

Independent Central Banks: Some theoretical and empirical problems?

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ABSTRACT

In little more than twenty years, it has become widely accepted that the optimal design of monetary policy should include provision for a central bank that is independent of government influence. This is a remarkably short period of time for any idea in economics to become so widely-accepted. But there are problems.

In this paper we show that there are many confusions and even some contradictions associated with central bank independence. To begin with, it is not entirely clear what it is exactly that central banks need to be independent of. Furthermore, there is confusion over the mechanisms whereby independence is supposed to deliver its benefits. The literature which is commonly said to provide the rationale for independence is often misunderstood and the evidence that independence does in fact enhance policy outcomes is extremely weak.

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1. Introduction

Any economist who had suggested, in 1990, that price stability could be achieved by legislation would have been treated with ridicule and directed to the history of prices and incomes policies. And yet, by 1996, Otmar Issing was asserting that the ability of central bank independence to bring about low inflation at very little cost were ‘two of the established findings of our discipline’ (Issing 1996, 289), findings moreover that had become ‘established’ in just seven years since the Federal Reserve Bank of New Zealand had been granted independence in 1989. Such a rapid emergence of a consensus is quite remarkable in economics, especially in the field of macroeconomics and policy where controversy is usually fiercest.

Such a widespread and hasty consensus in economics is surely suspicious. In the course of this paper we shall show that the widespread confidence in independent central banks as an essential design feature of optimal monetary policy owes quite a lot to misconceptions and confusions about the problems that independence is meant to overcome and about how it is meant to achieve this.

In the next section of this paper, we clarify a number of conceptual issues regarding the use of the term ‘independence’. In section 3 we focus on the theoretical arguments and in section 4 on the evidence. Section 5 summarises and concludes.

2. The meaning of independence

In everyday discussion there is no problem. An independent central bank is one that is free to conduct monetary policy without interference from government. However, the problems begin as soon as we ask for more detail. The first and simplest example concerns the frequent distinction between ‘operational’ (or ‘instrument’) independence and ‘goal’ independence. In the former, the bank is free to set the instruments at whatever values are necessary to achieve

the policy target; in the latter the bank also sets the target, usually these days a specific rate of inflation. But, as we shall see in a moment, there are other dimensions to independence. There is also a question of ‘independent from whom?’ The government, yes; but what about the electorate? This raises serious questions of accountability. And it is not just governments that impose constraints on the conduct of policy. A central bank which has multiple responsibilities may find that they conflict. To some degree, the way in which we answer these questions must depend on *how* exactly we think that independence improves policy outcomes. But that takes us into the theoretical debates that occupy the next section. For the moment, we shall simply assume that the mechanism involves (a) an increase in the policymaker’s ‘credibility’ and (b) a greater degree of inflation aversion than would otherwise be the case.

In practice, the degree of independence is usually measured by reference to the bank’s freedom to set the policy instrument without political interference. In most regimes the policy target is set by the legislature either periodically (illustrated by the annual ‘remit’ given to the Bank of England) or in a permanent ‘mandate’, charter or constitution (as in the case of the Maastricht Treaty and the ECB). The principle argument here is that policy goals should not be left to unelected officials in a democratic society but must be set in a way that allows an expression of collective preferences. However, this must create a tension and even a potential contradiction. ‘The decision on the ultimate goal of monetary policy must be left to citizens and set by their democratically elected representatives via legislative procedure[but]... Keeping the goal setting within the ongoing political process would expose the mandate for monetary policy to exactly those influences which are intended to be excluded by making the central bank independent.’ (Issing, 2006 p.67). The danger is clear: if the goal is set by democratically elected representatives, then these may be tempted to set it in a way that maximises their chances of re-election and this opens the door to all the ‘inflation biases’ that democratically elected policymakers are generally accused of. The uneasy compromise, in practice, is to have the goals set ‘democratically’, but through a mechanism which give the goals a high profile and protects them from short-run opportunistic changes. Hence, the ‘remits’ and ‘charters’ referred to earlier. However, this raises an important issue (if we are trying to judge the contribution of *independence* to optimal policy design) which is that if the low inflation targets that have proliferated alongside central bank independence are the expression of political preference, why does the conduct of policy need to be delegated? We return to this in the next section.

In practice then, independence is to be judged by reference to the bank's freedom to use its own, uninhibited, judgement in the setting of policy instruments. Again, there is something of a problem of understanding exactly how this guarantees an improvement in policy outcomes. If the legislature is committed to a low rate of inflation which it is willing to enshrine in various types of high profile public obligation, it is difficult to see why those economists, analysts and other technicians who can exercise their skills within an independent central bank, should not be able to exercise them to similar effect in, say, a ministry of finance. The only justification that Issing gives is that '... a key element of functional independence is ... a definitive prohibition of direct financing of budget deficits'. (Issing, 2006, p.68) Only with this prohibition can the policymaker retain lasting control over the money supply and ultimately inflation. But one might wonder whether such a prohibition could not be imposed regardless of institutional structures once everyone was agreed on the priority to be given to low inflation. There is also the issue that if this is a 'key element' in accessing the benefits of independence, then these benefits appear to be based on a foundation that plays little part in current macroeconomic thinking. (See for example Goodhart, 2007; Meyer, 2001 and Woodford, 2007a, 2007b).

We turn now to the question of 'independent of whom?' Clearly in Issing's view the main danger is that a central bank might fall under the influence of a profligate government. And when we turn to the evidence of independence and its achievements in section 4 we shall see that many of the characteristics of independence selected by researchers point quite clearly to government as the principal threat to optimal policy making. But while this may be a widespread assumption, it is incomplete. In the next few paragraphs we shall see that the logic behind making a central bank independent extends way beyond making it independent only of government.

If the chances of a successful policy outcome are to be maximised then the policymaker needs to have a single objective and to be *entirely* free to pursue it. There is little point in removing political pressures while leaving the bank saddled with multiple obligations, some of which may conflict with the requirements of price stability. On the face of it, this condition can be met by giving the bank a 'remit' which specifies inflation as the sole target of monetary policy or specifies it in some lexicographical way that makes it the first priority. In the UK, the inflation target is re-stated annually by the Chancellor of the Exchequer (and has been unchanged since December 2003). The instruction to the Bank of England begins each year with the formula:

The Bank of England Act came into effect on 1 June 1998. The Act states that in relation to monetary policy the objectives of the Bank of England shall be:

- a) to maintain price stability, and
- b) *subject to that*, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment.

(H M Treasury, 2009 p.2. Emphasis added)

But making an inflation target the first priority of *monetary* policy may not be sufficient if the bank is saddled with additional responsibilities. In the UK the 1998 Act which gave the Bank of England operational independence did two other things which attracted little attention at the time but were essential features of the package. The first was to remove responsibility for the management of the UK's national debt to a newly-created government agency, the Debt Management Office. The second was to remove the Bank's responsibility for banking supervisions to the newly-enlarged Financial Services Authority. Both activities had the potential to be a distraction from the Bank's main task and could, at worst, create conflicts of interest. An inflation-focused policymaker requires freedom to set the policy instrument in the light of inflation trends. It may be reluctant to do this if it is simultaneously trying to maximise the size of the market for government debt (especially if there is a suspicion that the market is dominated by capital risk-averse investors who will be frightened away by frequent changes in bond prices).¹ Similarly, the policymaker may be reluctant to raise interest rates with sufficient speed and vigour if, in its role as banking supervisor, it is aware that some banks in the system may be facing critical levels of delinquent loans. A genuinely independent central bank needs to be independent of *all* distractions.

Another aspect of independence, though rarely discussed, concerns the central bank's financial status. Measuring the financial strength of a central bank is not entirely straightforward. Firstly, there is no market capitalization to appeal to, while the use of accounting capital (undistributed profit plus the initial endowment) is difficult because of the wide range of accounting conventions employed. 'Capital' in one setting may not mean the same as 'capital' in another. The situation gets worse when 'reserves' are added to 'capital'

¹ Prior to the 1990s the Bank of England had a long history of intervening in the government bond market. In the 1960s it adopted a practice known as 'leaning into the wind' to smooth fluctuations in bond prices and in the 1970s it exploited the so-called 'Duke of York Strategy' in order to maximise bond sales. In both cases, interest rates were being determined by the market for public sector debt. (See Gowland, 1984, chs 5 and 8 respectively) for details.

since central banks adopt differing practices when it comes to the treatment of revaluation gains and losses. If we switch from the balance sheet to the profit and loss account and try to measure financial strength using some concept of rate of return, then the obvious objection is that the earning of profit is not a primary objective of a central bank and anyway a central bank that makes losses can always issue unlimited amounts of domestic currency and if that fails it can expect to be bailed out by government. These last two points may be exaggerations: there have been cases where the domestic currency has been rejected in favour (usually) of US dollars and times of financial distress for central banks are often linked to a dire fiscal position for central government such that a timely bail-out can not be relied on. But it remains true that a central bank's primary concern is not to make profit. 'The bank deals in financial markets to achieve policy goals, not to maximize its revenues'. (Bank of Canada, 2005).

How, then, can a central bank's financial position influence its conduct of policy? Part of the answer brings us back to the familiar bank-government relationship. This is the simple and obvious point that a central bank that wishes to be master of its monetary policy does not wish to be in a financial position such that it might require periodic support from government. But there are further, more technical possibilities. In order to set the policy rate, a central bank needs to intervene in financial markets. The precise form of the intervention will vary across regimes. It might for example involve outright sales and purchases of treasury bills or, more commonly at the moment, repurchase deals in government bonds. Whatever the detail, the bank has to have sufficient holdings of the relevant instruments and the counterparties need to know that the bank can carry out its operations without having first to consider the consequences for its own financial position. There is an issue of credibility here.² But monetary policy may not always consist of setting interest rates alone. In 2002 and 2003 the Bank of Japan pursued a policy of buying up long-term government debt and doubts were raised about its ability to continue the programme in the face of increasing exposure to capital losses. (Cargill, 2005).

In developed countries financial strength is rarely a major issue. In developing and middle income countries, however, it is possible to find cases where the central bank's own financial weakness has impeded the conduct of monetary policy, as shown by Stella (2008) and by Klüh and Stella (2008). As a measure of financial strength they use balance sheet capital plus what *International Financial Statistics* calls 'Other Items Net' to create a ratio with total assets in the denominator. A negative ratio shows 'weakness'. The cross-country

² There is a very interesting (and longer) discussion of these issues in Johnson and Zelmer (2007).

studies show the average rate of inflation in weak central bank regimes averages more than twice the rate in regimes with a positive ratio.

Finally, while governments subject to popular election may be the main source of *political* pressure on the policymaker, other interest groups may also have preferences regarding its behaviour. The US Federal Reserve, today, would be regarded as a moderately successful and independent (of government) central bank. But Forder (2003) shows that this reputation for independence has been earned and was certainly not enshrined in the statutes which governed its establishment in 1913. The development of a US central bank up to that point had had a long and controversial history. Even in 1913 there was strong opposition to the creation of such a powerful institution. But this fear was based, not on its potential to act as an arm of the executive, but on its potential for capture by the broader financial interests of 'Wall St.' The danger in the popular view was that the Fed would act as a sort of superbank, protecting the interests of the US banking sector generally against the interests of agriculture and industry. Accordingly, the statutes behind the US Fed actually provide a significant degree of executive oversight of its operations in order to protect the rest of the economy from the consequences of its being captured by the financial interest. The President nominates appointees to the Federal Reserve Board and, of course, appoints the Chairman.³ And it is not difficult to find episodes of US monetary policy (the New Deal era, the 1973 interest rate cuts) where Presidential influence was involved. As Forder (2003, pp. 307-8) points out, the Fed's reputation for independence of government was *earned*, largely by Volcker and maintained by Greenspan.⁴ There are two lessons here. The first is (again) that for complete freedom to pursue its inflation mandate the policymaker needs to be completely of *all* competing pressures and the second is that simply checking the formal statutes as a means of assessing a central bank's independence of government may give misleading results. We return to this theme in section 4.

3. The theoretical arguments

Readily available accounts of the theory underlying the enthusiasm for independent central banks frequently involve some degree of confusion since they combine two concepts which ought strictly to be kept separate.

³ Until the 1930s, the Secretary of the Treasury and the Comptroller of the Currency were also *ex-officio* members of the Board.

⁴ See also Blinder (1998) pp.62-6.

The confusion often begins with the interpretation of Kydland and Prescott's (1977) paper on time inconsistency. Assume that the policymaker is seeking to minimise a loss function containing the inflation rate and the level of output (or employment). The following is typical:

$$L = \alpha(\pi) - (1-\alpha) b(\pi - \pi^e) \quad \dots(1)$$

where α is a 'taste' parameter and $b(\pi - \pi^e)$ is based on the Lucas supply function with b the slope of the short-run Phillips curve.

The point made by Kydland and Prescott (KP) is that, at low rates of inflation, the output (employment) benefits from an inflation surprise are bound to exceed the costs from higher inflation. In a rational expectations world, agents know that the policymaker faces this incentive to inflate at low levels of inflation and so they *anticipate* by contracting at rates which incorporate the (higher) rate of inflation at which the losses from yet higher inflation would exceed any benefit from extra output. Consequently, the policymaker is prevented from achieving low inflation because of agents' expectations. Notice that this argument applies to *any* policymaker. It does not rely upon different loss functions being associated with different interest groups. Indeed, Kydland and Prescott stress that the loss function is universally agreed. And so it does not rely upon elected policymakers pursuing reckless objectives and will not be solved by the appearance of a central banker with a conservative loss function. The time inconsistency of optimal plans applies to all policymakers who know that an inflation surprise can create higher output.

In passing, we might note that a similar result can be arrived at through another route. This is the case where expectations are formed adaptively, or in some other, non-rational, way which permits expectational error. In this case the policymaker may, at low rates of inflation, decide to inflate for the purpose of output gain and then to maintain the higher rate of inflation even though output returns to equilibrium. The policymaker may even repeat the process, pocketing a further output gain at an even higher rate of inflation. We finish at a KP-like equilibrium where the policymaker decides to stop since the losses from the higher inflation rate just match the temporary output gains. If this equilibrium differs from a lower-inflation equilibrium which is the socially preferred alternative, then this is because the policymaker has a different loss function from the rest of society. This is not the KP case, but it does relate to other arguments about 'reckless' monetary policy and elected policymakers to which we return towards the end of this section.

The KP solution for the time inconsistency problem was the adoption of a monetary rule. The rule would be chosen so as to be consistent with the desired rate of inflation and it must be one which agents understand will deliver a lower rate of inflation. In these circumstances their expectations will be lower and so too will the inflation rate.

Barro and Gordon's (1983) contribution was to point out that this solution raises a second issue, that of 'credibility'. Rational agents may *understand* that the rule (a money growth rule, for example) is consistent with low inflation but the moment that it reduces expected inflation, then the policymaker has an incentive to optimise again, *given the rule*. In other words the policymaker has the same incentive to break the rule as s/he had when starting from a low rate of inflation without the rule. Rational agents will know this and so the rule is not credible.⁵ The remainder of their paper is an attempt to show how credibility can be achieved by other routes (specifically the private sector punishing the policymaker for deviating from low inflation) and how, once achieved, a low-inflation reputation can be used to maintain low inflation and low inflation expectations. But making a case for credibility does not in itself make a case for independent central banks especially when the argument leaves intact the KP assumption of agreed social preferences.⁶ What we need to take us from the credibility issue to independent central banks as a solution is the assumption that central bankers are bound to be inflation-averse. This, the 'conservative central banker' issue, takes us to the contribution of Rogoff (1985).

The widely-held view that Rogoff's contribution to this debate is to recommend institutional reforms to improve the policymaker's 'credibility' is based on the conclusion of his paper where he says that society can make itself better off by appointing a policymaker who places greater weight on inflation stabilisation than on output/employment stabilisation than society at large (Rogoff, 1985, p. 1177). But the argument to which this is the conclusion is not strictly based upon credibility. The paper is another attack on the KP case for commitment to a monetary rule, and invokes the more or less standard argument for discretionary policymaking, namely, that in a world of sticky prices (particularly inflexible wages) a monetary rule will result in instability of prices and output in response to shocks. What is required is a policymaker who can respond to these shocks, finding the optimal balance between price and output stabilisation, and (crucially) resisting the time inconsistency

⁵ As Forder (1998, p.310) points out, this argument has general applicability to *any* institutional innovation aimed to deal with time inconsistency. In our present case, for example, if creating an independent central bank creates low inflation expectations then that is an ideal time to abandon it. See also McCallum (1997).

⁶ See also the paper by Backus and Driffil (1985) which makes a rather different case for credibility. This does involve different policymakers having different preferences but the preferences are strictly unknown to agents and so political pressures do not seem relevant here.

temptations identified by Kydland and Prescott. Discretion will be preferable to some constitutional rule, provided the policymaker is alert to the dangers of inflation bias. This is, as it is often presented, an argument for a ‘conservative central banker’ but it is not, as is claimed with equal frequency, an argument for an independent central bank based upon its superior credibility.

To summarise thus far, we have three quite distinct arguments. The first is that monetary policy is easily infected with an inflation bias resulting from time inconsistency which is a danger confronting *all* policymakers and can be solved by commitment to a rule. The second is that policy outcomes improve with the policymaker’s credibility, but the solution does not lie with rules (and there is no mention of central bank independence). Thirdly, discretionary policy outcomes are better than the policy outcomes from following a rule, provided that the policymaker is alert to, and can resist, the temptations posed by inflation bias. Nonetheless, even if the theoretical case for independent central banks is not made in these papers, there is a widely-held view that independence does improve policy outcomes and that this the mechanism involves the policymaker’s credibility.⁷ We turn now to the argument that credibility is essential to good monetary policymaking.

For independence to improve policy outcomes, four conditions must hold. The first, with which we shall be mainly concerned, is that agents must have reason to believe that the policymaker has an incentive to deceive, in the absence of some specially-designed constraint or incentive. In addition, it must be the case that expectations are to some degree forward-looking and that these expectations have a real effect upon price-setting behaviour. Finally, of course, it must be that independence affects those expectations in the desired way.

Why should the public expect the policymaker to deceive? Kydland and Prescott would say that the policy maker has an incentive to cheat whenever the rate of inflation is low and this prevents the rate of inflation from ever being low. The incentive is to achieve a higher level of output (lower unemployment). If expectations are formed adaptively, then the extra output is purely temporary. But forward-looking expectations are central to the KP argument and this removes even the temporary gain. Knowing this, why would the policymaker do it?⁸ In our loss function [1] under rational expectations the term $b = 0$ (the Phillips curve is vertical even in the short-run) and there are no gains from an inflationary

⁷ Anyone who doubts this should read the collection of essays, many of them by central bankers and policymakers, in Arestis (2007).

⁸ We have stressed the point that Kydland and Prescott insist that the incentive confronts *all* policymakers. But if we set that aside for a moment and assume that the policymaker is subject to popular election, the question remains as to why an electorate ‘rational’ enough to anticipate policy outcomes is simultaneously foolish enough to elect policymakers who generate pointless inflation.

surprise. Of course, we can create the incentive by relaxing the rational expectations assumption so that the policymaker might choose a value of π such that output is pushed beyond its natural level and adding to future inflationary pressure, but the solution to this is simply to recognise the full-employment constraint. In terms of loss functions, we replace output with an output gap. We have:

$$L = \alpha(\pi) - (1-\alpha) [b(\pi-\pi^e) - Y^*] \quad \dots(2)$$

Recognising the full employment constraint is the basis of Blinder's 'disarmingly simple solution to the Kydland-Prescott problem: *Direct* the central bank to aim for [Y^*]', though the words that follow are more significant:

That is exactly what I felt duty-bound to do while I was Vice Chairman of the Fed. And my attitude was hardly unique in the FOMC, where members were always concerned about the potential inflationary consequences of pushing unemployment below the natural rate. (Blinder, 1998, p.43)

McCallum (1997) makes the similar point when he says that optimal policy is not infeasible and therefore there is no reason why it should not be followed (without major institutional changes). Forder, too, points out that 'To improve on the Kydland-Prescott outcome, the policymaker must simply recognise the futility of seeking to exploit a non-existent trade-off and refrain.' (Forder, 1998 p.315). And finally, Blinder once more, on the general disinflation of the 1980s 'It came from determined but discretionary application of tight money. Rather than seeking short-term gains, central banks paid the price to disinflate. As in the Nike commercial, they just did it' (Blinder 1998, p.41).

And there are all sorts of reasons why policymakers want to be credible. Discretionary policymaking will inevitably require short-term changes in strategy in response to shocks and these are easier to make if the policymaker knows that agents will not see these changes as U-turns in the long-term fight against inflation. The ECB's interpretation of its second, monetary, pillar provides a useful illustration. Since 1999, the growth rate of M3 has frequently exceeded its 'reference rate' but, although it regularly disregards these deviations, no-one doubts the ECB's underlying commitment to price stability. Equally, credibility is useful in a crisis. During 2009, the Bank of England embarked upon a policy of 'quantitative easing', a practice that come as close to printing money as one can get in a modern economy,

but it has been able to do it without anyone doubting that price stability remains the primary target. Finally, there is the point that policymakers, like most of us, wish to leave office thinking that they will be remembered for having done a good job – having encouraged price stability – and having behaved honestly and openly.

Looked at like this, the incentive to cheat faced by the policymaker looks feeble in the extreme. And if the incentive is not obvious to the policymaker, it is unlikely to be clear to the private sector.

Another condition about which we, and others, can raise doubts is the importance of expectations in price-setting. On the face of it, wage negotiators who do not take into account the rate of inflation that is likely to occur during the period covered by the wage contract are acting irrationally. But suppose that they *know* what that rate is. Many of the arguments for an independent central bank are based upon the notion that the policymaker can make an output gain by creating an inflation ‘surprise’, the transience of the gain depending upon the way in which expectations are formed. But suppose that contracts are negotiated after the rate of inflation is determined. There can be no surprise (since expectations play no part they cannot be wrong) and there is no incentive to cheat.

The idea that inflation may be determined by policy before contracts are negotiated is not so extreme as it sounds. All that is required is that the monetary policy transmission lag is longer than the wage bargaining period. For the UK, the Bank of England reckons the transmission lag at eighteen months to two years (Bank, 1999) and the ECB takes much the same view (ECB, 2004 §3.2). As Goodhart and Huang (1998) point out, many wage contracts are for shorter periods than one to two years. If they are uniformly shorter than the transmission lag, there would be no credibility problem to solve and no need for an independent central bank to solve it. To the extent that *some* contracts are shorter than the time inconsistency (and credibility) problem is exaggerated. WE return to the issue of wage contracts when we look at empirical evidence in section 4.

So far we have focused on the theoretical case for independence as it originates in the time inconsistency literature where, we stressed, the incentive to cheat applies to *all* policymakers and does not depend upon different sectional interests trying to minimise different loss functions. However, the arguments for a policymaker independent of elected governments is often put in terms of governments and political bureaucracies having an incentive to operate reckless monetary policies which generate inflation rates which are in some sense above the ‘socially optimum’.

The first of these focuses upon the incentives which face governments confronting periodic re-election. We are asked to imagine a government with inflation at its target level and output at the natural rate, springing an inflation surprise. On the assumption of adaptive expectations, this produces a transient gain in output and employment which lasts for long enough to win the election. Subsequently, output returns to its natural level and the economy is left with higher inflation. To return to target, the government deflates, sacrificing output and employment for a period which depends again on the adjustment of expectations. If this is repeated (at each election) then the rate of inflation cycles between the target rate (at its base) and whatever the higher rate is generated by the surprise. By definition the *average* rate of inflation must exceed the ‘target’ rate. As an argument for an independent central bank with a more conservative loss function, the weaknesses are obvious. The first is that in order to generate this higher average rate of inflation the surprise must be repeated at each election. Assuming that this higher rate exceeds the socially preferred level, then voters must be extraordinarily myopic if they are to repeat this error. On the other hand, if the policy is successful because voters do repeatedly endorse policymakers who generate temporarily higher output, then the inescapable conclusion is that this is what voters prefer and the loss function which embraces these preferences⁹ has the sanction of democratic legitimacy.

What we have seen throughout this section is that theoretical arguments that ‘independence’ on the part of the monetary policymaker is likely to improve policy outcomes is based on the twin notions that low inflation is in the ‘public interest’ and that an independent policymaker will pursue this interest with more vigour and success than one that is subject to external pressures and /or the temptations that arise from time inconsistency. This confidence will come as a surprise to students of the theory of bureaucracy who could, if they wished, draw on the work of Buchanan and Wagner (1977), to show how standard utility-maximising assumptions allow us to predict that large bureaucracies will behave in ways that ensure their continued existence and growth. Buchanan and Wagner were really more concerned with the effects of large public bureaucracies on government deficits, than with the effect on monetary policy, but writing in the same tradition Acheson and Chant (1973a and 1973b) showed how central banks, left to themselves, would be likely to pursue goals of prestige, the maximisation of discretionary power and the avoidance of blame for any failure of policy. In a more recent paper, Forder (2002) offers a number of hypotheses, in the spirit of Acheson and Chant regarding the way in which the ECB might be expected to behave if its is working primarily in its own self-interest. Forder begins by arguing that the ECB is in a

⁹ In effect, in our loss functions (1) and (2) α varies with the electoral cycle.

weaker position than one would expect from simply looking at the provisions of the Maastricht Treaty and that the ECB realises this and is thus forced to take its own security seriously when considering the outcome of its decisions. This gives rise to three testable hypotheses. The first is that the ECB will stress the importance of ‘credibility’ and link this to its own independence; the second is that it will seize opportunities to play down the importance of ‘rules’ in current thinking because rules threaten its own discretion; and thirdly that it will stress how ‘accountable’ it is while using accountable in such a way that it does nothing to infringe its independence. Looking at the behaviour of the ECB in its early years and focusing in particular on Issing *et al* (2001) as a statement of the ECB’s own thinking about its role, Forder finds support for all three.

What Forder does not point out, though it follows naturally from his argument, is that if independence, of itself, could ensure that central banks could be relied upon to pursue the public interest, defined as low inflation, then we would not need the additional safeguards that are invariably built into independent central bank regimes. In the UK, as we have seen, the Bank of England is subject to an annual ‘remit’ from the Treasury setting out the policy target and containing penalties that the Bank will face if it misses the target by more than +/- 1 per cent. The Bank of New Zealand has become notorious for the way in which rewards (and penalties) are linked to policy outcomes and, of course, the ECB is bound by the terms of the Maastricht Treaty. And so we have the paradoxical position that independent central banks, whose independence is supposed to improve policy outcomes, are faced with instructions on how to behave imposed in each case by an elected authority. Is it mischievous to ask why, if an elected authority can identify the requirements of optimal policymaking and impose them on a central bank, it cannot impose them on itself. To paraphrase Blinder – ‘just do it’.

We end this section, therefore by noting firstly, that several well-known arguments in favour of central bank independence have been misunderstood and do not lead to that conclusion at all; secondly that most of the benefits could be (and many have been) achieved by central banks with no formal change in their constitutional position and finally that independence itself might create incentives that do not encourage optimal policy outcomes. The suspicions about the hasty consensus that we voiced at the beginning of this paper are scarcely diminished by these findings.

4. The evidence

One major difficulty confronting the argument that independence promotes price stability is that the worldwide reduction in inflation rates that began in the 1980s and was largely

complete by the mid-1990s, occurred before central bank independence became a widely-adopted policy. Hence Blinder's (1998, p.41) remark that contributors to the 'independence' debate were fighting the last war. Furthermore, while monetary policy has been in the hands of more or less democratically elected governments since 1776, for most of the period until the 1970s (excluding major wars, prices were broadly stable. At the very least, this unfortunate timing suggests that independence is not a necessary condition for successful disinflation. Nonetheless, the theoretical arguments of the previous section gave rise to numerous examinations of the historical record, many of which, at first at least, suggested that they might contain some merit and that independence really did yield benefits.

The credit for first establishing some sort of empirical case that independence delivers lower inflation is usually shared amongst Alesina (1988), Alesina and Summers (1993), Grilli *et al* (1991), Cukierman (1992) and others writing at about the same time. But many of the results here had been anticipated by a less well-known paper of ten years earlier by Parkin and Bade (1978). The key to all these studies is essentially a cross-country study of inflation (averaged over a number of years) and an index of independence for the national central bank. (For a summary see Berger *et al* 2001). In some papers there are additional 'tests' for a relationship between independence and economic growth and/or volatility of inflation and economic growth. The latter were intended to anticipate (and reject) any argument that the superior inflation performance was being bought at a high price. These additional findings were important in encouraging the view that the lower inflation associated with independence was a 'free lunch'. The methods, particularly in the early years, relied on simple correlation.¹⁰ Over the years, this approach has come in for substantial criticism. Space constraints prevent us from detailing it all but in order to give a flavour we can group the problems under the construction of the independence index and the treatment of correlation as evidence of causation.

The two key variables in these studies are inflation and an index of independence. While inflation rates are widely available (and are generally accepted as adequate for this purpose) the construction of an independence index is highly problematic as Cukierman (1992) and Cukierman *et al* (1992). There are several reasons for this. Firstly, the *available* data on which any judgement of independence can be easily based amounts to official statements of various kinds. These typically refer to the charter by which the central bank is established and any rules regarding its conduct that it may contain. There will almost certainly

¹⁰ In the case of Alesina and Summers (1988), one of the most frequently-cited studies, the relationship is established solely by scatter diagrams. There are no calculated correlation coefficients.

be rules regarding the appointment of the governor and other senior staff, statements relating to the bank's relationship with the ministry of finance, rules governing the decision-making process and so on. By focusing on this data researchers implicitly assume that actual central bank behaviour follows the rules without deviation. Generally, one might imagine this to be broadly true for central banks in jurisdictions where democratic institutions are well-entrenched, there is a free press and the rule of law is secure, it is not such a safe assumption in some less-developed countries where autocratic governments can be very imaginative in their ability to put pressure on the central bank. Furthermore, it does not necessarily follow that the statutes determine behaviour even in advanced economies. Forder's 2003 paper looks at the history of the US Federal Reserve. What he shows (as we noted briefly in section 2) is that its founders in 1913 were indeed keen that it should be 'independent'. But they wished it to be independent of the 'money interest' and more sympathetic to the needs of agriculture and trade. In order to avoid capture by Wall Street institutions, they looked to links with government to protect it. The relevance to the present discussion is that any researcher looking at the Fed's formal position is unlikely to score it highly for independence of government. Its reputation for independence came about as a result of its behaviour. As Blinder (1998, p.65) points out, its reputation was *built* by successive chairmen.

Secondly, in order to assess this evidence, the researcher needs a check-list of characteristics which, *a priori*, s/he thinks make for an independent central bank and checks off the list against the official statements. (This is the process that Forder (2003 p. 309) criticises as 'statute reading'). What we discover, predictably, is that different researchers have differing views about what should be in the list and much more frequently, and intractably, they have differing views about the weights that should be assigned to the different characteristics. Changing the characteristics and their weights inevitably changes the measure of 'independence'. For all these reasons, more recent work starting with Cukierman *et al* (1992) has tended to use an alternative measure of independence based upon the average term of office of the central bank governor, the 'turnover rate' (or TOR). As a general rule, TOR-based studies find a less robust relationship between independence and inflation than tests based on statute reading. For example, Sturm and de Haan (2001), using a recursive estimation technique find that independence reduces inflation only when high inflation countries are included in the sample and a rather similar picture emerges in Bouwman *et al* (2005).

Setting aside for now these controversial aspects of the measure of independence, we must now consider how we interpret the findings. What exactly does it mean if we do find a downward-sloping line of best fit in inflation/independence space?

The first observation to make is that this is a very primitive test of the theoretical arguments underlying the supposed benefits of independence that, as we saw in section 3, are quite complex. For example, if it is true that independence enhances credibility then we should expect to see not just a correlation of independence with reduced inflation rates but also evidence of a lowering of sacrifice ratios. Disinflation should be quicker and less costly the more independent the central bank. These (and other) hypotheses derived from the theoretical arguments in section 3 can be tested and this was done by Posen (1998) using the (law-based) indices from the four major studies listed at the beginning of this section and data on 17 OECD economies from 1950 to 1989. The conclusions are worth quoting directly:

This paper's investigations find no evidence to support the hypothesis that the mechanism by which central bank independence leads to low inflation is the enhancement of credibility of commitments to price stability. In our sample of 17 OECD member countries from 1950-89, there is no indication that any of the implications for public- and private-sector behavior necessarily associated with the existence of such a credibility bonus hold. (Posen, 1998, 355).

Other results, suggesting that there is no credibility bonus can be found in work by Fischer 1996 and Jordan 1997. Clearly such findings fly in the face of the traditional arguments and may even seem counterintuitive, but Mourmouras (1997) and Diana and Sidiropoulos (2005, 2006) suggest that this may be the result of a flattening of the short-run Phillips curve when the central bank is independent. The argument is that independence *is* associated with lower mean inflation rates. Knowing this, agents are aware that losses from lower indexation (longer duration) of wage contracts are lower with the result that wage and price inertia is increased.

Taking all the evidence together, we are left with a correlation between low inflation and central bank independence which may indicate something but it does not suggest that any of the inflation benefits are gained through the normally quoted channels, especially that of a gain in credibility. And this illustrates the dangers, commonly stressed to first year students of statistics, of taking correlation to imply causation. It is almost trivial to point out that any association between independence and inflation outcomes may easily be the result of some third (or even fourth or fifth) variable. It is entirely conceivable, for example, that a community with a high and united degree of inflation-aversion will pose an easier task for a

conservative policymaker than one where inflation is regarded with different degrees of distaste by different social groups. If it so happens that the fear of inflation leads the community to design apparently inflation-averse institutions then we have the independence-low inflation correlation both caused by inflation aversion. The obvious example of such a case is Germany where the Bundesbank was established in 1948 under the direction of the allies, with a high degree of constitutional independence of government, not for reasons of monetary policy but primarily to prevent a repeat of the 1930s where the Reichsbank, reluctantly or otherwise, had been complicit in the financing of the Nazi regime. At the same time, the German nation was recovering from the second hyperinflation of the twentieth century in which savings (though not current spending power this time) were largely wiped out. It is perhaps not surprising that when the Bundesbank gave evidence to the UK House of Commons and Treasury Select Committee in 1980 (pp. 290-304) it ascribed its success in maintaining price stability to the fact that it faced an easy task given the unity of the German nation in its fear of inflation. What is more surprising, and highly significant, is that when the Bundesbank representatives were repeatedly invited by the Committee Chairman to explain their success by reference to their independence they refused and even described the arrangements for Bundesbank-government-employer-worker collaboration in the formulation of policy. The same sentiment was effectively expressed by the Bundesbank's President Helmut Schlesinger in 1984 when, in a speech reflecting on the Bundesbank's price stability record he failed to mention independence.¹¹

5. Conclusions

The idea that independent central banks improve monetary policy outcomes is very widely accepted. Indeed, it is often quoted as part of the so-called 'new macroeconomic consensus'. This wide acceptance is remarkable for at least two reasons. Firstly it has come about in a very short space of time for a policy-related proposal in macroeconomics. The twenty years that it has taken for independence to become 'an established finding of our discipline' compares with the forty years that it took for the short-run Phillips curve that is also part of the new macro consensus. Secondly, stripped of its details, it amounts to saying that inflation can be cured by legislation, an idea that has hitherto been treated with ridicule by most economists.

¹¹ In his classic study of postwar economic institutions, *Modern Capitalism*, Andrew Shonfield describes the Bundesbank's independent position as 'anomalous' and Holtfrerich (1988) suggests that *reducing* the degree of Bundesbank independence was matter of active discussion by the mid-1980s.

Unfortunately, as we have seen in this paper, the enthusiasm for central bank independence is based on some very wobbly foundations. Although ‘independence’ is almost universally interpreted as ‘independence of government’ this is not a sufficient condition for the alleged beneficial mechanisms to work and neither is the required ‘independence’ achieved through laws or statutes – which are often used as a measure of the degree of independence itself. There is confusion too over the theoretical basis of its merits. These don’t follow, as is often argued from the problem of time-inconsistency and if, instead, the benefits follow from increased credibility then independence is unnecessary and, anyway, there is little evidence that credibility is enhanced.

In the face of these problems it might be argued that there must be *some* merit in the independence cause since inflation rates have fallen and remained (so far) low since the enthusiasm for independence began. But a careful look at the historical record shows that the reduction in inflation was well-underway before most central banks experienced the legal change of status. If central banks were responsible for this, then the actions they took were initiated under the old arrangements. Furthermore, on a longer view, price stability has been around for a lot longer than independent central banks.

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