Inflation, Distortionary Taxation and the Design of Monetary Policy: the Role of Social Cohesion *

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1. Introduction

The relationship between central bank independence and inflation has received considerable attention in the recent literature on monetary policy. The theoretical literature, using concepts from game theory, predicts a lower inflationary bias in countries where the central bank is not subject to governmental interference. Empirical studies attempt to show that this relationship between independence and price stability indeed exists in the real world. The principal-agent approach to monetary policy design, finally, recommends an institutional environment in which the central banker is rewarded for keeping prices stable, while stabilizing the economy against real shocks that reduce output 'too much' (for an overview, see Prast 1996b).

Despite the overwhelming amount of literature, many questions in this area remain unresolved. The measurement of central bank independence is not undisputed. Furthermore, if a correlation exists between independence and inflation, it may be the result of a third factor, or the causation may run from the latter to the former. Moreover, if the theory holds, in the real world some other characteristics would have to show up. For example, the inflationary bias would have to be higher, *ceteris paribus*, in countries with more rigidities and distortions in the labour market or monopoly power by firms (Good-

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hart 1994, Blanchard and Fischer 1989). These issues have thus far been neglected in most empirical studies, exceptions being Goodhart (1994) and Heylen and van Poeck (1996).

The aim of this paper is to analyze the issue of independence and inflation, taking the degree of labour market distortions as well as other relevant characteristics into account. Our conclusion will be that the predicted relationship between distortions and the inflationary bias does not show up in the real world. Rather, the opposite is true: countries with more distortionary taxation exhibit lower inflation and more commitment to a monetary policy directed at achieving price stability. In our view, this reflects the importance of another factor – social cohesion – affecting both inflation and the regime of monetary policy. If social cohesion is measured by the expenditures on social protection as a fraction of GDP, the data for the European Union indeed show a significant downward effect on inflation. As taxes are levied partly in order to finance these expenditures, this may explain why no positive correlation is found between the degree of distortionary taxation and the inflationary bias, if no account is taken of the degree of social cohesion. If the latter is included, the effect of distortionary taxation has the positive sign predicted by the theory.

The paper is structured as follows. In the next Section, we outline the theoretical model underlying the literature on the inflationary bias of monetary policy. Section 3 assesses the results of existing empirical work on independence and inflation. Sections 4 and 5 present the results of our empirical investigation into the role of distortionary taxation and social cohesion in the context of inflation and the monetary policy regime. The paper ends with a summary and conclusion.

2. The theoretical framework

Underlying the game-theoretic analysis of monetary policy is the Lucas supply model, which assumes that real output effects can be established through surprise inflation. An important feature of the analysis is that the government wishes to bring output above the 'natural' level, i.e. the level where expected inflation equals actual inflation. As

this can be realized only by surprising the private sector, it is obvious that in a world with rational expectations and perfect information this attempt is bound to fail. The second-best solution – zero inflation and zero inflationary expectations – is not attainable because there is an incentive for the government to deviate from the zero inflation rule. Therefore, the third-best solution is the likely outcome. The result implies that the inflationary bias will be higher, the more the government wishes to bring output above the natural level. The traditional approach to analyze monetary policy in a game-theoretic framework is to define an objective function for the policy maker. Usually, this is assumed to be the social welfare function, containing output and inflation as arguments. The government wants to minimize deviations from the equilibrium level of output, defined as the output level in the absence of rigidities and distortions (Blanchard and Fischer 1989, p. 56). As rigidities and distortions cause the natural output level (defined as the output level in the absence of surprises) to be too low (i.e. lower than the equilibrium level), the government aims at bringing output at a level above the natural rate (Goodhart 1994). Hence the inflationary bias can be expected to be positively related to the degree of labour market distortions in the economy. Distortions may take the form of taxation, mimimum wage legislation, social security regulations and the like. We shall turn to this in Section 4. Formally, the relationship between distortions and the inflationary bias can be derived as follows.

The model of the economy is given by

$$y = \hat{y} + \pi - \pi^e \qquad (1)$$

where y is output, $\hat{y}$ is natural output (the output level in the absence of surprises), π is inflation and π^e is expected inflation. The model is in logarithms.

The social welfare function is given by

$$W = -a\pi^2 - (y - k\hat{y})^2 \qquad (2)$$

where $k\hat{y}$ is the equilibrium or target rate of output (as defined above), with $k > 1$. As $(k - 1)\hat{y}$ is the difference between the equilibrium output and the natural rate of output, $k - 1$ can be interpreted as a measure of the degree of distortions in the economy.

Optimizing the social welfare function (2) with the help of monetary policy (assuming that the rate of inflation is the instrument), subject to the constraint given by the economic model,[1] yields:

$$\pi = [1/(1 + a)]\,[(k - 1)\,\hat{y} + \pi^e]$$

which under rational expectations ($\pi = \pi^e$) implies:

$$\pi = \pi^e = (1/a)\,(k - 1)\,\hat{y} \qquad (3)$$

Equation (3) reflects the relationship between the inflationary bias on the one hand and the government's (or society's) inflation aversion, a, and society's degree of distortion, $k - 1$, on the other. Obviously, a and k are difficult to identify empirically. Moreover, they may be interrelated, as some authors argue that the benefits from price stability depend positively on the degree of distortions in an economy (Feldstein 1996).

Empirical studies, focusing on the effect of the institutional design of monetary policy, have neglected the role of distortions in explaining the inflationary bias. In terms of equation (3), the focus has been on the monetary policy maker's inflation aversion a. By appointing a conservative central banker, (very large a) and granting him independence, the inflationary bias can be reduced according to this approach (1). No attention has been paid to the underlying factors influencing society's inflation aversion, however.

As equation (3) shows, the bias could also be reduced by eliminating the degree of distortions, bringing $k - 1$ close to zero. However, labour market distortions are difficult to eliminate. Often they are the result of deliberate policy considerations regarding income distribution, social security, social consensus and peaceful relations in the labour market. Changing the design of monetary policy is easy to implement and is assumed not to have adverse side effects: it can be regarded as a free lunch. This may explain why the focus in discussions about ways to eliminate the inflationary bias has been on the monetary policy design. Still, when measuring the effect of the institutional framework of monetary policy on inflation other relevant factors should be taken into account. Otherwise, the effect of central bank independence might be misunderstood. Furthermore, the determinants of society's inflation aversion deserve attention. To this we shall turn in Sections 4 and 5.

[1] Rogoff (1985) has shown that in a two-party system society chooses a central banker that is more conservative than the median voter.

3. Central bank independence and inflation: an assessment of the empirical evidence

Most empirical studies into the relationship between central bank independence and the inflationary bias conclude that autonomy for the central bank is good for price stability. This is seen as a confirmation of the theory in this area. It is also used to advocate institutional changes towards central bank independence in the real world. In our view the role of central bank independence is overstated in a number of respects, however. In reality central banks are much less independent than is usually assumed. For example, the independence measures do not take account of the fact that in all countries it is the government that decides over the direction of exchange rate policy. Of course, the day to day management lies in the hands of the central bank. But if a country adheres to an exchange rate mechanism, the interest rate cannot be freely used as a monetary policy instrument (Neumann 1991).[2] Moreover, if by central independence is meant that the government delegates some functions to a monetary policy maker, than it is a trivial meaning (Friedman 1962). A truly independent central bank is outside the regular political channels. The Maastricht Treaty (art. 107) and the Statutes of the ESCB (art. 7) guarantee such a position for the future European Central Bank, but thus far no existing central bank is given true legal independence. As Capie and Goodhart (1995) argue, in extreme situations – that make disagreement between the government and the central bank more likely – the government has the final say. A standard example is of course a situation of war, but maybe the German unification is more illustrative. A recent example is given by the row between the Bundesbank and German Finance Minister Waigel over the valuation of gold reserves

[2] It should be kept in mind, that decisions over exchange rate policy have always been in the hands of the government, even during e.g. the Gold Standard.

and, more importantly, the subsequent announcement by the Bundesbank of its planned revaluation of dollar reserves, with the profits going to the German budget. According to Capie and Goodhart it is, moreoever, the political and economic philosophy in an era that is decisive for the direction of monetary policy. The financial sector as an interest group may also play a key role. For a set of 32 countries Posen (1995) shows that the degree of effective financial opposition explains both inflation and central bank independence. The latter is measured by the index developed by Cukierman, Webb and Neyapti (1992) and includes elements reflecting the central bank's freedom to decide over monetary policy, as well as the degree to which society has chosen price stability as the major goal of monetary policy. From Posen's study it appears that the structure of a country's financial sector may be regarded as a third-factor effect, influencing both the institutional design of monetary policy and inflation. Most independence measures tend to be biased at finding the hoped-for relationship between independence and inflation (Romer 1994). In this regard it is useful to keep in mind that what is called independence is not so much legal autonomy, but rather the commitment of society to use monetary policy for achieving price stability. If evaluation takes place according to true independence, the empirical relationship between independence and inflation is quite weak (Prast 1996a). Finally, some authors argue that empirical validation of the theory should focus on long nominal interest rates rather than inflation, as – in contrast with the assumption made in the theory – current inflation is not under control of the monetary authority (Rovelli 1997). Anyway, a conclusion to be drawn from the empirical evidence is that it is society's commitment to a monetary policy rule, rather than legal independence, that is decisive both for the central bank's actual freedom to manage monetary policy, and for price stability. In the remainder of this paper it is investigated, first, how the relationship between the monetary policy regime and inflation is affected if account is taken of distortions and, second, where society's commitment to price stability may come from.

4. Distortions, commitment to price stability and the inflationary bias of monetary policy

As the model set up in Section 2 shows, both society's inflation aversion, a, and the difference between the equilibrium level of output and the natural rate of output, $k - 1$, affect the inflationary bias. The inflation aversion may be reflected by the monetary policy design. The 'distortion gap' is the result of, among other things, distortions, especially in the labour market. To see whether the latter does indeed affect inflation, in this Section we shall develop a measure for a country's degree of (labour market) distortions. We shall investigate whether there is empirical evidence for a relationship between the design of monetary policy and inflation if account is taken of the differences in the degree of distortion between countries.

Taxation, unionization, minimum wage legislation and the system of social benefits are all factors influencing the behaviour of groups in society. The theory predicts that the incentive to stimulate output, and hence the inflationary bias, must be larger in countries with more labour market distortions. Goodhart (1994) analyzes the effect of unionization on inflation separately and finds no significant effect. We shall concentrate on labour market distortions through income taxation. Obviously, any tax other than lump sum may affect decisions of labour supply. Thus, a value added tax on consumption goods reduces the amount of consumption that can be bought out of labour income. It may therefore affect the choice between consumption and leisure. Taxation of savings may also affect choices of labour supply, e.g. through retirement behaviour. A complicated tax system itself may be socially sub-optimal, diverting resources from efficient use (from a macroeconomic point of view) to rent-seeking behaviour (OECD 1995). Furthermore, taxation of capital and labour may affect the demand of labour, which can reduce employment for a given level of output. In what follows we shall concentrate on income taxation and social security contributions, as these are likely to have the most direct effect on the labour market. If income taxation is used to measure distortion, there is a range of possible indicators from which to choose: total income tax revenues as a fraction of GDP, marginal rates, average rates. We use two different measures, namely the average income tax rate for an average production worker (APW, one-

earner family, two children) and total government revenues from the taxation of income and wealth as percentage of GDP. The former is available for all countries under consideration – the 15 members of the European Union –, but only from 1990 onwards. The latter is available from 1985, but only for a subset of 13 EU-countries. Although it is obvious that social security contributions do affect the difference between wages paid and disposable income of employed just as do taxes, we do not believe they should be treated in an identical manner. As a rule, social security contributions entitle those who pay them – the employed – to benefit from various funds that are not open to those outside the labour force. For example, they ensure income in case the worker gets ill. In that sense, they can be treated more or less on an equal footing with private insurances. The revenues from taxation, on the other hand, are used for government expenditures on goods and services that are not merely available to those who pay taxes. Still, it is obvious that an obligatory system of social security contributions limits the workers freedom of spending and may therefore distort incentives. Moreover, part of the revenues from social security contributions are used for expenses that accrue to all in the labour force. When analyzing the effect of distortionary taxation on inflation, we evaluate central bank independence with the measure introduced by Cukierman, Webb and Neyapti (1992). Although we are critical of this measure (see Prast 1996a), it is often used by or referred to by other authors, which is why we employ it here. It should be stressed that this measure entails both elements reflecting central bank autonomy (i.e. protection against dismissal, final authority in case of conflicts) and elements reflecting commitment to price stability, which limit rather than increase the central bank's freedom to choose monetary policy according to its own goals (i.e. price stability as sole legal objective of monetary policy, limits on lending to the government). We memorize that this measure does not take into account that, even if the central bank formulates policy and has final authority in case of conflicts, it is the Minister of Finance who decides over the exchange rate. This is especially important, of course, in countries that participate in an exchange rate agreement. Our empirical analysis focuses on the 15 countries of the European Union (EU).[3]

[3] For lack of data, some of our results apply only to a subset of countries.

As an additional explanatory variable we use the actual turnover rate of the central bank Governor. This may be a measure of the degree to which the central banker's view of the monetary policy to be implemented is in conflict with that of the government. Although in the past fifty years there is no evidence that a central bank Governor has been dismissed, it is sometimes argued that a longer time horizon enables a central banker to focus more on the longer-term gains of price stability. Moreover, it must be kept in mind that central bankers sometimes choose to give up their position because they disagree with the policy views by the government, as was the case in Germany after the unification. To assess the effect of distortionary taxation as well as the effect of central bank independence taking account of differences in taxation across countries, we have estimated the following equation:

$$\pi_i = b + a_1 CBI_i + a_2 TAX_i + a_3 TURNOVER_i \qquad (4)$$

where π is the average rate of inflation in country i in the period under consideration, *CBI* is the degree of independence according to Cukierman's index mentioned in Section 3, *TAX* is a measure of the degree of distortionary taxation (see below) and *TURNOVER* measures the actual average yearly turnover rate of the central bank Governor in the period 1950-89. As pointed out above, the idea behind the introduction of this variable is that the longer the central bank Governor is actually in office, the less the possibilities for a government to appoint a Governor according to its own preferences. A long actual term of office, moreover, indicates that the Governor probably has not been sent away or has chosen to leave, indicating that he has freedom of action. For *TAX* we have used the various variables mentioned earlier (see also the note to Table 1). The period under consideration goes from 1973 to 1996. We have also split up this period into two intervals, namely 1973-87 and 1988-96. The first period started with the breakdown of Bretton Woods and the first oil price shock and was characterized by a worldwide increase in, and divergence of, inflation. The second subperiod can be regarded as one of convergence towards monetary unification in Europe, as from 1988 exchange rates began to stabilize in the ERM. As we observed earlier, the data on the tax variables are incomplete. It should be kept in mind, however, that the tax system does not change from year to year, but is to be seen rather as an institutional characteristic. Therefore, we feel that the tax measures used here are appropriate for our

TABLE 1

INFLATION, CENTRAL BANK INDEPENDENCE AND TAXATION

	1973-87	1988-96	1973-96
CONSTANT	9.03 (1.1)	-1.03 (0.3)	1.32 (0.3)
CBI	-8.5 (0.8)	4.02 (0.8)	0.35 (0.1)
TURNOVER	43.0 (1.4)	32.93 (1.9)	48.4 (2.3)
TAX	-0.08 (0.3)	-0.02 (0.2)	0.01 (0.1)
R^2 (adj.)	0.19	0.13	0.19
No. of observations	13	15	15

Note: t-values in parentheses. CBI = index of legal central bank independence developed by Cukierman (1992). TURNOVER = turnover rate of central bank Governor, 1950 to 1989 (*source*: Cukierman, Webb and Neyapti 1992). TAX (*source*: OECD 1994, 1995; Eurostat 1996); for 1973-1987: current taxes on income and wealth as percentage of GDP, 1985; for 1988-96 and 1973-96: average personal income tax rate for an average production worker, 1990-93.

purpose. The results of our empirical research, presented in Table 1, show that income taxation does not seem to increase inflation. This applies both for the entire period and for each subperiod.[4] However, this may be due to another factor, which we shall introduce in the next Section. Table 1 also reveals that legal independence does not seem to matter for monetary policy. This may be because, inside the European Union, governments decide over the exchange rate. In countries that have decided to participate in the ERM, central bankers adjust monetary policy to keep their exchange rate pegged, whether they are independent or not. The degree to which they succeed in doing so may depend on factors outside the monetary sector, rather than on the institutional design of monetary policy. To this we turn in the next Section. The results presented in Table 1 do indicate that the actual turnover rate of the central bank Governor has an upward effect on inflation. This could imply that a longer actual term of office is good for the central banker's reputation. Also, one could infer that in countries where the central banker chooses to resign before his term

[4] Additional regressions with alternative taxation measures yield similar results.

is over, there may be disagreement over monetary policy, with the government pushing for expansionary measures.

5. Social consensus, central bank independence and inflation

Society's inflation aversion can be measured in different ways. First, it can be evaluated by applying the 'revealed preference' concept to the design of monetary policy: the more directed at price stability this regime is, the higher the inflation aversion. Another approach is to investigate to what degree price stability is likely to be in a country's interest. It can be expected that a country's inflation aversion depends on the benefits the country has from price stability. As Alesina and Wacziarg (1997) argue, small economies benefit most from (international) trade. Price- and exchange-rate stability are likely to increase trade, hence it may be in the interest especially of small countries to keep prices stable. According to this reasoning one would expect country size to affect inflation aversion. We shall turn to this issue later. As we mentioned in Section 2, Feldstein (1996) argues that the more distortions there are in an economy, the larger are the welfare effects of price stability. If this is true, countries with more distortionary taxation should have a higher inflation aversion. In the previous Section we have searched for empirical evidence to support the theoretical prediction that labour market distortion through e.g. taxation has an upward effect on inflation. This effect would have to show up because distortions increase the divergence between the socially optimal and the natural rate of output or employment. No significant effect of either taxation or the legal design of monetary policy (combining central bank independence and society's legal commitment to price stability) on inflation was found in Section 3, however. Society's revealed preference for price stability through the actual turnover rate of the central bank Governor, on the other hand, was found to reduce inflation significantly. In our view, society's revealed preference for price stability originates in the real sector of the economy. Social consensus and a more equal income distribution are likely to increase the willingness of society to 'sacrifice' monetary policy totally to price stability. Income redistribution through the government may play an

important role in this respect. It is quite likely that the countries with higher taxation are precisely those that have higher expenditures on social protection. This may indirectly result in a higher value of *a*, as in these countries inflation is not used as an instrument in a struggle over the income distribution. If people are satisfied with the way the government protects their incomes, it is more likely that they accept monetary policy to be directed at the goal of price stability alone, and not at efforts to create employment in the short run. This effect of higher inflation aversion, or rather more public consensus to direct monetary policy at price stability may more than compensate the upward effect on the bias of the distortionary taxation.[5]

In this Section we shall use the degree of social protection as a measure of social consensus. Social protection is measured by government expenditures on a range of income transfers to those in society that are less capable of earning income. This concept is constructed by Eurostat (1996) for the member states of the European Union. These transfers include widow and orphan protection, maternity and child care allowances, old age pensions, unemployment benefits, government health expenditures, invalidity/disability and sickness benefits and housing subsidies. Data are available from 1980 onwards. The following equation is estimated:

$$\pi_i = b + a_1 CBI_i + a_2 TURNOVER_i + a_3 SOCPROT_i + a_4 TAX_i \qquad (5)$$

where *SOCPROT* measures the government expenditures on social protection as a fraction of GDP. As before, we have looked at the whole period 1973-96 and we have also made a division into the two subperiods 1973-87 and 1988-96. For lack of data on taxes, the analysis of the first subperiod applies to only 13 of the EU-countries, as in Table 1. For the expenditures on social protection data are available from 1980 onwards, and for the countries who became a member of the European Union at a later stage they are incomplete even after that year. However, these expenditures can be looked upon as reflecting structural institutional characteristics of society. If a country has spent a relatively (with respect to other countries) high fraction of its GDP on social protection since 1980, it is likely that this was the case already in earlier years. Therefore, we use the available data on social protection expenditures in the period 1980-85 as a proxy for social cohesion in the period 1973-88. The results of our regression analysis are given in Table 2.

[5] Fratianni and Spinelli (1997, p. 261), however, argue that for Italy "[i]f anything, the direction of causality runs from inflation to social conflict and not *vice versa*". This conclusion stems from the view, that inflation is essentially a monetary phenomenon and that therefore push factors from the labour market cannot be regarded as causing inflation. However, it must be taken into account that the behaviour of the central bank is influenced by society, through the government. Hence indirectly social conflict may affect money growth and therefore inflation.

From Table 2 a number of interesting conclusions can be drawn. The first is that social protection has a significant downward effect on inflation. This result applies for both subperiods, although it is less convincing for the years 1988-96. As additional regressions not presented here have shown, this result still holds if taxation is removed as explanatory variable. The second conclusion is that the coefficient of taxation has the positive sign predicted by the theory and is significant for the whole period.

TABLE 2

INFLATION, CENTRAL BANK INDEPENDENCE AND SOCIAL PROTECTION

	1973-87	1988-96	1973-96
CONSTANT	29.4 (6.4)	6.23 (1.23)	14.71 (3.4)
CBI	-0.90 (0.3)	3.56 (0.7)	-0.76 (0.2)
TURNOVER	8.10 (0.6)	24.15 (1.5)	31.33 (2.25)
SOCPROT	-0.88 (6.6)	-0.25 (1.8)	-0.48 (4.1)
TAX	0.11 (1.0)	0.06 (0.6)	0.13 (2.0)
R^2 (adj.)	0.86	0.28	0.67
No. of observations	13	15	15

Note: t-values in parentheses; for 1973-1987: Austria, Finland, Greece and Sweden excluded for lack of data. SOCPROT = expenditures on social protection as a fraction of GDP, namely expenditures on invalidity/disability and sickness benefits, unemployment benefits, maternity benefits and child allowances, old age pensions, widow and orphan protection and miscellaneous; for 1973-1987: the average for the years 1985 through 1988; for 1988-96: the average for the years 1990 through 1994 (Sweden: the 1992-figure); for 1973-96: the average for the years 1985 through 1994 (*source*: Eurostat 1995, 1996); for other explanatory variables: see note to Table 1.

As is obvious from Table 2, the effect of social protection is more pronounced for the subperiod 1973-87 than for the later years. The explanation may be that in the later years a convergence of inflation levels has come about, partly due to the ERM and the movement toward monetary unification. In addition, expenditures on social protection have converged.[6] Social cohesion can also be measured by peace in the labour market. Strikes are a sign of protest, usually against the existing income distribution. As additional regressions not shown in Table 2 suggest, the number of hours lost through strikes has a significant upward effect on inflation. Another conclusion from Table 2 is that legal central bank independence still does not seem an important factor influencing inflation, whereas the effect of the actual turnover rate is not significant in the first subperiod. We have also done regressions including country size as explanatory variable, to test Alesina and Wacziargs's (1997) assertion, but we found no significant results. As we observed earlier, the lack of explanatory power of central bank independence in the European Union might be due to the ERM. To investigate this empirically, we have replaced central bank independence as explanatory variable by the number of years of participation in the ERM. Hence we have estimated the following equation:

$$\pi_i = b + a_1 ERM_i + a_2 TURNOVER_i + a_3 SOCPROT_i + a_4 TAX_i \qquad (6)$$

The results, given in Table 3, show that the number of years of participation in the ERM has a significant correlation with price stability in the interval 1988-96. This variable seems to take over the effect of the turnover rate. The direction of causation is not obvious here, however, as continuation of the ERM membership can be thought to depend partly on inflation performance. In the earlier period only few countries participated in the ERM, which may explain why the ERM variable fails to explain inflation in those years. The effect of social protection on price stability is still significant, both for the entire period and for each subperiod separately. For the period as a whole, distortionary taxation has a significant upward effect on inflation. It should be taken into account that the tax data refer to the years 1990-93, however.

[6] See Eurostat (1996, p. 245)

TABLE 3

INFLATION, SOCIAL PROTECTION AND PARTICIPATION IN THE ERM

	1973-87	1988-96	1973-96
CONSTANT	29.13	15.6	18.46
	(6.5)	(3.3)	(4.7)
ERM	-0.09	-0.23	-0.14
	(0.5)	(2.6)	(1.9)
TURNOVER	6.86	-3.17	15.44
	(0.5)	(0.2)	(1.0)
SOCPROT	-0.88	-0.32	-0.48
	(6.8)	(2.7)	(4.8)
TAX	0.14	0.02	0.10
R^2 (adj.)	0.86	0.55	0.75
No. of observations	13	15	15

Note: t-values in parentheses. ERM = number of years that a country has participated in the ERM since its start in 1979 up to 1988 (for the subperiod 1973-87) or up to 1996 (for the subperiod 1988-96 and the period 1973-96). For other explanatory variables see notes to Tables 1 and 2.

6. Conclusion

From the analysis in this paper the following conclusions can be drawn. First, in the European Union legal central bank independence, if measured by the Cukierman index, does not seem to be a decisive factor for inflation if account is taken of distortionary taxation and/or social cohesion. A low turnover rate of the central bank Governor, which may reflect consensus between the central bank and the government over monetary policy, has a small effect on price stability in the last decade. Distortionary taxation does not have a significant effect on inflation. Social cohesion, measured by expenditures on social protection, does significantly contribute to price stability in the post-Bretton Woods era, and especially in those years when inflation rates were high and diverged between countries. Finally, participation in the ERM, as a reflection of commitment to a monetary rule, is shown to be conducive to price stability, although doubts may arise as to the direction of causation.

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