disinflation episode differed from that of the earlier episode, when the labor share fell from 49.0 percent if GDP in 1992 to 45.9 percent in 1995. The similar patterns of real wages and labor income shares during the two disinflation episodes under review would suggest that wage moderation may not have played the leading role in the decline of inflation of 1996–97.[46] It is possible that a positive expectations shocks may have hit all agents in the economy, inducing a fall in price increases, and wage moderation. We turn now to this question.

120. A final and more complete method to investigate whether structural improvements in the labor market were behind the latest disinflation episode is the **estimation of a four-variable VAR model** covering 1987–95. The estimation includes inflation, real wage growth, productivity growth, and unemployment, and it performs a dynamic forecast for 1996–97 that is compared with the variables' observed trends.[47] The main advantage of the specification is that the model allows distinguishing between shocks to price expectations, and all other shocks, without identifying formally the underlying structural VAR. An expectation shock affects only the dynamics of inflation, without significantly altering the behavior of other variables. This is not the case for other shocks to the real economy, specifically demand and supply shocks. A negative demand shock would increase unemployment and reduce real wages and inflation through a Phillips curve effect. Similarly, a positive supply shock (such as

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[46]However, the share of wage income did not catch up with the levels observed earlier. This would point to some form of wage moderation.

[47]The estimation includes the relative price of foods as an exogenous variable as well. This is done because relative food prices were found to be significant in the estimation of Section C.

a labor market reform) would temporarily reduce inflation through real wage moderation and lower unemployment.

121. The **estimated model** traces the behavior of the four variables in a satisfactory manner, as shown by a comparison between the static simulation and observed values of the variables (Figure 16). A dynamic forecast for 1996–97, using available information at the beginning of the period, is able to replicate the observed trends in unemployment, productivity growth, and real wages, but fails to track inflation as well (Figure 17).[48] The evidence may thus be interpreted as representing stability in the behavior of real wages, productivity and unemployment. This might indicate the absence of significant innovations in the real economy. On the contrary, actual inflation differs importantly from the dynamic forecast implied by the model, which would suggest that there were innovations to inflation formation that were independent from the real economy. Such a finding would imply the presence of an expectation shock, such as that presented in the general model of inflation of Section B.

122. The tests conducted here to ascertain whether real shocks or expectation shocks were key to the fall in inflation seem to **discard demand and supply shocks** as having played a large role in Spain's latest disinflation episode. We now turn to a more in-depth analysis of the possible shock to price expectations.

E. A Credibility Effect in the Run-up to EMU

123. This section investigates the factors that might explain the credibility shock underlying the decline in inflation. **Two mechanisms** might have provided the basis for the reduction in inflation expectations: the implementation of an inflation targeting strategy by the newly independent Bank of Spain, and the convergence process to meet the EMU criteria.

124. **Changes in the monetary framework** could help explain a drop in the forward-looking component of inflation expectations through higher credibility. In June 1994, the Bank of Spain was granted autonomy and given the clear mandate of attaining price stability. In November 1994, the Bank of Spain abandoned the use of intermediate targets for monetary aggregates and shifted to targeting inflation directly (see SM/97/76 for a detailed presentation). Since then, all medium-term targets for inflation have been met. Actual inflation stood at 2.0 percent by end-1997, while the target was 2.5 percent (Figure 18).

125. **Spain's commitment to be a founding member of EMU** entailed the pursuit of a stable peseta within the ERM bands. More specifically, after the devaluation of early 1995, any change in the central rate of the peseta would have ran counter to the Maastricht Treaty's requirement that there be no modification in the central parity in the two years prior to the decision on EMU membership. The credibility of nominal exchange rate stability is likely to

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[48] The apparent deviation between the dynamic forecast and observed values for real wages are not statistically significant. Observed values still fall within the confidence interval of the estimated values.

Figure 16. Spain: Static simulations of the VAR

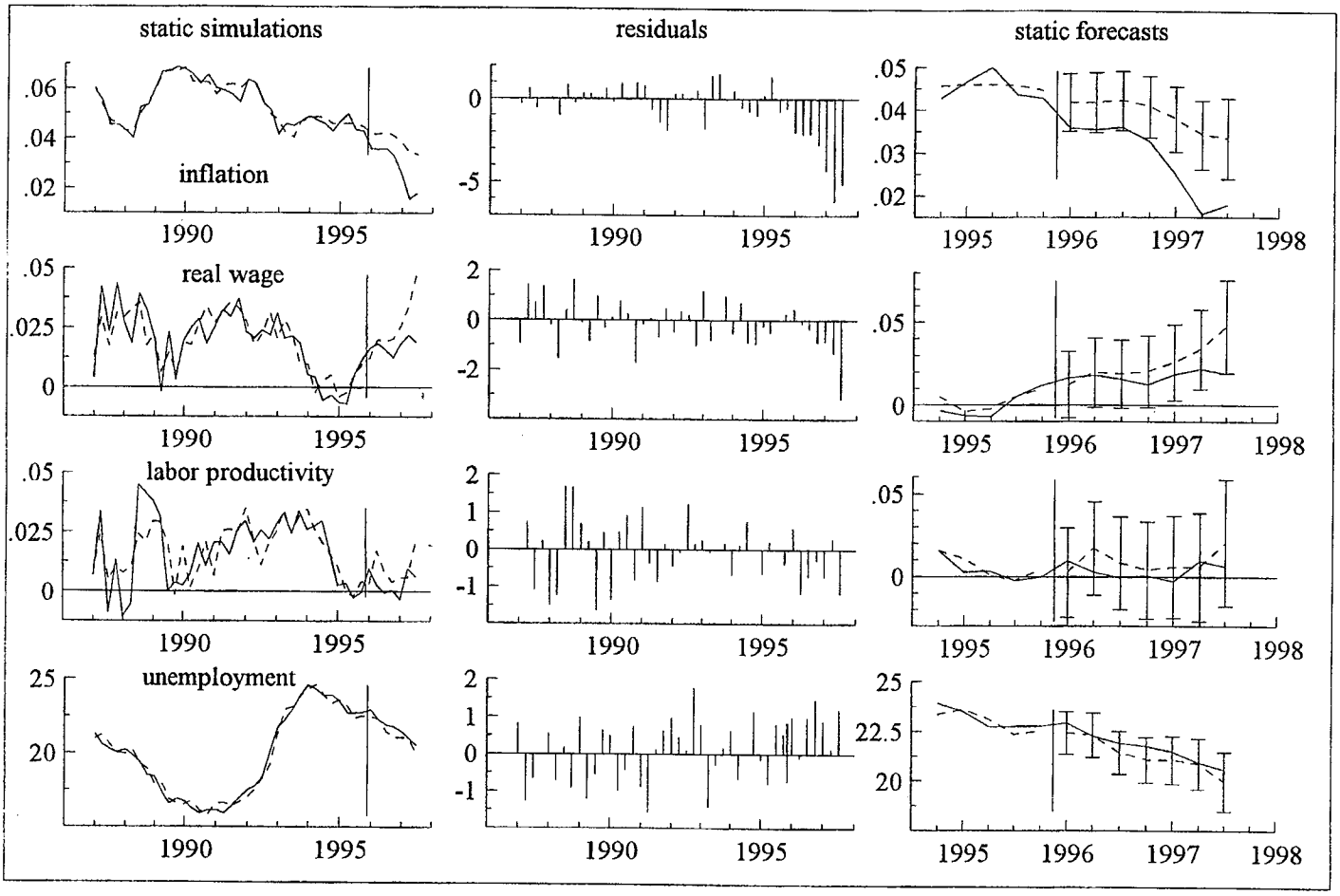


Figure 17. Spain: Dynamic forecasts of the VAR

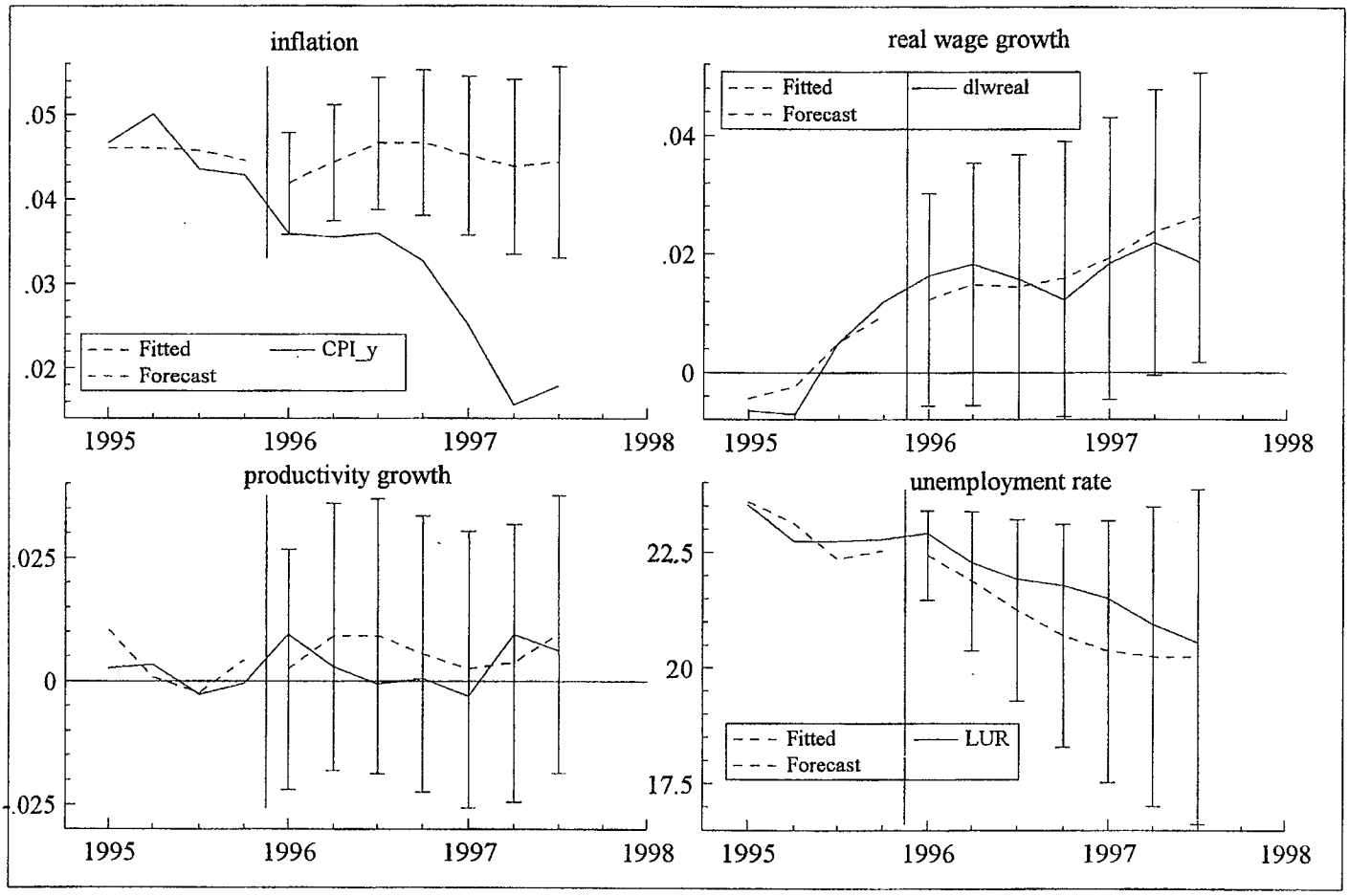
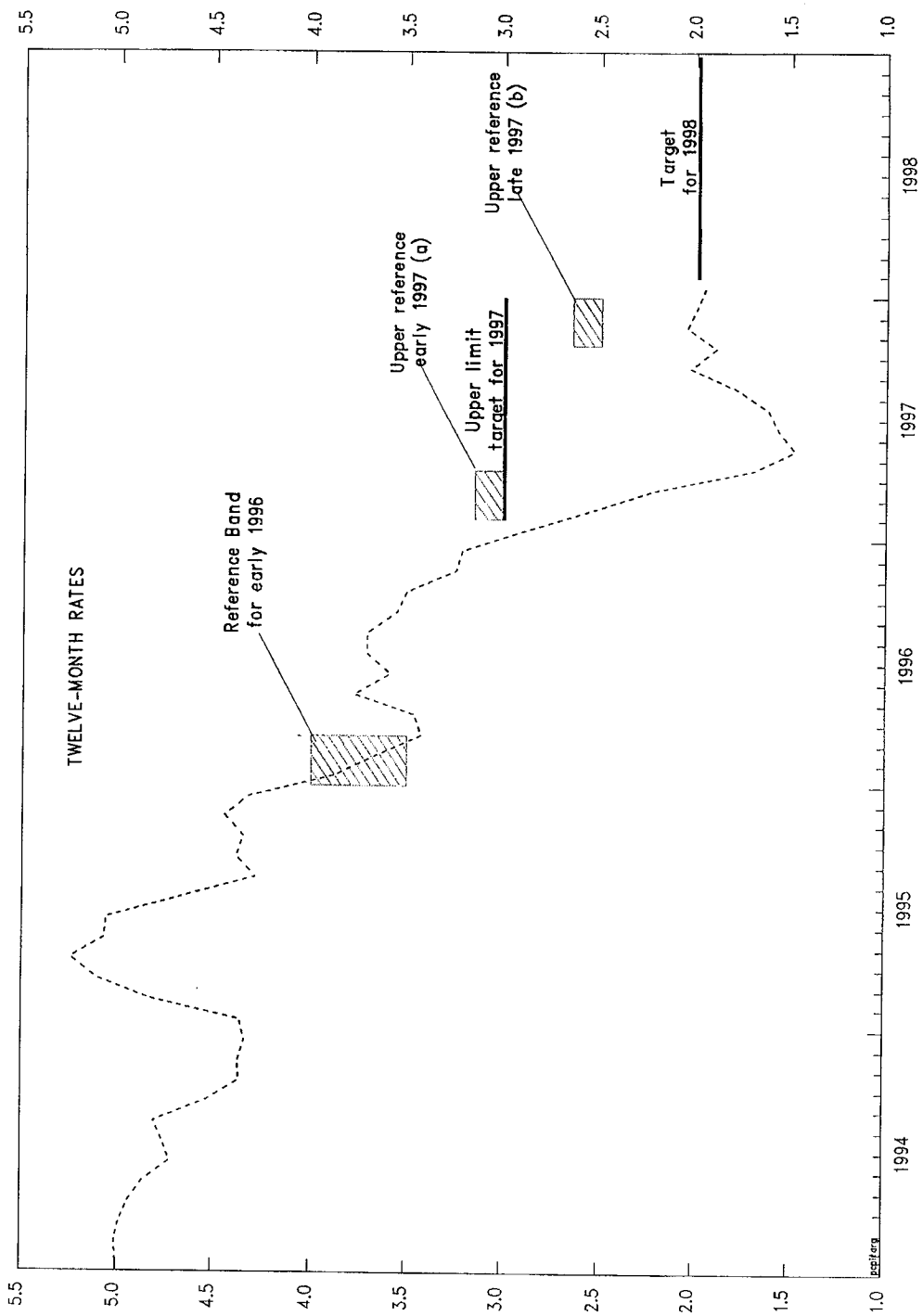


Figure 18. Spain: Consumer Price Inflation-Targets & References, 1994-98
(Year-on-year inflation)



Sources: Instituto Nacional de Estadistica; and Banco de Espana.

(a) The CPI growth rate should, in the opening months of 1997, be running at close to 3 percent.
(b) The twelve-month rate of inflation should, at the end of 1997, be close to 2.5 percent.

have been boosted by the government's effort to meet the 1997 fiscal deficit target of 3 percent of GDP. This, in turn, may have induced a fall in inflation expectations to levels prevailing in the rest of Europe.

126. The credibility effects of inflation targeting and commitment to EMU from the start are likely to have reinforced each other. In an effort to ascertain their **relative importance**, this section presents indicators of inflation expectations in Spain, which may be associated with country-specific credibility gains, and international comparisons of inflationary developments, which may have affected several countries seeking to join EMU.

127. We examine four **proxies of inflation expectations** in Spain (Figure 19), as proposed in Manzano and Campoy (1997): Business surveys and consumer confidence surveys, which include opinions about price expectations in the future; the consensus forecast for inflation, and interest rates differentials with Germany, which should reflect differences in inflation expectations between the two countries. Assuming as a first approximation that inflation expectations have been roughly constant in Germany during this period, then changes in spreads should reflect changes in Spain's inflationary expectations.

128. All these indicators show a rise in inflation expectations at the end of 1994, shortly after the autonomy of the Bank of Spain, no significant decline until end-1995, and a rapid fall thereafter. Thus, it would appear that **credibility gains were not immediate** after the central bank acquired an independent status and adopted an inflation targeting framework.[49] The evidence would instead point to a buildup of credibility gains as inflation targets were met, and as convergence to EMU criteria accelerated.

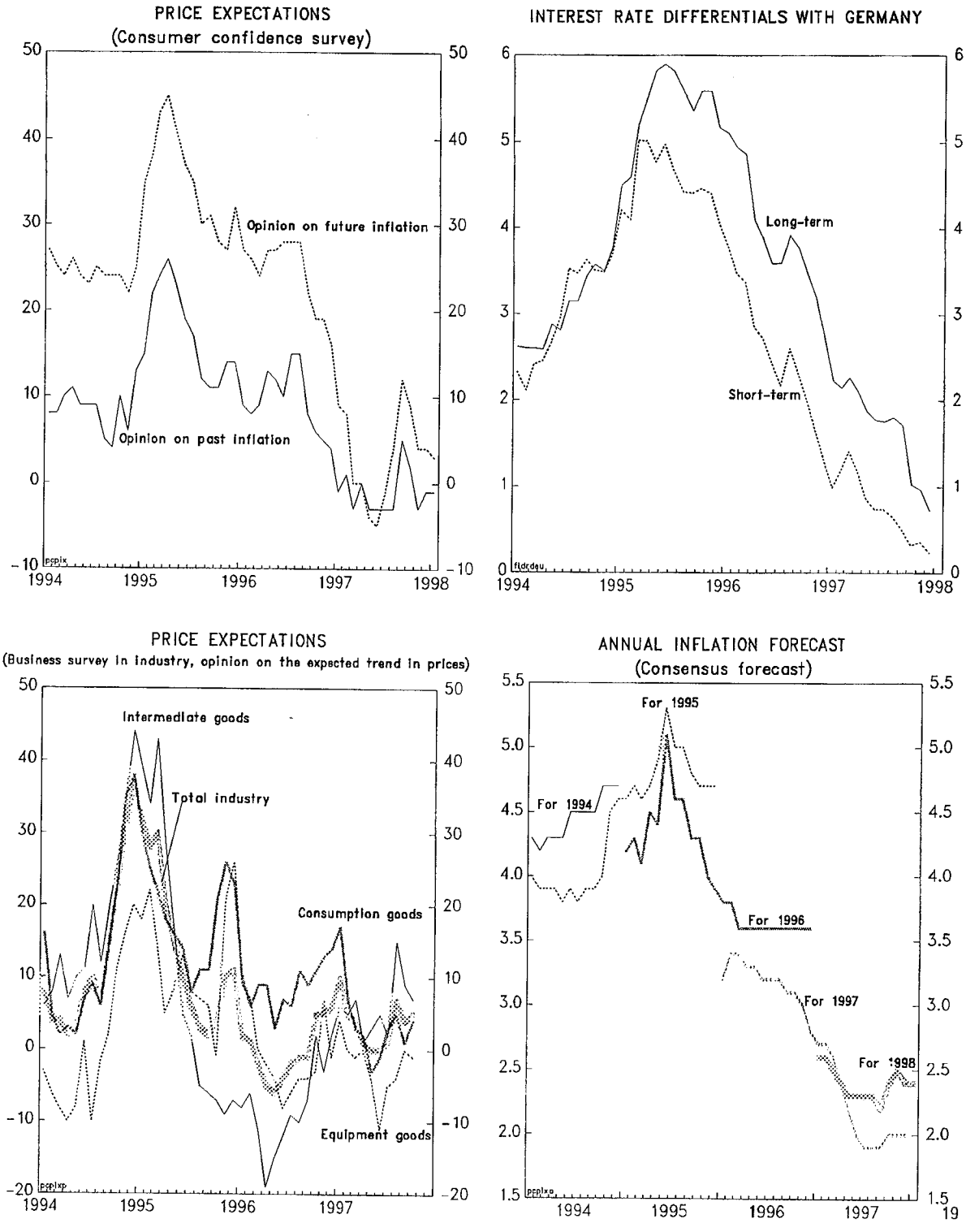
129. A simple comparison of the **disinflationary experiences of Italy, Portugal, and Spain**, all aspiring to joining EMU from the start, may provide some hints on the importance of the commitment to monetary union in reducing inflation. In the three countries, inflation declined sharply during the last few years to a rate close to 2.0 percent, while it previously fluctuated around 5.0 percent in Italy and Spain, and around 9 percent in Portugal (Figure 20, upper panel).

130. The strikingly similar disinflationary episodes in Spain, Italy, and Portugal suggest that a **common factor may have been at play**. In fact, there were three factors that these countries shared: fiscal policies geared to meeting the Maastricht deficit criteria; a favorable shock to food prices in early 1996; and similar movements of the output gap (Figure 20). This chapter has argued in previous sections that the shock to food prices and cyclical position are

---

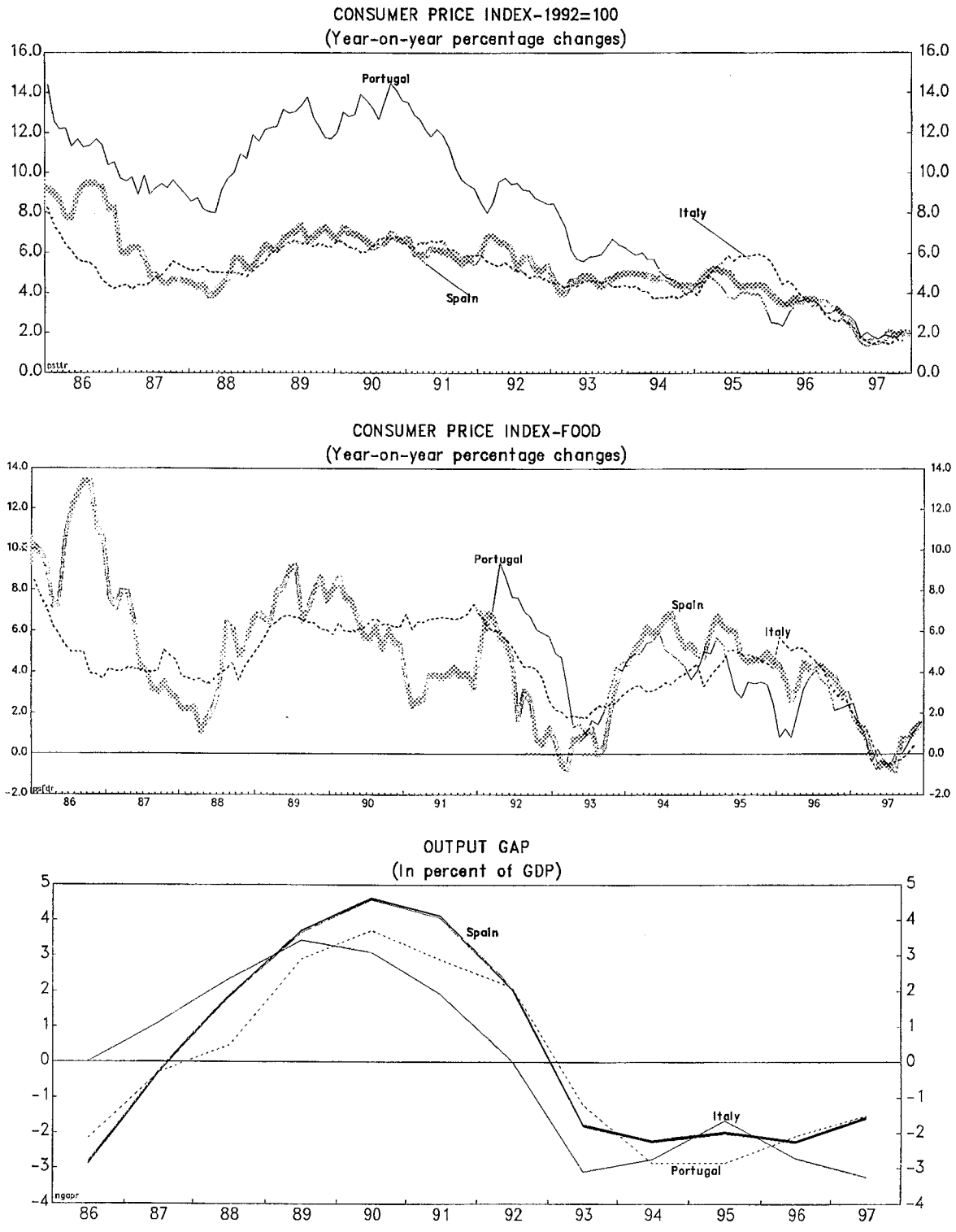
[49]Studies on the gains associated to changes in the status of the central bank or the adoption of a strategy of inflation targeting generally do not show immediate credibility effects. For example, Debelle (1996) finds no output gains comparing disinflation episodes in countries with varying degrees of central bank autonomy and inflation targeting, i.e., Australia, New Zealand, and Canada; Fischer (1996) finds that industrial countries with independent central banks have higher sacrifice ratio than those with less autonomous central banks.

Figure 19. Spain: Indicators of Inflation Expectations, 1994-98



Sources: Bank of Spain; and consensus forecast.

Figure 20. Spain: Inflation and Output Gap, 1986-97



Source: Bank of Spain; and WEFA.

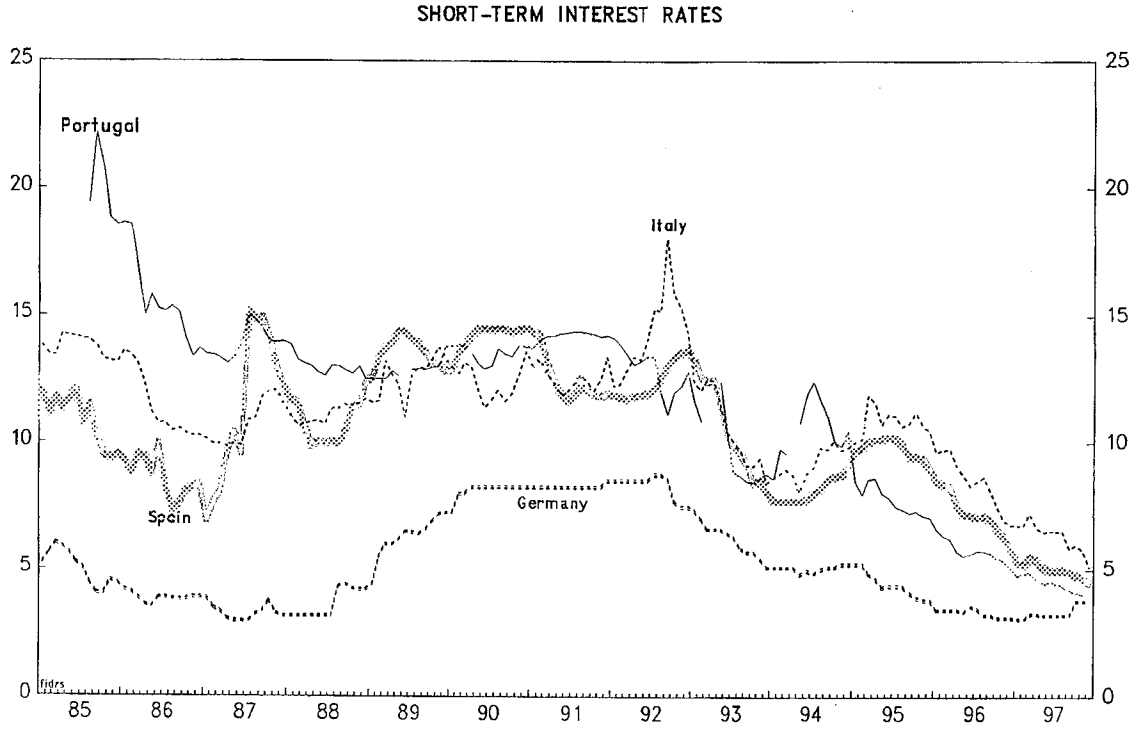
unlikely to have played a major role in the fall in inflation in Spain. If the same is true for Portugal and Italy, then it could be advanced that the commitment to EMU was key to inducing a positive credibility shock in the three countries (Figure 21). This conclusion is obviously tentative because it depends on inferences regarding inflation in Portugal and Italy that may not hold. If they did, however, it would mean that credibility in Spain ensued from the commitment to EMU and it was accompanied by the acquired gains in reputation by the Bank of Spain.

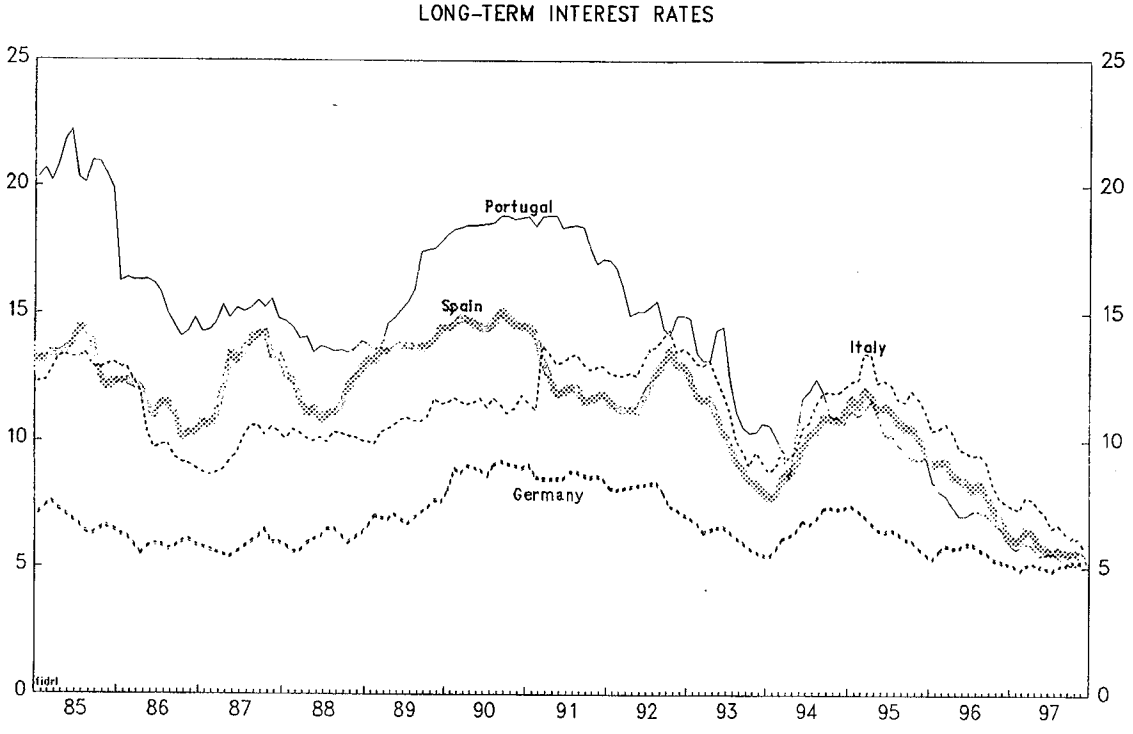
131. Although this chapter does not fully resolve the issue of why the EMU commitment may have been akin to a positive credibility shock, **studies of the experience under the EMS** may shed some light on the issue. For example, Giavazzi and Pagano (1988) sustained that the EMS was expected to allow member countries to "borrow counter-inflation reputation" from the Bundesbank, and therefore increase the credibility of their own monetary policy, simply by pegging their exchange rate to the German currency. Yet, few empirical studies confirmed this credibility effect as disinflation appeared no less costly in the EMS than outside. For example, Revenga (1993) concludes that there was no credibility effect in Spain during the EMS period. More recently, Bleaney and Mizen (1997) confirm the results obtained in previous studies that there is mixed evidence that price-setting in countries which participated in the EMS was influenced by the exchange rate mechanism. These studies lend support to the hypothesis that exchange rate pegging per se does not provide automatic credibility, especially when fiscal policy is not consistent with the target of monetary policy. It could be argued that, in contrast to the EMS experience, the commitment to EMU participation by Italy, Portugal, and Spain was accompanied by significant fiscal adjustment, which may have enhanced credibility and reduced inflation in 1996–97.

F. Concluding Remarks

132. Spain's disinflation in 1996–97 cannot be explained fully by the recession experienced in 1992–93, nor by a positive supply shock, even if both factors contributed to abate inflationary pressures. In particular, wage moderation appears to have accompanied, rather than induced, the fall in inflation. As in Portugal and Italy, the fall in inflation is more likely to have resulted from a credibility shock associated with a strong commitment to be part of EMU from the start, and the implementation of fiscal policy consistent with that goal. The findings of this chapter bode well for medium-term prospects in Spain, even if cyclical conditions turn upward. As long as long-term price expectations remain stable, Spain's inflation is unlikely to rise persistently. Risks, instead, emanate from possible unemployment costs associated with maintaining low inflation levels in the presence of continued product and labor market rigidities. With low inflation seemingly assured by EMU participation, the challenge for Spain is to allow price stability to coexist with flexible labor and product markets.

Figure 21. Spain: International Comparisons of Interest Rates, 1985-97





Source: IMF, International Financial Statistics.

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Table 1. Spain: Demand and Output, 1991-96

	1994	1995	1996	1986-91	1992-96	1992	1993	1994	1995	1996
	In billions of pesetas at current prices			Avg. percent cng. at constant prices		Year-on-year percent changes at constant prices				
Consumption	51,686.9	54,978.9	57,791.3	5.0	1.0	2.6	-1.3	0.6	1.5	1.8
Private	40,723.7	43,331.8	45,669.5	4.6	0.9	2.2	-2.2	0.9	1.5	2.1
Public	10,963.2	11,647.1	12,121.9	6.7	1.6	4.0	2.4	-0.3	1.3	0.5
Gross investment	12,993.1	14,712.6	15,139.7	10.2	-1.0	-3.9	-14.1	3.4	9.0	0.9
Fixed capital formation	12,843.0	14,420.4	14,871.0	10.0	-0.8	-4.4	-10.6	1.8	8.2	1.3
Change in stocks 1/	150.1	292.2	268.6	0.1	-0.1	0.1	-1.0	0.4	0.2	-0.1
Total domestic demand	64,680.0	69,691.5	72,931.0	5.7	4.7	1.0	-4.3	1.2	3.1	1.6
Exports of goods and services	14,440.6	16,728.9	18,761.7	5.1	10.5	7.4	8.5	16.7	8.2	11.7
Aggregate demand	79,120.6	86,420.4	91,692.7	5.9	6.3	2.2	-4.5	3.3	4.4	3.2
Imports of goods and services	14,331.4	16,659.6	18,120.9	13.7	6.0	6.9	-5.2	11.4	8.8	8.4
Gross domestic product	64,789.2	69,760.7	73,571.7	4.3	1.3	0.7	-1.2	2.2	2.7	2.3
Percentage change in:										
GDP at current prices	6.3	7.7	5.5	11.2	6.0	7.6	3.1	6.3	7.7	5.5
GDP deflator	4.0	4.8	3.1	6.6	4.6	6.9	4.3	4.0	4.8	3.1
Memorandum items:										
Decomposition of fixed capital formation by:										
Sectors:										
Construction	8,741.9	9,668.8	9,789.9	10.4	-1.1	-4.4	-6.5	1.9	5.7	-2.0
Machinery and equipment	4,101.1	4,751.6	5,081.2	9.4	-0.1	-4.4	-17.0	3.3	11.7	5.9
Agents:										
Private fixed investment	10,204.0	11,824.4	12,590.0	9.8	0.7	-2.4	-13.4	2.8	11.7	4.6
Public fixed investment	2,639.0	2,596.0	2,281.0	11.2	-6.7	-13.0	2.3	-2.2	-6.0	-14.9

Source: Ministry of Economy and Finance.

1/ Changes at constant prices in stockbuilding are expressed in percent of real GDP in the previous period.

Table 2. Spain: Quarterly Evolution of GDP, 1995-97

(Year-on-year percentage change at constant prices)

	1995				1996				1997		
	I	II	III	IV	I	II	III	IV	I	II	III
Consumption	1.8	1.9	1.6	1.4	1.4	1.5	1.6	1.7	2.0	2.4	2.7
Private	1.7	1.8	1.6	1.4	1.5	1.8	2.2	2.3	2.7	3.2	3.5
Public	2.2	2.1	1.6	1.3	1.0	0.3	-0.4	-0.5	-0.5	-0.5	-0.4
Gross investment	10.7	10.7	8.7	5.5	3.1	0.9	-0.6	-0.7	0.1	1.6	3.7
Fixed capital formation	8.5	9.4	8.2	5.4	2.9	0.9	-0.3	0.2	2.1	3.8	5.6
Change in stocks 1/	0.5	0.3	0.2	0.1	0.1	0.0	-0.1	-0.2	-0.4	-0.5	-0.4
Total domestic demand	3.7	3.8	3.1	2.3	1.8	1.4	1.1	1.2	1.6	2.2	2.9
Exports of goods and services	11.6	10.8	9.8	7.9	7.5	9.2	11.1	11.5	11.8	12.1	12.9
Aggregate demand	5.3	5.3	4.6	3.5	3.0	3.1	3.3	3.5	3.9	4.5	5.3
Import of goods and services	13.0	13.0	10.9	7.4	5.8	6.0	6.6	6.5	6.9	8.4	11.0
Gross domestic product	3.0	2.9	2.6	2.3	2.1	2.1	2.3	2.5	2.9	3.2	3.4
GDP deflator	4.6	5.0	5.1	4.6	3.8	3.2	2.8	2.7	2.3	1.9	1.9
Memorandum items:											
Fixed capital formation by sector:											
Construction	5.0	6.5	6.7	4.6	1.6	-1.8	-3.9	-3.6	-1.8	0.2	2.5
Machinery and equipment	15.1	14.7	10.8	6.7	5.1	5.7	6.1	6.8	8.5	9.6	10.5

Source: Ministry of Economy and Finance.

1/ Changes at constant prices in stockbuilding are expressed in percent of real GDP in the previous period.

Table 3. Spain: Contribution to the Growth of Real Aggregate Demand, 1989-96

	1990	1991	1992	1993	1994	1995	1996
			(In percent)				
Private consumption	1.9	1.5	1.1	-1.1	0.4	0.7	1.0
Public consumption	0.8	0.7	0.5	0.3	-0.0	0.2	0.1
Private fixed investment	0.7	0.3	-0.4	-2.0	0.4	1.6	0.7
Public fixed investment	0.6	0.0	-0.5	0.1	-0.1	-0.2	-0.4
Change in inventories	0.0	-0.1	0.1	-0.8	0.3	0.2	-0.1
Total domestic demand	4.0	2.4	0.8	-3.5	1.0	2.4	1.2
Exports	0.5	1.2	1.2	1.5	3.2	1.7	2.6
Memorandum items:							
			(Percent change)				
Aggregate demand	4.5	3.6	2.0	-2.1	4.1	4.2	3.8
Gross domestic product	3.7	2.3	0.7	-1.2	2.2	2.7	2.3

Sources: Ministry of Economy and Finance; and staff calculations.

Table 4. Spain: Factors Accounting for Growth in Private Consumption, 1991-96 1/

	Real private consumption	Total employment	Real earned income per worker	Net Direct taxes per worker 2/	Real disposable income per worker	Change in personal savings rate
	(Average of period percentage change)					
1991	2.9	0.2	4.3	3.8	4.4	1.2
1992	2.2	-1.9	2.8	10.2	2.0	-1.9
1993	-2.2	-4.3	4.4	-5.2	5.5	3.0
1994	0.9	-0.9	-1.3	-0.6	-1.4	-2.7
1995	1.5	2.7	-0.0	-10.9	1.1	1.8
1996	2.1	2.9	-0.3	4.1	-0.7	0.0

Sources: Staff calculations on data from the Ministry of Economy and Finance; and Cuentas Financieras, Bank of Spain.

1/ Income includes those of households and unincorporated business.

2/ Direct taxes plus social security contribution minus transfers received.

Table 5. Spain: Household Disposable Income, 1990-96

	1990	1991	1992	1993	1994	1995	1996
	(In billions of pesetas)						
Disposable income	35,117	38,978	41,501	44,315	45,487	49,387	52,073
Changes in percent in nominal terms	13.1	11.0	6.5	6.8	2.6	8.6	5.4
Changes in percent in real terms	6.6	4.6	0.0	1.2	-2.3	3.8	2.2
Wage income	23,978	26,792	28,947	30,061	30,563	32,055	33,936
share of income	68.3	68.7	69.7	67.8	67.2	64.9	65.2
Nonwage income	14,926	16,367	17,351	18,865	19,692	21,937	23,213
share of income	42.5	42.0	41.8	42.6	43.3	44.4	44.6
Social and current transfers	7,990	9,216	10,423	11,432	11,564	12,083	12,762
share of income	22.8	23.6	25.1	25.8	25.4	24.5	24.5
Direct taxes	4,297	4,963	5,750	5,742	6,032	6,398	6,763
share of income	12.2	12.7	13.9	13.0	13.3	13.0	13.0
Social security contributions	7,480	8,434	9,470	10,301	10,300	10,290	11,075
share of income	21.3	21.6	22.8	23.2	22.6	20.8	21.3
Private consumption	31,303	34,269	37,277	38,482	40,724	43,332	45,669
Gross savings	3,814	4,709	4,224	5,833	4,763	6,055	6,404
Savings ratio 1/	10.9	12.1	10.2	13.2	10.5	12.3	12.3

Source: Ministry of Economy and Finance.

1/ Gross savings in percent of disposable income.

Table 6. Spain: GDP by Sectors, 1989-96
(In constant prices)

	1989	1990	1991	1992	1993	1994	1995	1996
				(Changes in percent)				
Real GDP at market prices	4.7	3.7	2.3	0.7	-1.2	2.2	2.7	2.3
Agriculture and fishing	-6.6	3.1	-0.3	-1.4	-0.4	-10.1	-13.2	25.7
Industrial	5.6	3.8	1.7	-1.2	-3.7	3.9	5.2	-0.7
Excluding construction	3.6	2.0	1.4	-0.0	-3.1	4.5	4.8	-0.0
Construction	13.5	10.2	3.0	-5.4	-5.5	1.6	6.7	-3.2
Services	5.2	4.0	2.7	2.1	0.8	2.2	2.7	2.9
Market	4.6	3.1	2.1	1.8	0.9	2.9	2.9	3.4
Nonmarket	6.9	6.8	4.8	3.0	0.8	0.3	2.1	1.2
				(Share of GDP at market prices)				
Agriculture and fishing	5.2	5.2	5.0	4.9	5.0	4.4	3.7	4.5
Industrial	36.0	36.0	35.8	35.2	34.3	34.8	35.7	34.6
Excluding construction	28.4	28.0	27.7	27.5	27.0	27.6	28.1	27.5
Construction	7.6	8.0	8.1	7.6	7.3	7.2	7.5	7.1
Services	52.7	52.8	53.0	53.8	54.8	54.8	54.8	55.2
Market	40.1	39.8	39.8	40.2	41.0	41.3	41.3	41.8
Nonmarket	12.6	12.9	13.3	13.6	13.8	13.6	13.5	13.3

Sources: INE; and Ministry of Economy and Finance.

Table 7. Spain: Production Indicators, 1991-97

	1991	1992	1993	1994	1995	1996	1996				1997			
							I	II	III	IV	I	II	III	Oct.
	(Changes in percent over same period of previous year)													
Industrial production														
Total	-0.7	-2.9	-4.7	7.3	4.7	-0.7	-2.5	-2.9	0.9	2.0	0.8	9.2	9.0	8.6
Manufacturing sector	-1.1	-3.5	-4.9	8.7	5.6	-0.8	-3.8	-2.8	1.7	2.3	1.7	9.2	8.8	9.0
By destination:														
Intermediate goods	-1.0	-2.5	-4.4	7.4	4.5	-1.2	-1.7	-4.5	-0.9	2.4	-1.8	9.0	9.1	6.8
Consumption goods	2.1	-2.4	-4.1	7.2	1.6	-1.5	-4.9	-2.4	1.2	0.6	3.6	8.1	6.6	9.4
Investment goods	-9.7	-4.7	-7.5	7.6	14.2	3.0	0.9	1.1	6.4	4.2	2.7	13.0	15.3	12.1
Housing starts	-14.8	3.3	-6.4	19.2	28.7	-4.9	-8.9	-8.0	-5.2	2.7	4.4	9.1	10.7	...
Commercial vehicles production	-17.7	6.8	-20.9	20.5	19.7	26.2	9.8	2.8	59.4	45.8	15.8	46.4	2.1	...
Automobile production	5.6	1.0	-16.0	21.3	7.3	-1.0	-4.1	-0.2	-4.5	4.6	-5.8	2.6	7.1	...
	(In percent of total capacity)													
Memorandum item:														
Capacity utilization 1/	76.7	73.4	70.7	75.1	78.1	77.0	76.1	77.1	77.6	77.1	77.4	79.2	80.6	...

Sources: Bank of Spain, Statistical Bulletin; and Ministry of Economy and Finance, Sintesis Mensual de Indicadores Economicos.

1/ Industrial sector excluding construction.

Table 8. Spain: Prices, 1992-97

	1992	1993	1994	1995	1996	1996 I	1996 II	1996 III	1996 IV	1997 I	1997 II	1997 III	1997 IV
	(Average of period: percent change)					(End-of-period; annual percent change)							
Consumer prices	5.9	4.6	4.7	4.7	3.6	3.4	3.6	3.6	3.2	2.2	1.6	2.0	2.0
Food products	3.7	1.1	5.7	5.3	3.7	2.7	4.1	4.0	2.9	1.0	-0.4	0.7	1.5
Non-food products	7.1	6.2	4.3	4.4	3.5	3.7	3.4	3.4	3.3	2.7	2.4	2.6	2.2
Energy	6.7	7.5	3.6	3.5	3.7	1.6	2.5	4.8	6.5	3.5	1.9	2.7	0.6
Other Industrial	4.5	4.6	3.5	3.9	3.2	4.0	3.2	2.9	2.4	1.8	1.5	1.4	1.4
Services	8.8	7.5	5.4	5.1	3.7	3.9	3.7	3.6	3.6	3.5	3.3	3.7	3.5
Underlying inflation 1/	6.8	5.6	4.6	4.9	3.6	4.2	3.6	3.4	3.0	2.1	1.9	2.1	2.0
Industrial prices	1.4	2.4	4.3	6.4	1.7	1.9	1.2	0.8	1.8	0.8	0.8	1.6	0.9
Of which: Energy	2.3	3.6	3.0	2.0	3.0	0.9	1.5	3.8	7.1	2.3	0.3	0.4	...
By destination:													
Consumer goods	2.9	3.4	4.4	5.0	3.9	4.2	4.1	3.4	2.9	1.2	0.7	1.0	0.7
Investment goods	2.3	1.3	1.8	4.2	2.4	2.6	2.3	2.1	2.0	1.4	1.2	1.2	1.2
Intermediate goods	-0.2	1.8	4.8	8.3	-0.5	-0.3	-1.6	-2.0	0.7	0.2	1.0	2.3	1.0
Memorandum items:													
GDP deflator	6.9	4.3	4.0	4.9	3.1	3.8	3.2	2.8	2.7	2.3	1.9	1.9	...
Private consumption deflator	6.4	5.6	4.9	4.8	3.2	3.7	3.3	3.3	3.2	2.9	2.4	2.3	...
Inflation differentials with respect to:													
EU	1.5	1.0	1.7	1.6	1.1	0.7	1.1	1.3	1.0	0.4	-0.2	-0.1	...
Three best EU	3.3	2.7	3.0	3.1	2.5	2.4	2.6	2.4	2.2	1.2	0.6	0.8	...

Source: Bank of Spain, Statistical Bulletin.

1/ Underlying inflation is measured by excluding energy and the unprocessed food groups from the total CPI.

Table 9. Spain: Population and Unemployment, 1992-97 1/

	1992	1993	1994	1995	1996	1997 Q3
	(In thousands)					
Population over 16 years of age	30,990	31,272	31,569	31,880	32,125	32,370
(Annual growth rate)	1.0	0.9	0.9	1.0	0.8	0.7
Economically active population	15,155	15,319	15,468	15,625	15,936	16,187
(Annual growth rate)	0.5	1.1	1.0	1.0	2.0	0.9
Employment	12,366	11,838	11,730	12,042	12,396	12,861
(Annual growth rate)	-1.9	-4.3	-0.9	2.7	2.9	2.7
Unemployed	2,789	3,481	3,738	3,584	3,540	3,326
Unemployment rate	18.4	22.7	24.2	22.9	22.2	20.5
Labor force participation rate: Total	48.9	49.0	49.0	49.0	49.6	50.0
Male	64.7	64.3	63.3	62.7	63.1	63.1
Female	34.2	34.8	35.6	36.2	37.0	37.8
Memorandum items:						
Beneficiaries of unemployment benefits (in percent of):						
Registered unemployed 2/	63.3	67.3	57.8	50.7	50.5	49.3
Unemployed net of agriculture 2/	80.4	82.7	70.8	62.8	63.4	62.2
All unemployed 3/	58.5	55.4	47.0	40.7	37.9	36.0

Sources: INE, Labor Force Survey; and Ministry of Economy and Finance, Sintesis de Indicadores Economicos.

1/ Annual averages.

2/ Excludes assistance to temporary agricultural workers.

3/ Includes assistance to temporary agricultural workers.

Table 10. Spain: Contribution to Total Employment Growth
by Sectors and Categories, 1992-97

	1992	1993	1994	1995	1996	1997		
						I	II	III
	(Period-to-period percentage change)							
Dependent employees								
by professional category	-3.2	-4.3	-0.7	3.7	3.8	0.4	1.5	1.8
contribution to total growth	-2.4	-3.2	-0.5	2.7	2.8	0.3	1.1	1.4
Public								
by professional category	0.8	-2.4	-2.7	3.1	5.4	-0.5	1.1	1.3
contribution to total growth	0.1	-0.4	-0.5	0.5	1.0	-0.1	0.2	0.2
Private								
by professional category	-4.3	-4.9	-0.0	3.9	3.3	0.8	1.6	2.0
contribution to total growth	-2.5	-2.7	-0.0	2.2	1.9	0.4	0.9	1.1
Full time								
by type of employment	-4.0	-5.1	-1.4	2.9	3.5	-0.1	1.2	2.3
contribution to total growth	-2.8	-3.5	-1.0	2.0	2.4	-0.1	0.8	1.6
Part time								
by type of employment	15.9	10.3	10.7	15.4	7.8	7.2	5.2	-3.8
contribution to total growth	0.5	0.4	0.5	0.7	0.4	0.4	0.3	-0.2
Permanent contracts								
by type of contract	-4.8	-2.6	-2.9	2.0	5.5	0.4	1.4	1.6
contribution to total growth	-2.4	-1.3	-1.4	1.0	2.7	0.2	0.7	0.8
Temporary contracts								
by type of contract	0.3	-7.7	3.9	7.0	0.6	0.5	1.6	2.2
contribution to total growth	0.1	-1.9	0.9	1.7	0.2	0.1	0.4	0.6
Non-salaried								
by professional category	1.6	-4.2	-1.5	-0.2	0.4	-0.3	-0.4	-0.6
contribution to total growth	0.4	-1.1	-0.4	-0.0	0.1	-0.1	-0.1	-0.1
Of which:								
Self-employed								
by professional category	0.5	-2.5	-0.2	0.1	-0.2	-1.8	0.5	0.3
contribution to total growth	0.1	-0.4	-0.0	0.0	-0.0	-0.3	0.1	0.0
Total	-1.9	-4.3	-0.9	2.7	2.9	0.3	1.0	1.2

Source: Bank of Spain, Statistical Bulletin.

Table 11. Spain: Employment by Sectors, 1990-97

	1990	1991	1992	1993	1994	1995	1996	1997		
								I	II	III
	(Period-to-period percentage change)									
Agriculture										
by sector	-7.0	-9.5	-6.9	-4.4	-3.9	-3.9	-2.7	6.6	-6.6	-1.7
contribution to total growth	-0.9	-1.1	-0.7	-0.4	-0.4	-0.4	-0.2	0.6	-0.6	-0.1
Industry										
by sector	2.8	-3.0	-3.0	-9.3	-2.6	0.5	0.6	-1.2	1.7	3.0
contribution to total growth	0.7	-0.7	-0.7	-2.1	-0.6	0.1	0.1	-0.2	0.3	0.6
Construction										
by sector	7.6	4.3	-6.1	-9.0	-2.7	7.2	3.6	-0.7	2.9	0.1
contribution to total growth	0.7	0.4	-0.6	-0.9	-0.3	0.6	0.3	-0.1	0.3	0.0
Services										
by sector	4.0	3.0	0.2	-1.5	0.5	3.8	4.5	0.0	1.6	1.2
contribution to total growth	2.2	1.6	0.1	-0.9	0.3	2.3	2.7	0.0	1.0	0.7
Total	2.6	0.2	-1.9	-4.3	-0.9	2.7	2.9	0.3	1.0	1.2

Source: Bank of Spain, Statistical Bulletin.

Table 12. Spain: Indicators of Labor Costs, 1991-97

	1991	1992	1993	1994	1995	1996	1997		
							I	II	III
	(Year-on-year percentage changes)								
Contractual wage increases (In percent) 1/	8.0	7.3	5.5	3.6	3.9	3.8	3.0	3.0	3.0
Net wages per employee 2/									
Nominal	7.6	7.5	6.4	4.7	4.5	4.5	4.2	3.6	2.9
Real 3/	1.7	1.6	1.8	0.0	-0.2	0.9	1.7	2.0	1.1
Unit labor costs 4/	8.4	8.7	5.1	-0.1	1.4	2.0	...	...	...
Average compensation per employee 4/	10.6	11.6	8.5	3.0	1.4	1.3	...	...	...
Productivity per worker	2.0	2.7	3.3	3.2	0.1	-0.7	-0.4	0.3	0.7
GDP	2.3	0.7	-1.2	2.2	2.7	2.3	2.9	3.2	3.4
Total employment 5/	0.2	-1.9	-4.3	-0.9	2.7	2.9	3.3	3.0	2.7
Dependent Employment	1.1	-3.2	-4.3	-0.7	3.7	3.8	5.0	4.5	4.3
Unit labor costs in manufacturing	7.4	8.2	5.2	-2.4	-0.8	5.3	1.1	1.6	1.0
Value added in manufacturing	0.9	-0.2	-2.9	4.1	4.7	-0.2	5.1	6.4	6.8
Employment in manufacturing	-1.2	-3.2	-5.3	-2.1	1.6	1.2	2.2	3.4	4.1
Average compensation in manufacturing	9.8	11.6	7.9	3.7	2.1	3.9	4.0	4.5	3.6

Sources: Bank of Spain, Statistical Bulletin; and Ministry of Economy and Finance.

1/ Based on collective wage agreements.

2/ Excluding social security contributions; data from the wage survey by INE, excluding agriculture.

3/ Deflated by the consumer price index.

4/ National accounts definitions.

5/ Data on employment are those from the Encuesta de Poblacion Activa (EPA).

Table 13. Spain: General Government - Overall Balances, National Accounts Basis, 1991-1997

(In percent of GDP)

	1991	1992	1993	1994	1995	1996	1997 Prelim. proj.
Overall balance (Maastricht definition)	-4.4	-3.5	-6.7	-6.3	-6.6	-4.4	-2.9
Central government	-2.5	-2.3	-6.0	-5.1	-5.4	-3.3	-2.3
Territorial governments	-1.6	-1.1	-1.2	-1.0	-0.7	-0.6	-0.4
Social security	-0.3	-0.1	0.5	-0.2	-0.5	-0.5	-0.2

Sources: *Cuentas Financieras* and *Boletin Estadistico*, Bank of Spain; and staff projections.

Table 14. Spain: General Government Nonfinancial Operations, National Accounts Basis, 1991-97

	1991	1992	1993	1994	1995	1996	1997 Prelim. proj.
	(Percent of Maastricht GDP)						
Current revenues	39.8	41.7	41.7	40.4	39.1	39.7	40.1
Indirect taxes	9.8	10.2	9.5	10.1	9.9	10.0	10.4
Direct taxes	11.9	12.3	11.9	11.4	11.4	11.5	11.6
Personal income taxes	8.2	8.8	8.5	8.4	8.2	8.2	8.1
Corporate income taxes and other	3.8	3.6	3.4	3.0	3.2	3.3	3.5
Social security contributions	13.6	14.5	14.8	14.5	13.4	13.8	13.9
Other current revenues	4.5	4.6	5.5	4.5	4.3	4.5	4.2
Current expenditures	38.6	40.4	43.3	42.2	41.2	40.6	39.7
Public consumption	16.1	17.0	17.4	16.8	16.5	16.1	15.7
Current transfers	15.1	16.0	16.8	16.4	15.7	15.6	15.4
Interest payments	3.9	4.2	5.2	5.1	5.3	5.3	4.8
Subsidies	1.8	1.7	2.1	2.0	1.9	1.7	1.7
Other current expenditures	1.7	1.6	1.8	2.0	1.8	1.9	2.0
Current balance	1.2	1.2	-1.6	-1.8	-2.2	-0.9	0.3
Capital revenues	0.8	0.8	0.8	1.0	1.2	1.2	1.2
Gross fixed capital formation	4.8	4.0	4.0	3.9	3.6	3.0	3.1
Capital transfers and other	1.6	1.6	1.9	1.6	2.0	1.8	1.4
Primary balance	-0.5	0.6	-1.6	-1.2	-1.3	0.9	1.9
Overall balance (Maastricht definition)	-4.4	-3.5	-6.7	-6.3	-6.6	-4.4	-2.9
Government debt (Maastricht definition)	45.5	48.0	60.0	62.6	65.3	69.8	68.2

Sources: *Cuentas Financieras* and *Boletin Estadistico,* Bank of Spain; and staff projections.

Table 15. Spain: General Government Financing, 1989-96

	1989	1990	1991	1992	1993	1994	1995	1996
				(In billions of pesetas)				
Net change in liabilities	3,025	3,838	3,064	3,924	7,594	4,693	6,179	5,803
Loans from financial institutions	257	1,853	1,144	493	350	568	512	600
of which: Bank of Spain	215	1,243	160	-100	-31	-39	36	-48
Short-term securities	2,173	797	-1,037	-92	101	953	123	1,676
Bonds	320	763	2,301	1,755	7,112	1,974	4,429	3,714
Nonnegotiable securities	-28	-30	152	819	-48	-51	-54	-58
Loans in foreign currency	65	47	-5	215	297	411	247	74
Foreign currency loans from residents	18	24	-2	-4	58	13	12	27
Direct loans from abroad	47	23	-3	219	239	398	235	47
Other 1/	238	408	509	734	-219	838	922	-203
				(In percent of GDP)				
Net change in liabilities	6.7	7.6	5.5	6.6	12.4	7.2	8.8	7.8
Loans from financial institutions	0.6	3.7	2.1	0.8	0.6	0.9	0.7	0.8
of which: Bank of Spain	0.5	2.5	0.3	-0.2	-0.1	-0.1	0.1	-0.1
Short-term securities	4.8	1.6	-1.9	-0.2	0.2	1.5	0.2	2.3
Bonds	0.7	1.5	4.2	2.9	11.6	3.0	6.3	5.0
Nonnegotiable securities	-0.1	-0.1	0.3	1.4	-0.1	-0.1	-0.1	-0.1
Loans in foreign currency	0.1	0.1	0.0	0.4	0.5	0.6	0.4	0.1
Foreign currency loans from residents	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Direct loans from abroad	0.1	0.0	0.0	0.4	0.4	0.6	0.3	0.1
Other 1/	0.5	0.8	0.9	1.2	-0.4	1.3	1.3	-0.3
Memorandum items:								
General government balance	-1,148	-1,890	-2,436	-2,106	-4,133	-4,098	-4,621	-3,291
Of which: State	-974	-1,456	-1,267	-1,346	-3,752	-3,323	-3,825	-2,487
Change in deposits at the Bank of Spain	0	1,210	-58	39	2,271	-1,337	-306	990

Source: Bank of Spain, *Cuentas Financieras.*

1/ Includes changes in cash and deposit balances.

Table 16. Spain: General Government Financing by Debt Holder, 1989-96 1/

	1989	1990	1991	1992	1993	1994	1995	1996
				(In billions of pesetas)				
Net financing	3,025	3,838	3,064	3,924	7,594	4,693	6,179	5,803
Resident	2,662	3,435	1,278	3,384	1,659	7,058	3,930	5,380
of which: in foreign currency	18	24	-2	-4	58	13	12	27
Nonresident	363	403	1,786	540	5,935	-2,365	2,249	423
of which: in pesetas	316	380	1,789	321	5,696	-2,763	2,014	376
				(In percent of GDP)				
Total outstanding debt	48.9	50.5	51.5	54.5	66.1	69.2	72.6	76.7
Resident	46.7	47.9	45.8	48.0	49.5	57.1	58.4	62.7
of which: in foreign currency	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2
Nonresident	2.2	2.6	5.7	6.5	16.7	12.1	14.1	14.0
of which: in pesetas	1.7	2.2	5.2	5.7	15.3	10.2	12.2	12.0
Debt according to Maastricht criteria	43.2	44.8	45.5	48.0	60.0	62.6	65.3	69.8

Source: Bank of Spain, *Cuentas Financieras.*

1/ Not computed according to Maastricht definition.

Table 17. Spain: State Nonfinancial Operations on a National Accounts Basis, 1989-96 1/

	1989	1990	1991	1992	1993	1994	1995	1996
				(In percent of GDP)				
Current revenue	21.4	20.3	20.6	21.5	21.1	20.3	20.1	20.6
Indirect taxes	8.1	7.4	7.2	7.6	6.9	7.4	7.4	7.5
Taxes on income and wealth	10.4	10.1	10.2	10.6	10.0	9.6	9.6	9.7
Social security taxes	0.9	0.9	0.9	1.0	1.1	1.0	1.0	1.0
Other current revenues	2.0	1.9	2.2	2.3	3.2	2.3	2.0	2.3
Current expenditure	20.3	19.8	20.0	21.0	23.7	23.2	23.0	22.2
Public consumption	5.5	5.3	5.2	5.2	5.4	5.1	5.2	4.9
Current transfers	10.7	10.3	10.7	11.8	13.1	13.0	12.6	12.3
Interest payments	2.9	3.1	3.1	3.2	4.1	4.1	4.4	4.3
Subsidies	1.1	1.0	0.9	0.8	1.0	1.0	0.9	0.7
Current balance (deficit -)	1.1	0.5	0.5	0.5	-2.5	-2.9	-2.9	-1.7
Net capital transfers	-2.1	-2.0	-1.6	-1.8	-2.4	-1.1	-1.3	-0.9
Gross fixed capital formation	1.1	1.3	1.2	1.0	1.1	1.0	1.1	0.7
Net purchases of land	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Primary balance (deficit -)	0.8	0.2	0.9	1.0	-2.0	-1.0	-1.1	1.0
Overall balance (deficit -)	-2.2	-2.9	-2.3	-2.3	-6.1	-5.1	-5.4	-3.4

Sources: Bank of Spain, *Cuentas Financieras.*

1/ Excludes central government agencies.

Table 18. Spain: State Financing, 1990-1996

	1990	1991	1992	1993	1994	1995	1996
				(In billions of pesetas)			
Net change in liabilities	3,277	1,561	2,589	6,847	3,107	4,994	4,592
Short-term securities	1,128	-776	205	152	968	92	1,671
Bonds	772	2,289	1,534	6,680	1,595	4,046	3,365
Loans in pesetas	1,187	23	48	19	190	152	215
of which: Bank of Spain	1,118	-40	-31	-31	-39	-39	-39
Loans in foreign currency	8	-14	99	136	296	157	-13
of which: from non-residents	-12	-11	103	80	266	138	-42
Nonnegotiable securities	-30	152	655	-48	-51	-54	-58
Other 1/	212	-113	48	-93	109	601	-588
				(In percent of GDP)			
Total liabilities	40.7	40.0	41.9	52.4	54.1	56.9	60.3
Short-term securities	22.1	18.8	17.8	17.5	18.0	16.8	18.2
Bonds	11.0	14.2	16.0	26.9	27.8	31.4	34.3
Loans in pesetas	4.2	3.8	3.6	3.6	3.6	3.6	3.7
of which: Bank of Spain	4.0	3.6	3.3	3.1	2.9	2.6	2.4
Loans in foreign currency	0.3	0.3	0.4	0.7	1.1	1.2	1.1
of which: from non-residents	0.3	0.2	0.4	0.6	0.9	1.0	0.9
Non-negotiable securities	0.5	0.7	1.8	1.7	1.5	1.3	1.1
Other	2.6	2.3	2.3	2.0	2.0	2.6	1.9
Memorandum items:							
General government balance	-1,890	-2,436	-2,106	-4,133	-4,098	-4,621	-3,291
Of which: State	-1,456	-1,267	-1,346	-3,752	-3,323	-3,825	-2,487

Source: Bank of Spain, *Cuentas Financieras.*

1/ Includes changes in cash and deposit balances.

Table 19. Spain: Recent State Operations on a National Accounts Basis

(In billions of pesetas)

	1996 Jan.-Oct.	1997 Jan.-Oct.	Percentage Change
Revenues	12,552.6	13,711.2	9.2
Taxes on income and wealth	6,185.8	6,896.4	11.5
Indirect taxes	4,913.9	5,251.3	6.9
VAT	3,098.0	3,386.5	9.3
Other indirect taxes	1,815.9	1,864.8	2.7
Social insurance contributions	591.1	614.8	4.0
Dividends and interest revenues	373.8	355.3	-4.9
Capital revenue	201.2	173.5	-13.8
Other revenues	286.8	419.9	46.4
Expenditure	14,568.5	14,670.2	0.7
Public consumption	2,672.9	2,656.7	-0.6
Wages and salaries	2,277.8	2,273.5	-0.2
Goods and services	395.1	383.2	-3.0
Interest payments	2,609.4	2,632.8	0.9
Subsidies	427.8	370.0	-13.5
Current transfers	6,484.2	6,944.9	7.1
Social benefits	703.8	720.1	2.3
Other current expenditures	343.2	482.3	40.5
Capital expenditures	1,327.2	863.4	-34.9
Gross fixed capital formation	398.9	282.0	-29.3
Capital transfers	928.3	581.4	-37.4
Balance	-2,015.9	-959.0	-52.4
(in percent of annual GDP)	-2.7	-1.2	-54.8

Source: Ministry of Economy and Finance, *Ejecucion del Presupuesto del Estado*, October 1997, and *Avance de Liquidacion del Presupuesto de 1997*.

Table 20. Spain: Details of Recent State Operations on a Cash Basis

	Actual, adjusted for overruns 1/				Budget		Actual /2		Budget	
	1995		1996		1997		1997		1998	
	billion pesetas	percent of GDP	billion pesetas	percent of GDP	billion pesetas	percent of GDP	billion pesetas	percent of GDP	billion pesetas	percent of GDP
Revenues	14,077.2	20.2	14,629.6	19.9	16,090.9	20.8	16,637	21.5	17,242.3	21.1
Taxes on income and wealth	6,598.1	9.5	6,750.0	9.2	7,528.0	9.7	7,882	10.2	7,950.2	9.7
Personal income tax	5,208.9	7.5	5,249.2	7.1	5,915.7	7.6	5,540	7.1	5,936.6	7.2
Corporate income tax	1,263.7	1.8	1,373.0	1.9	1,335.4	1.7	2,095	2.7	1,874.0	2.3
Other direct taxes	125.5	0.2	127.8	0.2	276.9	0.4	247	0.3	139.6	0.2
Indirect taxes	5,467.8	7.8	5,812.9	7.9	6,264.6	8.1	6,253	8.1	6,900.7	8.4
VAT	3,380.7	4.8	3,618.3	4.9	3,878.4	5.0	4,004	5.2	4,375.1	5.3
Excise taxes	1,911.6	2.7	2,053.9	2.8	2,163.8	2.8	2,065	2.7	2,307.4	2.8
Other indirect taxes	175.5	0.3	140.7	0.2	222.4	0.3	184	0.2	218.2	0.3
Fees and other income	339.9	0.5	419.4	0.6	428.4	0.6	468	0.6	355.1	0.4
Capital income 3/	878.8	1.3	941.1	1.3	1,069.8	1.4	1,306	1.7	1,001.3	1.2
Current transfers	398.3	0.6	319.9	0.4	521.3	0.7	433	0.6	742.0	0.9
Capital transfers	369.1	0.5	335.4	0.5	278.8	0.4	282	0.4	293.0	0.4
Unclassified income	25.2	0.0	50.9	0.1	0.0	0.0	13	0.0	0.0	0.0
Expenditure	17,844.6	25.6	17,709.6	24.1	18,099.2	23.4	18,686	24.1	18,729.8	22.9
Current expenditures	15,902.7	22.8	15,982.7	21.7	16,461.4	21.3	16,993	21.9	16,945.3	20.7
Wages and salaries	2,858.0	4.1	2,932.8	4.0	2,984.3	3.9	2,992	3.9	3,070.7	3.7
Goods and services	431.3	0.6	371.8	0.5	302.8	0.4	390	0.5	315.7	0.4
Interest payments	3,168.5	4.5	3,377.7	4.6	3,459.6	4.5	3,596	4.6	3,190.1	3.9
Current transfers	9,444.9	13.5	9,300.4	12.6	9,714.7	12.5	10,016	12.9	10,368.8	12.7
Capital expenditures	1,941.9	2.8	1,726.9	2.3	1,637.8	2.1	1,692	2.2	1,784.5	2.2
Investment	977.4	1.4	938.2	1.3	832.8	1.1	847	1.1	873.2	1.1
Capital transfers	964.5	1.4	788.7	1.1	805.0	1.0	846	1.1	911.3	1.1
Cash Balance	-3,767.4	-5.4	-3,080.0	-4.2	-2,008.3	-2.6	-2,049	-2.6	-1,487.5	-1.8

Sources: *Intervencion General de la Administracion del Estado;* and staff estimates.

1/ Adjusted columns record spending overruns of Ptas 603.3 billion in 1995, when they were incurred.
2/ Includes Ptas 105.3 billion to cover overruns incurred in 1995, which have already been recorded in that year on a national accounts basis.
3/ Includes privatization revenues *accrued directly to the State*. These amounted to Ptas 189.9 billion in 1996, Ptas 539.1 billion in 1997, and Ptas 225.3 billion in the 1998 budget.

Table 21. Spain: State Recent Financing Operations, 1993-97

(In billions of pesetas)

	1993	1994	1995	1996	1997 1/
Net change in liabilities	6,842	3,110	5,028	4,770	1,546
Securities denominated in pesetas	6,500	2,426	3,799	4,808	2,219
Short-term	202	989	35	1,654	-1,307
Long-term	6,313	1,395	3,675	3,142	3,532
Other 2/	-15	42	89	12	-6
Securities in foreign currency	332	137	338	228	474
Short-term	-50	-21	56	17	-77
Long-term	382	158	282	211	551
Loans in pesetas	19	190	153	215	-461
of which: Bank of Spain	-31	-39	-39	-39	0
Loans in foreign currency	136	296	157	-13	-87
Other	-145	61	581	-468	-599
Memorandum items:					
Change in deposits at the Bank of Spain	2,173	-1,358	-283	968	-281
Assumption of liabilities	190	243	435	448	0

Source: Bank of Spain, Statistical Bulletin.

1/ January-November.

2/ Includes nonnegotiable securities and the assumption by the government of nongovernment securities.

Table 22. Spain: Nonfinancial Operations of the Social Security System, 1990-96 1/

(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996
Current revenues	17.2	17.8	18.9	20.1	19.7	18.5	18.4
Social security contributions	12.3	12.6	13.4	13.7	13.4	12.4	12.7
Transfers from the government	4.5	4.8	5.1	6.0	6.0	5.8	5.4
Other current revenues	0.3	0.4	0.4	0.4	0.3	0.4	0.4
Current spending	16.9	17.9	19.2	20.2	19.9	18.9	18.9
Consumption	3.8	4.0	4.6	4.6	4.6	4.3	4.3
Social security benefits	12.9	13.6	14.3	15.2	14.9	14.3	14.3
Other spending	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Gross saving	0.3	-0.2	-0.4	-0.1	-0.2	-0.4	-0.5
Net capital transfers	0.2	0.1	0.5	0.9	0.1	0.1	0.2
Gross fixed capital formation	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Overall balance	0.1	-0.3	-0.1	0.5	-0.2	-0.5	-0.5

Source: Bank of Spain, *Cuentas Financieras.*

1/ National accounts basis.

Table 23. Spain: Social Security System - Recent Operations 1/

(In billions of pesetas)

	1996 Jan.-Sep.	1997 Jan.-Sep.	Percentage Change
Revenue	7,987.8	8,376.1	4.9
Contributions	5,339.6	5,658.6	6.0
Transfers from the State	2,522.0	2,693.7	6.8
Other	126.2	23.8	-81.1
Expenditure	8,545.3	8,879.7	3.9
By activity:			
Wages and salaries	602.6	616.2	2.3
Goods and services	320.0	294.1	-8.1
Benefits 2/	7,596.5	7,936.6	4.5
Other	26.2	32.8	25.2
By type of benefit:			
Economic	5,449.6	5,731.4	5.2
Pensions	4,930.0	5,195.0	5.4
Temporary disability	357.5	361.8	1.2
Other economic benefits	162.1	174.6	7.7
Social	136.4	142	4.1
Health	2,010.5	2,063.2	2.6
Other (incl. administrative costs)	948.8	943.1	-0.6
Overall balance	-557.5	-503.6	-9.7
(in percent of annual GDP)	-0.8	-0.6	

Source: Ministry of Economy and Finance, *Sintesis Mensual de Indicadores Economicos.*

1/ Transactions basis. Excludes unemployment benefits.
2/ Includes social security transfers to regional governments.

Table 24. Spain: Nonfinancial Operations of Territorial Governments, 1989-96 1/

	1989	1990	1991	1992	1993	1994	1995	1996
				(In percent of GDP)				
Current revenue	8.9	9.4	9.6	10.1	10.4	10.2	10.1	10.2
Indirect taxes	2.2	2.5	2.5	2.6	2.6	2.6	2.5	2.5
Direct taxes	1.7	1.9	1.8	1.8	1.9	1.8	1.8	1.8
Transfers from the State	4.3	4.2	4.3	4.8	4.9	4.9	4.8	5.0
Other current revenues	0.7	0.9	0.9	0.8	0.9	0.8	1.0	0.9
Current expenditure	7.5	8.0	8.7	9.0	9.3	8.9	8.9	9.0
Public consumption	5.2	5.6	5.9	6.2	6.3	6.2	6.1	6.2
Current transfers	1.1	1.2	1.3	1.2	1.2	1.0	1.0	1.0
Interest payments	0.5	0.6	0.7	0.9	1.0	0.9	0.9	0.9
Other current spending	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.8
Current balance	1.5	1.4	0.9	1.1	1.1	1.3	1.1	1.2
Net capital transfers	0.4	0.6	0.5	0.4	0.3	0.3	0.2	0.2
Gross fixed capital formation	2.7	3.0	3.0	2.6	2.6	2.6	2.1	2.0
Primary balance (deficit -)	-0.3	-0.4	-0.9	-0.3	-0.3	-0.1	0.2	0.3
Overall balance (deficit -)	-0.8	-1.0	-1.6	-1.1	-1.2	-1.0	-0.7	-0.6

Source: Bank of Spain, *Cuentas Financieras.*

1/ National accounts basis. Territorial governments include regional governments and municipalities. and municipalities.

Table 25. Spain: Financial Relations with the EC, 1992-97

	1992	1993	1994	1995	1996	1997 1/
	(In billions of pesetas)					
Transfers from the EC to Spain						
Total	975.3	1129.5	1150.2	1754.0	1651.6	1615.9
Current	477.4	606.9	705.9	749.7	655.2	752.9
Capital	497.9	522.6	444.3	1004.3	996.4	862.9
Transfers from Spain to the EC						
Total	647.8	740.6	803.4	615.9	739.3	846.0
Balance	327.5	388.9	346.8	1138.1	912.3	769.9
As percent of GDP	0.6	0.6	0.5	1.6	1.2	1.0

Source: Bank of Spain, Statistical Bulletin.

1/ January-November.

Table 26. Spain: Monetary Survey, 1992-97
(Stocks: in billions of pesetas; end of period)

	1992	1993	1994	1995	1996	1997 Nov.
A1. Net foreign assets	3,785.7	10,298.3	7,006.5	8,843.9	8,641.6	5,819.0
Bank of Spain	5,551.8	6,085.9	5,728.2	4,499.4	7,830.8	9,747.6
Other monetary institutions	-1,766.1	4,212.4	1,278.2	4,344.6	810.8	-3,928.6
A2. Total domestic credit	65,560.6	66,672.1	74,418.8	79,559.8	86,687.2	92,688.2
Credit to general government	19,430.7	19,578.2	25,795.3	27,772.8	30,979.9	29,884.5
of which:						
Loans	5,470.3	3,633.0	5,623.2	6,467.2	6,168.3	6,121.5
Securities	10,633.5	11,833.6	15,738.4	17,320.9	18,363.8	17,562.9
Money market credits	4,300.9	5,165.7	5,567.1	5,121.5	7,229.4	6,976.1
(-) Provisions made to ICO	974.0	1,054.0	1,133.4	1,136.9	781.6	776.0
Credit to private sector	46,130.0	47,093.9	48,623.5	51,787.0	55,707.3	62,803.6
A3. Other items (net)	-5,521.5	-7,213.6	-7,149.5	-7,416.6	-8,381.1	-9,254.0
L. Total assets (L = L1 +L2 +L3 = A1 +A2 +A3)	63,824.8	69,756.8	74,275.8	80,987.1	86,947.7	89,253.2
L1. Liquid assets held by the public (ALP)	59,449.7	65,429.1	70,045.8	76,479.0	82,118.8	83,907.6
M3	54,237.5	59,260.7	63,675.8	70,439.4	73,819.5	75,506.6
M2	25,690.3	26,966.7	28,753.4	29,637.5	31,717.5	33,884.0
M1	15,631.3	16,180.5	17,337.6	17,887.8	19,116.1	20,559.8
Other components of ALP 1/	5,212.2	6,168.4	6,369.9	6,039.6	8,299.3	8,401.0
L.2 Other nonmonetary liabilities of the Private sector	1,382.6	1,247.7	1,298.1	1,350.3	1,537.8	1,489.0
L.3 Other nonmonetary liabilities of the Public sector	2,992.4	3,079.9	2,932.0	3,157.7	3,291.1	3,856.6
Memorandum items:						
Credit to general government Inclusive of provisions made to ICO	20,404.7	20,632.2	26,928.7	28,909.6	31,761.6	30,660.5
Monetary base	7,752.6	7,791.4	8,593.9	8,929.7	9,251.6	9,436.5
of which: commercial bank reserves	1,246.1	802.3	936.8	862.4	733.4	845.7

Source: Bank of Spain, Statistical Bulletin.

1/ Includes short-term government securities and repurchase operations with public and private papers.

Table 27. Spain: Monetary Survey, 1992-97
(Stocks: end-of-period; year-over-year percentage change)

	1992	1993	1994	1995	1996	1997 Nov.
A1. Net foreign assets	3.2	172.0	-32.0	26.2	-2.3	-33.4
Bank of Spain	-16.9	9.6	-5.9	-21.5	74.0	32.2
Other monetary institutions	41.4	338.5	-69.7	239.9	-81.3	-386.6
A2. Total domestic credit	6.0	1.7	11.6	6.9	9.0	10.1
Credit to general government	5.0	0.8	31.8	7.7	11.5	2.1
of which:						
Loans	14.6	-33.6	54.8	15.0	-4.6	15.8
Securities	-2.3	11.3	33.0	10.1	6.0	-2.0
Money market credits	15.2	20.1	7.8	-8.0	41.2	2.2
(-) Provisions made to ICO	9.3	8.2	7.5	0.3	-31.2	-0.3
Credit to private sector	6.5	2.1	3.2	6.5	7.6	14.3
A3. Other items (net)	-30.9	-30.6	0.9	-3.7	-13.0	-11.1
L. Total assets (L = L1 + L2 = A1 +A2 +A3)	4.2	9.3	6.5	9.0	7.4	5.5
L1. Liquid assets held by the public (ALP)	5.1	10.1	7.1	9.2	7.4	4.8
M3	4.8	9.3	7.5	10.6	4.8	4.5
M2	-0.4	5.0	6.6	3.1	7.0	11.0
M1	-1.7	3.5	7.2	3.2	6.9	12.2
Other components of ALP 1/	9.3	18.3	3.3	-5.2	37.4	7.5
L.2 Other nonmonetary liabilities of the Private sector	-25.0	-9.8	4.0	4.0	13.9	3.7
L.3 Other nonmonetary liabilities of the Public sector	3.6	2.9	-4.8	7.7	4.2	25.5
Memorandum items:						
Credit to general government inclusive of provisions made to ICO	5.2	1.1	30.5	7.4	9.9	2.1
Monetary base	0.5	0.5	10.3	3.9	3.6	5.8
of which: Commercial bank reserves	-24.3	-35.6	16.8	-7.9	-15.0	11.5

Source: Bank of Spain, Statistical Bulletin.

1/ Includes short-term government securities and repurchase operations with public and private papers.

Table 28. Spain: Monetary Aggregates, 1991-97

	1991	1992	1993	1994	1995	1996	1997 Nov.
	(In billions of pesetas; end of period)						
ALP2	58,311	61,203	66,757	71,088	77,382	82,927	84,708
ALP	56,547	59,450	65,429	70,046	76,479	82,119	83,908
M3	51,778	54,238	59,261	63,676	70,439	73,820	75,507
M2	25,798	25,690	26,967	28,753	29,638	31,718	33,884
M1	15,899	15,631	16,181	17,338	17,888	19,116	20,560
Currency in circulation	5,607	6,025	6,509	7,164	7,535	7,941	8,039
Demand deposits	10,292	9,607	9,672	10,173	10,353	11,175	12,521
Saving deposits	9,899	10,059	10,786	11,416	11,750	12,601	13,324
Time deposits	15,970	17,829	20,620	22,181	24,749	24,227	21,620
Other components of M3	10,010	10,718	11,674	12,741	16,053	17,875	20,003
Other components of ALP	4,769	5,212	6,168	6,370	6,040	8,299	8,401
Commercial paper	1,764	1,754	1,328	1,043	903	808	801
	(Year-over-year percentage change)						
ALP2	10.4	5.0	9.1	6.5	8.9	7.2	4.7
ALP	11.3	5.1	10.1	7.1	9.2	7.4	4.8
M3	10.9	4.8	9.3	7.5	10.6	4.8	4.5
M2	12.0	-0.4	5.0	6.6	3.1	7.0	11.0
M1	12.3	-1.7	3.5	7.2	3.2	6.9	12.2
Currency in circulation	23.7	7.4	8.0	10.1	5.2	5.4	5.2
Demand deposits	6.9	-6.7	0.7	5.2	1.8	7.9	17.3
Saving deposits	11.5	1.6	7.2	5.8	2.9	7.2	9.2
Time deposits	15.2	11.6	15.7	7.6	11.6	-2.1	-12.3
Other components of M3	2.3	7.1	8.9	9.1	26.0	11.3	17.0
Other components of ALP	16.1	9.3	18.3	3.3	-5.2	37.4	7.5
Commercial paper	-13.4	-0.6	-24.3	-21.5	-13.4	-10.5	-4.5
Memorandum items:							
Velocity of circulation: 1/							
ALP2	0.94	0.97	0.91	0.91	0.90	0.89	0.92
ALP	0.97	0.99	0.93	0.92	0.91	0.90	0.92
M3	1.06	1.09	1.03	1.02	0.99	1.00	1.03

Source: Bank of Spain, Statistical Bulletin.

1/ Annual GDP; end-of-period monetary aggregate.

Table 29. Spain: Main Interest Rates, 1992-97

	1992	1993	1994	1995	1996	1997	1996 I	1996 II	1996 III	1996 IV	1997 I	1997 II	1997 III	1997 IV
							(Period averages in percent)							
Interbank market														
Bank of Spain overnight intervention rate	12.9	11.8	7.9	8.9	7.6	5.5	8.7	7.7	7.3	6.8	6.1	5.4	5.3	5.1
Bank of Spain 10-day intervention rate	12.8	11.3	7.8	8.8	7.6	5.4	8.7	7.6	7.2	6.7	6.0	5.4	5.2	5.0
1-month interbank rate	13.3	12.2	7.9	9.2	7.6	5.5	8.8	7.6	7.3	6.7	6.1	5.4	5.3	5.1
3-month interbank rate	13.3	11.7	8.0	9.4	7.5	5.4	8.7	7.4	7.2	6.6	5.9	5.3	5.3	5.0
Commercial banks														
Prime rate	14.2	13.1	8.9	10.0	8.5	6.1	9.7	8.6	8.3	7.5	6.7	6.0	6.0	5.7
1-3 years commercial credits	18.0	17.3	13.6	14.2	12.4	9.5	13.3	12.3	12.4	11.6	10.8	9.6	8.9	8.6
Demand deposits	8.3	7.4	5.1	5.1	4.3	3.2	4.8	4.3	4.1	3.8	3.4	3.3	3.1	3.1
1-2 years deposits	10.1	9.3	6.8	8.3	6.1	3.9	7.3	6.1	5.8	5.1	4.3	4.0	3.8	3.5
Government securities 1/														
1-year Treasury bills	12.1	10.5	7.9	9.7	7.2	4.9	8.3	7.2	7.0	6.2	5.3	5.1	4.7	4.6
3-years government bonds	12.6	10.2	9.3	10.9	7.7	5.3	8.8	8.1	7.5	6.4	5.6	5.4	5.1	5.0
10-years government bonds	11.7	10.2	9.9	11.2	8.8	6.4	9.7	9.2	8.7	7.4	6.9	6.7	6.2	5.9

Source: Bank of Spain, Statistical Bulletin.

1/ Secondary markets.

Table 30. Spain: Financial Markets Developments, 1992-97

(In billions of pesetas)

	1992	1993	1994	1995	1996	1997			
						I	II	III	IV
Net issues of obligations:									
General government	1,176.3	6,743.9	2,737.4	4,134.2	5,137.3	-141.6	1,691.4	818.8	583.5
Central government 1/	1,299.0	6,499.9	2,426.4	3,799.2	4,808.3	-188.3	1,558.1	734.8	479.6
Short-term	180.5	201.9	989.2	35.5	1,654.4	-272.6	536.8	-447.7	-1,274.2
Medium to long-term	1,118.5	6,298.0	1,437.2	3,763.8	3,153.9	84.3	1,021.3	1,182.5	1,753.8
Credit institutions	-18.3	486.9	340.7	300.5	182.1	165.4	299.4	97.0	82.7
Other resident sectors	165.8	249.6	-98.3	-197.5	-57.7	-51.6	-91.3	-95.5	-33.4
Net issues of commercial paper	-6.6	-397.6	-353.9	-171.2	-102.9	-23.5	-19.1	-35.4	27.7
Net issues of equities:									
Credit institutions	82.5	170.3	375.3	96.0	33.6	2.4	4.5	-27.9	-2.6
Other resident sectors	566.5	363.6	562.5	641.0	320.2	59.1	16.2	19.3	22.9
Nonfinancial institutions	557.7	351.0	551.0	613.4	299.9	51.3	16.1	19.0	22.7
Indices of activity in secondary markets:									
Stock exchange: turnover/capitalization ratio (%)	44.8	42.0	60.3	46.7	53.9	24.5	21.6	17.2	16.7
Madrid stock exchange price index (1985=100)	230.5	270.8	314.6	296.1	367.3	467.9	553.8	602.9	583.0
Memorandum item:		(As a share of GDP)							
Net debt outstanding (period average) of:									
General government	30.7	35.9	41.7	44.2	47.9	49.0	51.0	52.1	52.8
Central government	29.5	34.7	40.1	42.1	45.6	46.5	48.4	49.3	49.9
Short-term debt	15.4	15.4	15.9	17.0	16.1	17.0	17.6	17.6	15.8
Medium-and long-term debt	14.2	19.3	24.2	25.1	29.4	29.5	30.8	31.7	34.1
Stock exchange capitalization	16.8	25.5	23.5	24.6	32.4	32.9	41.3	43.9	42.1

Source: Bank of Spain, Statistical Bulletin.

1/ Excludes nonmarketable bonds.

Table 31. Spain: Exchange Rate Indicators, 1992-97

	1992	1993	1994	1995	1996	1997	1997							
							MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
							(Period averages)							
Nominal														
Peseta/US dollar	102.4	127.2	134.0	124.7	126.7	146.4	143.8	145.9	151.0	155.5	150.9	148.3	146.3	150.3
Peseta/deutsche mark	65.6	76.9	82.6	87.0	84.2	84.5	84.4	84.5	84.4	84.5	84.4	84.4	84.5	84.6
Peseta/ECU	132.3	148.7	158.5	161.2	158.6	165.4	164.5	165.1	166.4	166.2	165.5	165.9	167.1	167.3
							(Index 1990=100)							
Nominal Effective Exchange Rates														
vs. Developed Countries	98.0	86.6	80.8	80.3	80.9	77.2	77.6	77.0	76.2	76.0	76.7	76.9	77.0	76.6
vs. EU Countries	98.2	88.8	83.1	82.0	82.2	79.2	79.3	79.2	79.2	79.1	79.1	79.2	79.1	79.0
vs. EMS Narrow Band	96.6	83.0	76.9	73.5	75.2	74.6	74.7	74.7	74.8	74.6	74.7	74.6	74.5	74.4
							(Index 1990=100)							
Real Effective Exchange Rates 1/														
vs. Developed Countries	101.2	90.6	86.3	87.5	89.3	85.4	85.5	84.8	84.0	84.0	85.0	85.2	85.3	...
vs. EU Countries	101.1	92.4	88.2	88.7	90.1	86.9	87.0	86.6	86.0	86.3	87.0	86.9	86.7	...
vs. EMS Narrow Band	101.2	88.0	83.6	82.1	85.5	85.1	85.0	84.9	84.9	85.0	85.4	85.4	85.4	...
							(Index 1990=100)							
Real Effective Exchange Rates 2/														
vs. Developed Countries	102.9	93.9	86.3	85.0	88.1	85.8	85.5	85.7	84.9	85.2	86.5	...	...	...
vs. EU Countries	102.6	95.7	88.5	86.3	89.0	87.3	86.8	87.5	86.9	87.5	88.4	...	...	...
vs. EMS Narrow Band	102.2	89.6	83.1	79.3	84.5	86.4	85.8	87.2	87.0	87.4	87.9	...	...	...

Source: Bank of Spain.

1/ Based on CPI indices, average through November.

2/ Based on unit labor costs in manufacturing, average through November.

Table 32. Spain: Profit and Loss Account of the Banking System 1/

	Banks			Savings banks		
	1994	1995	1996	1994	1995	1996
Net interest margin						
(percent of total assets)	2.60	2.27	2.05	3.70	3.49	3.34
(percent of own funds)	41.39	37.36	36.72	64.39	60.17	57.06
Gross interest margin						
(percent of total assets)	3.16	3.00	2.93	4.20	4.04	4.01
(percent of own funds)	50.23	49.36	52.49	73.18	69.71	68.51
Operating margin						
(percent of total assets)	1.08	0.99	1.01	1.51	1.46	1.53
(percent of own funds)	17.18	16.54	18.09	26.36	25.09	26.14
Pre-tax income						
(percent of total assets)	0.72	0.70	0.70	0.92	0.98	1.06
(percent of own funds)	11.46	11.88	12.54	16.06	16.93	18.11

Source: Bank of Spain, *Annual Report*.

1/ Excluding Banesto.

Table 33. Spain: Balance of Payments, 1992-97

	1992	1993	1994	1995	1996	1997 1/
	(Transaction basis; in billions of pesetas)					
Current account	-2,186	-727	-927	140	224	562
Goods	-3,088	-1,897	-1,967	-2,195	-1,886	-1,633
Exports	6,757	7,876	9,889	11,345	12,936	12,554
Imports	-9,846	-9,773	-11,856	-13,539	-14,822	-14,187
Services	1,272	1,436	1,951	2,224	2,538	2,496
Income	-588	-448	-1,095	-483	-752	-728
Current transfers	219	181	183	593	324	427
Capital account	382	418	361	780	807	532
Financial account	2,411	525	735	-156	-580	-504
Spanish investment abroad 2/	-501	-1,207	-775	-520	-1,064	-3,149
Foreign investment in Spain 2/	2,623	8,043	-1,355	3,348	1,125	1,587
Other Spanish investment abroad 3/	-4,109	-9,402	1,325	-4,678	178	-805
Other foreign investment in Spain 3/	2,620	2,517	1,533	848	2,253	3,467
Changes in reserves	1,778	574	7	846	-3,072	-1,602
Errors and omissions	-608	-216	-169	-764	-451	-590

Source: Bank of Spain, Boletín estadístico.

1/ January-October.

2/ Including foreign direct investment and marketable securities.

3/ Including loans, deposits, and repurchase operations.

Table 34. Spain: Balance of Payments, 1992-97

	1992	1993	1994	1995	1996	1997 1/
	(Transaction basis; in billions of U.S. dollars)					
Current account	-21.5	-6.0	-6.9	1.1	1.8	3.9
Goods	-30.4	-15.0	-14.8	-17.7	-14.9	-11.1
Exports	65.8	62.1	74.0	91.1	102.0	86.1
Imports	-96.2	-77.0	-88.8	-108.7	-116.9	-97.2
Services	12.7	11.1	14.7	18.0	20.0	16.9
Income	-5.8	-3.6	-8.2	-3.9	-5.9	-5.0
Current transfers	2.1	1.4	1.4	4.7	2.6	3.0
Capital account	3.7	3.2	2.7	6.3	6.4	3.7
Financial account	23.6	4.6	5.5	-1.3	-4.6	-3.4
Spanish investment abroad 2/	-5.1	-9.5	-5.7	-4.3	-8.4	-21.5
Foreign investment in Spain 2/	25.2	63.7	-10.1	27.4	9.0	10.2
Other Spanish investment abroad 3/	-39.8	-74.6	9.2	-37.4	1.2	-5.4
Other foreign investment in Spain 3/	26.0	20.1	12.0	6.6	18.0	24.4
Changes in reserves	17.4	4.9	-0.0	6.5	-24.3	-11.1
Errors and omissions	-5.9	-1.7	-1.2	-6.2	-3.6	-4.2

Source: Bank of Spain, Boletin estadistico.

1/ January-October.

2/ Including foreign direct investment and marketable securities.

3/ Including loans, deposits, and repurchase operations.

Table 35. Spain: Current Account Balance, 1992-97

	1992	1993	1994	1995	1996	1997 1/
	(Transaction basis; in billions of pesetas)					
Merchandise, net	-3,088.5	-1,896.7	-1,966.7	-2,194.5	-1,886.3	-1,633.2
Receipts	6,757.3	7,876.5	9,889.1	11,344.7	12,935.8	12,553.8
Payments	9,845.7	9,773.2	11,855.8	13,539.2	14,822.1	14,187.0
Services, net	1,272.0	1,435.7	1,951.1	2,224.5	2,537.9	2,496.4
Tourism and travel	1,699.1	1,911.5	2,322.2	2,609.5	2,880.8	2,828.3
Receipts	2,265.1	2,514.1	2,875.4	3,165.9	3,503.7	3,387.2
Payments	566.0	602.7	553.2	556.4	622.8	558.9
Other services	-427.1	-475.8	-371.1	-385.0	-343.0	-331.9
Receipts	1,181.9	1,424.7	1,670.8	1,817.7	2,120.1	2,073.8
Payments	1,609.0	1,900.5	2,041.9	2,202.7	2,463.1	2,405.7
Income, net	-587.6	-447.6	-1,094.7	-482.8	-751.9	-727.8
Investment income	-610.1	-447.2	-1,095.6	-482.4	-749.1	-728.2
Receipts	1,417.7	1,490.9	1,148.4	1,682.9	1,765.7	1,543.0
Payments	2,027.9	1,938.1	2,243.9	2,165.3	2,514.7	2,271.2
Labor income	22.5	-0.4	0.9	-0.4	-2.8	0.4
Receipts	24.7	14.2	13.9	19.8	22.3	29.1
Payments	2.2	14.6	13.1	20.1	25.1	28.7
Transfers, net	218.6	181.2	183.2	593.2	324.0	426.7
Private	702.5	804.6	930.2	1,008.6	929.0	970.2
Official	-483.9	-623.4	-747.0	-415.4	-605.0	-543.5
	(As percent of GDP)					
Memorandum items:						
Current account balance	-3.7	-1.2	-1.4	0.2	0.3	0.7
Merchandises	-5.2	-3.1	-3.0	-3.1	-2.6	-2.1
Services	2.2	2.4	3.0	3.2	3.4	3.2
Tourism	2.9	3.1	3.6	3.7	3.9	3.6
Income	-1.0	-0.7	-1.7	-0.7	-1.0	-0.9

Source: Bank of Spain, Boletín Estadístico.

1/ January-October.

Table 36. Spain: External Trade, 1992-97 1/

	1992	1993	1994	1995	1996	1997 2/
	(Percentage change; unless otherwise indicated)					
Exports, f.o.b. (total in billions of pesetas)	6,605.7	7,754.6	9,796.3	11,423.1	12,931.0	14,581.2
Value	6.1	17.4	26.3	16.6	13.2	17.9
Unit price	1.0	5.1	4.3	6.5	2.0	2.6
Volume	4.9	11.7	21.2	9.7	11.0	15.0
Exports, f.o.b. (nonenergy; in billions of pesetas)	6,417.5	7,534.8	9,589.3	11,236.3	12,580.6	14,200.6
Value	7.9	17.4	27.3	17.2	12.0	17.7
Unit price	1.5	4.7	4.3	6.3	1.6	2.2
Volume	6.1	12.0	22.0	10.4	10.3	15.2
Exports, f.o.b. (manufactured final goods; in billions of pesetas)	2,809.0	3,243.1	4,149.3	4,790.9	5,413.5	6,037.0
Value	11.1	15.5	27.9	15.5	13.0	17.7
Unit price	3.7	6.8	2.3	1.7	2.3	3.2
Volume	7.0	7.8	24.9	13.8	10.8	14.0
Imports, c.i.f. (total in billions of pesetas)	10,205.0	10,131.0	12,348.7	14,318.3	15,435.7	17,004.7
Value	5.5	-0.7	21.9	15.9	7.8	12.8
Unit price	-1.2	5.1	5.9	4.4	2.2	4.6
Volume	6.8	-5.7	15.2	11.0	5.5	8.0
Imports, c.i.f. (nonenergy; in billions of pesetas)	9,180.8	9,029.6	11,190.7	13,130.5	14,033.6	15,464.8
Value	6.4	-1.6	23.9	17.3	6.9	12.6
Unit price	-0.1	4.3	6.3	4.4	1.0	3.2
Volume	6.6	-5.8	16.7	12.4	5.8	9.1
Imports, c.i.f. (energy in billions of pesetas)	1,024.2	1,101.4	1,158.0	1,187.7	1,402.1	1,540.0
Value	-2.2	7.5	5.1	2.6	18.1	15.3
Unit price	-10.1	11.0	3.1	4.2	16.2	19.4
Volume	8.6	-4.2	3.2	-1.3	1.9	-3.1
Trade balance (in billions of pesetas)	-3,599.3	-2,376.4	-2,552.4	-2,895.2	-2,504.7	-2,423.6
Memorandum items:						
Exports, f.o.b. (in billions of US$)	58.5	55.3	74.0	93.2	98.9	96.6
Imports, c.i.f. (in billions of US$)	90.4	72.2	93.3	116.9	118.1	112.7
Real total domestic demand in Spain	1.0	-3.9	1.7	3.2	-1.8	0.7
Market growth 3/	5.9	-0.7	8.3	6.3	5.8	...
MERM effective exchange rate	0.8	-9.7	-8.0	-1.6	...	...

Sources: Ministry of Economy and Finance, Sintesis Mensual de Indicadores Economicos; and Fund staff estimates.

1/ Based on customs statistics.
2/ January-September.
3/ Calculated on the basis of the movement in non-oil import volumes of Spain's major trading partners.

Table 37. Spain: Trade Composition by Products, 1992-97 1/

	1992	1993	1994	1995	1996	1997 2/
Net	(In billions of pesetas)					
Consumer goods	-103.1	385.2	919.5	1,377.7	1,542.9	1,674.6
Food	64.0	189.1	254.6	323.3	539.9	714.8
Other consumer goods	-167.1	196.1	665.0	1,054.4	1,003.1	959.8
Intermediate goods	-2,595.4	-2,269.1	-2,839.2	-3,488.4	-3,269.9	-3,465.7
Capital goods	-900.8	-492.5	-632.7	-784.5	-777.7	-750.8
Exports	(Percent change; unless otherwise indicated)					
Consumer goods (in billions of pesetas)	2,743.1	3,210.2	4,137.0	4,820.1	5,309.5	5,941.0
Value	10.3	17.0	28.9	16.5	10.2	13.8
Price	3.5	7.1	4.8	6.0	1.4	1.2
Volume	6.7	9.2	22.8	10.2	8.7	12.4
Food (in billions of pesetas)	838.6	1,013.2	1,258.4	1,455.2	1,662.0	1,925.7
Value	12.3	20.8	24.2	15.6	14.2	18.1
Price	1.1	3.1	6.0	10.8	4.6	0.3
Volume	11.7	16.6	17.3	4.1	9.3	17.8
Other consumer goods (in billions of pesetas)	1,904.5	2,197.0	2,878.6	3,364.9	3,647.5	4,015.3
Value	9.4	15.4	31.0	16.9	8.4	11.9
Price	4.6	8.8	4.1	3.7	0.1	1.5
Volume	4.5	5.8	25.5	13.0	8.4	10.1
Intermediary goods (in billions of pesetas)	2,937.7	3,464.5	4,350.1	5,147.8	5,821.7	6,793.4
Value	0.5	17.9	25.6	18.3	13.1	18.9
Price	-1.3	3.8	5.5	9.6	1.0	3.0
Volume	1.7	13.6	19.1	8.0	11.9	15.5
Investment goods (in billions of pesetas)	924.9	1,079.9	1,309.3	1,455.2	1,799.8	2,183.5
Value	13.3	16.8	21.2	11.1	23.7	29.7
Price	1.5	3.7	-2.2	-1.9	8.1	7.6
Volume	11.4	12.5	23.6	13.6	15.1	20.2
Imports	(Percent change; unless otherwise indicated)					
Consumer goods (in billions of pesetas)	2,846.2	2,825.0	3,217.5	3,442.4	3,766.6	4,266.4
Value	21.5	-0.7	13.9	7.0	9.4	15.1
Price	1.1	6.4	2.9	2.2	1.9	2.4
Volume	20.4	-6.8	10.9	4.5	7.4	12.3
Food (in billions of pesetas)	774.6	824.1	1,003.8	1,131.9	1,122.2	1,210.9
Value	13.6	6.4	21.8	12.8	-0.9	7.1
Price	3.2	2.3	5.1	5.1	0.7	5.9
Volume	10.2	3.4	16.3	7.4	-1.4	1.0
Other consumer goods (in billions of pesetas)	2,071.6	2,000.9	2,213.7	2,310.6	2,644.4	3,055.5
Value	24.8	-3.4	10.6	4.4	14.4	18.6
Price	0.2	7.9	2.2	0.8	2.6	1.3
Volume	24.6	-10.6	8.6	3.2	11.5	17.1
Intermediate goods (in billions of pesetas)	5,533.1	5,733.6	7,189.3	8,636.2	9,091.6	10,259.2
Value	3.5	3.6	25.4	20.1	5.3	14.0
Price	-3.2	3.8	8.1	5.5	2.1	5.2
Volume	6.8	-0.2	16.0	13.9	3.1	8.4
Investment goods (in billions of pesetas)	1,825.7	1,572.4	1,942.0	2,239.6	2,577.5	2,934.4
Value	-8.1	-13.9	23.5	15.3	15.1	17.3
Price	1.7	9.2	2.9	3.8	2.9	5.3
Volume	-9.3	-21.2	19.9	11.0	11.9	11.5

Source: Ministry of Economy and Finance, Sintesis Mensual de Indicadores Economicos.

1/ Based on customs statistics.
2/ January-October.

Table 38. Spain: Direction of Trade, 1992-97

	1992	1993	1994	1995	1996	1997 1/
			(In billions of pesetas)			
Export						
World Total	6,605.7	7,754.6	9,796.3	11,423.1	12,931.0	12,537.2
OECD	5,535.5	6,230.7	8,019.2	9,350.4	10,434.4	10,028.0
(Percentage of total)	83.8	80.3	81.9	81.9	80.7	80.0
United States	315.3	372.7	481.9	472.2	544.0	560.3
Japan	61.6	71.9	131.7	157.1	155.1	132.3
EC	4,845.9	5,348.1	6,917.2	8,264.6	9,238.1	8,800.5
(Percentage of total)	73.4	69.0	70.6	72.3	71.4	70.2
France	1,335.0	1,465.6	1,971.2	2,345.8	2,600.9	2,305.6
Germany	1,036.5	1,132.6	1,390.4	1,760.1	1,879.1	1,694.4
Italy	719.4	704.4	902.2	1,045.3	1,129.8	1,239.6
Portugal	496.5	563.2	762.6	951.1	1,112.5	1,131.2
Developing countries	868.5	1,261.6	1,475.4	1,709.2	1,942.7	1,916.8
(Percentage of total)	13.1	16.3	15.1	15.0	15.0	15.3
OPEC	231.9	307.0	305.5	338.0	350.8	335.7
Latin America	315.4	482.0	610.4	642.8	782.9	793.5
Others	201.7	262.3	301.7	363.5	553.8	592.4
Import						
World Total	10,205.0	10,131.0	12,348.7	14,318.3	15,435.7	14,777.6
OECD	8,203.4	8,000.2	9,779.9	11,364.6	12,255.6	11,522.4
(Percentage of total)	80.4	79.0	79.2	79.4	79.4	78.0
United States	755.0	739.2	901.0	919.1	977.7	934.1
Japan	475.6	434.5	440.0	472.7	436.3	399.0
EC	6,485.7	6,308.0	7,915.4	9,362.5	10,226.9	9,604.7
(Percentage of total)	63.6	62.3	64.1	65.4	66.3	65.0
France	1,619.3	1,700.1	2,155.7	2,454.9	2,754.7	2,577.3
Germany	1,673.7	1,514.9	1,803.7	2,189.6	2,284.8	2,182.6
Italy	1,003.1	856.4	1,104.5	1,310.0	1,471.8	1,383.1
Portugal	275.8	268.7	343.2	421.6	452.6	399.7
Developing countries	1,756.3	1,787.4	2,188.4	2,495.0	2,749.9	2,832.7
(Percentage of total)	17.2	17.6	17.7	17.4	17.8	19.2
OPEC	586.2	590.9	738.8	789.1	963.9	1,004.0
Latin America	445.3	454.7	542.3	619.3	638.8	661.8
Others	245.3	343.4	380.5	458.6	430.2	422.4
Net						
World Total	-3,599.3	-2,376.4	-2,552.4	-2,895.2	-2,504.7	-2,240.4
OECD	-2,668.0	-1,769.5	-1,760.7	-2,014.3	-1,821.2	-1,494.4
United States	-439.7	-366.4	-419.2	-446.8	-433.7	-373.8
Japan	-414.0	-362.7	-308.3	-315.7	-281.1	-266.8
EC	-1,639.9	-959.9	-998.2	-1,098.0	-988.7	-804.2
France	-284.2	-234.5	-184.5	-109.0	-153.8	-271.7
Germany	-637.1	-382.2	-413.3	-429.4	-405.6	-488.2
Italy	-283.6	-152.0	-202.4	-264.8	-341.9	-143.5
Portugal	220.7	294.5	419.4	529.6	659.9	731.5
Developing countries	-887.8	-525.8	-713.0	-785.8	-807.1	-915.9
OPEC	-354.3	-283.9	-433.3	-451.1	-613.1	-668.3
Latin America	-129.8	27.2	68.0	23.5	144.0	131.7

Source: Ministry of Economy and Finance.

1/ January-October.

Table 39. Spain: Selected Indicators of Export Performance, 1991-97

	1991	1992	1993	1994	1995	1996	1997 1/
	(Annual percentage changes; unless otherwise indicated)						
Market growth 2/	6.0	5.9	-0.7	9.4	7.4	5.6	9.5
Export growth 3/							
Total	12.3	6.1	12.0	22.0	10.4	10.3	15.2
Industry	8.5	7.0	7.8	24.9	13.8	10.8	14.0
Market share	5.9	0.3	12.8	11.6	2.8	4.5	5.2
Tourist arrivals (in thousands)	53,495.0	55,330.7	57,263.3	61,428.0	63,255.0	...	...
(Annual percentage change)	2.8	3.4	3.5	7.3	3.0	...	...
Indices of real effective exchange rate:							
based on export prices relative to:							
Industrial countries	-1.2	-0.5	-9.4	-4.9	2.5	1.3	-2.3
EU countries	-0.7	-1.2	-7.8	-5.0	1.3	1.2	-1.6
EMS narrow band	0.0	-2.5	-8.9	-5.8	0.4	4.4	1.2
based on ULC in manufacturing relative to:							
Industrial Countries	1.4	1.4	-8.8	-8.0	-1.6	3.7	-1.8
EU countries	1.9	0.7	-6.8	-7.5	-2.5	3.1	-1.3
EMS narrow band	3.7	-1.5	-12.2	-7.3	-4.5	6.5	3.4
Memorandum items:							
End-of-period exchange rates							
Pesetas per U.S. dollar	100.2	112.9	140.3	132.3	122.5	130.7	150.9
(percentage change)	1.9	-1.5	24.3	5.3	-6.9	1.6	15.5
Pesetas per deutsche mark	63.8	71.4	82.1	84.2	85.0	84.2	84.4
(percentage change)	-0.7	4.7	17.2	7.4	5.4	-3.3	0.2

Sources: Bank of Spain; IMF, World Economic Outlook; and Fund staff estimates.

1/ Real effective exchange rate data for 1997 refer to January-September.

2/ Calculated on the basis of the growth of non-oil import volumes of Spain's major trading partners.

3/ Non-oil exports.

Table 40. Spain: Official Development Assistance, 1993-1997

	1993	1994	1995	1996	1997
	(Disbursements in millions of U.S. dollars)				
Official development assistance	1,303.3	1,293.5	1,348.2	1,253.9	1,300.8
Multilateral	368.7	451.4	533.8	363.2	570.8
European community	278.0	333.8	330.3	269.1	342.8
Other multilateral	90.8	117.5	203.5	94.1	228.1
Bilateral	934.5	842.2	814.4	890.7	730.0
Loans	745.9	597.3	283.0	325.2	273.2
Grants	188.6	244.8	531.4	565.6	456.7
Technical cooperation	116.0	124.3	248.9	189.5	...
Food and emergency aid	12.2	7.8	23.0	26.0	...
Support to NGOs	24.4	23.8	80.8	86.7	...
Decentralized cooperation	32.9	22.0	117.6	140.0	...
Debt forgiveness	3.2	67.0	61.0	123.3	...
Memorandum items:					
Official development assistance as percent of GDP	0.27	0.27	0.24	0.22	0.24
Exchange rate peseta / U.S. dollar	127.26	133.96	124.69	126.66	146.41

Source: Ministry of Economy and Finance.