Central bank independence
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Abstract

Many countries have implemented reforms designed to grant their monetary authorities greater independence from direct political influence. These reforms were justified by research showing central bank independence was negatively correlated with average inflation among developed economies. An important line of research developed measures of central bank independence and studied their relationship between inflation and real economic activity. The empirical correlations have been questioned on the grounds that they may not reflect causal relationships, and critics of the reform movements towards central bank independence have expressed concerns that independence can weaken the accountability of central banks.

Central bank independence

Central bank independence refers to the freedom of monetary policymakers from direct political or governmental influence in the conduct of policy.

During the 1970s and earlier 1980s, major industrialized economies experienced sustained periods of high inflation. To explain these periods of inflation, one must account for why central banks allowed them to happen. One influential line of argument pointed to the inflation bias inherent in discretionary monetary policy if the central bank's objective for real output (unemployment) is above (below) the economy's natural equilibrium level or if policy makers simply prefer higher output levels (Barro and Gordon 1983). Under rational expectations, the public anticipates the central bank will attempt to expand the economy; as a consequence, real output is not systematically affected but average inflation is left inefficiently high.

This explanation for inflation raises the question of why central banks might prefer economic expansions or have unrealistic output goals. Economists have frequently pointed to political pressures as the answer. Elected officials may be motivated by short-run electoral considerations or may value short-run economic expansions highly while discounting the longer-run inflationary consequences of expansionary policies. If the ability of elected officials to distort monetary policy results in excessive inflation, then countries whose central banks are independent of such pressure should experience lower rates of inflation. Beginning with Bade and Parkin (1984), an important line of research focused on the relationship between the central bank and the elected government as a key determinant of inflation.

This empirical research found that average inflation was negatively related to measures of central bank independence. Cukierman (1992) provides an excellent summary of the empirical work; references to the more recent literature can be found in Eijffinger and de Haan (1996) and Walsh (2003, Chapter 8). The empirical findings led to a significant body of work addressing the following questions: What do we mean by central bank independence? How should central bank independence be measured? What causal interpretation should be placed on the empirical correlations between central bank independence and macroeconomic outcomes discovered in the data? What is the theoretical explanation for these correlations?

The meaning of independence

The historical, legal, and de facto relationship between a country's government and its central bank is very complex, involving many difference aspects. These include, but are not limited to, the role of the government in appointing (and dismissing) members of the central bank governing board, the voting power (if any) of the government on the board, the degree to which the central bank is subject to budgetary control by the government, the extent to which the central bank must lend to the government, and whether there are clearly defined policy goals established in the central bank's charter.

Most discussions have focused on two key dimensions of independence. The first dimension encompasses those institutional characteristics that insulate the central bank from political influence in defining its policy objectives. The second dimension encompasses those aspects that allow the central bank to freely implement policy in pursuit of monetary policy goals. Grilli, Masciandaro, and Tabellini (1991) called these two dimensions "political independence" and "economic independence." The more common terminology, however, is due to Debelle and Fischer (1994) who called these two aspects "goal independence" and "instrument independence." Goal independence refers to the central bank's ability to determine the goals of policy without the direct influence of the fiscal authority. In the U.K., the Bank of England lacks goal independence since the inflation target is set by the government. In the U.S., the Federal Reserve's goals are set in its legal charter, but these goals are described in vague terms (e.g., maximum employment), leaving it to the Fed to translate these into operational goals. Thus, the Fed has a high level of goal independence. Price stability is mandated as the goal of the European Central Bank (ECB), but the ECB can choose how to interpret this goal in terms of a specific price index and definition of price stability.

Instrument independence refers only to the central bank's ability to freely adjust its policy tools in pursuit of the goals of monetary policy. The Bank of England, while lacking goal independence, has instrument independence; given its inflation mandate set by the government, it is able to sets its instruments without influence from the government. Similarly, the inflation target range for the Reserve Bank of New Zealand is set in its Policy Targets Agreement (PTA) with the government, but given the PTA, the Reserve Bank has the authority to sets its instruments without interference. The Federal Reserve and the ECB have complete instrument independence.

Measuring independence

The most widely employed index of central bank independence is due to Cukierman, Webb, and Neyapti (1991), although alternative measures were developed by Bade and Parkin (1984), and Alesina, Masciandaro, and Tabellini (1991), among others.

The Cukierman, Webb, and Neyapti index is based on four legal characteristics as described in a central bank's charter. First, a bank is viewed as more independent if the chief executive is appointed by the central bank board rather than by the prime minister or minister of finance, is not subject to dismissal, and has a long term of office. These aspects help insulate the central bank from political pressures. Second, independence is higher the greater the extent to which policy decisions are made independently of government involvement. Third, a central bank is more independent if its charter states that price stability is the sole or primary goal of monetary policy. Fourth, independence is greater if there are limitations on the government’s ability to borrow from the central bank.

Cukierman, Webb, and Neyapti combine these four aspects into a single measure of legal independence. Based on data from the 1980s, they found Switzerland to have the highest degree of central bank independence at the time, closely followed by Germany. At the other end of the scale, the central banks of Poland and the former Yugoslavia were found to have the least independence.

Legal measures of central bank independence may not reflect the relationship between the central bank and the government that actually exists in practice. In countries where the rule of law is less strongly embedded in the political culture, there can be wide gaps between the formal, legal institutional arrangements and their practical impact. This is particularly likely to be the case in many developing economies. Thus, for developing economies, it is common to supplement or even replace measures of central bank independence based on legal definitions with measures that reflect the degree to which legally established independence is honored in practice. Based on work by Cukierman, measures of actual central bank governor turnover, or turnover relative to the formally specified term length, are often used to measure independence. High actual turnover is interpreted as indicating political interference in the conduct of monetary policy.

Empirical evidence

The 1990s saw many countries, both develop and developing, adopt reforms that increased central bank independence. This trend was strongly influenced by empirical analysis of the relationship between central bank independence and macroeconomic performance. Among the developed economies, central bank independence was found to be negatively correlated with average inflation. The estimated effect of independence on inflation was statistically and economically significant. Based on data from the high inflation years of the 1970s, for example, moving from the status of the Bank of England prior to the 1997 reforms that increased its independence to the level of independence then enjoyed by the Bundesbank would be associated with a drop in annual average inflation of four percentage points.

The form of independence may also matter for inflation. Debelle and Fischer (1994) report evidence that it is goal *dependence* and instrument *independence* that produces low average inflation, although their empirical results were weak.

Even if central bank independence leads to lower inflation, the case for independence would be greatly weakened if it also leads to greater real economic instability. However, little relationship was found between measures of real economic activity and central bank independence (Alesina and Summers 1993). In other works, countries with more independence central banks enjoyed lower average inflation rates yet suffered no cost in terms of more volatile real economic activity. Central bank independence appeared to be a free lunch.

While standard indexes of central bank independence were negatively associated with inflation among developed economies, this was not the case among developing economies. In these economies, turnover rates of central bank governors were positively correlated with inflation. Countries that experienced rapid turnover among their central bank heads also tended to experience high rates of inflation. This is a case, however, in which causality is difficult to evaluate; is inflation high because of political interference that leads to rapid turnover of central bank officials? Or are central bank officials tossed out because they can’t keep inflation down?

The empirical work attributing low inflation to central bank independence has been criticized along two dimensions. First, studies of central bank independence and inflation often failed to control adequately for other factors that might account for cross-country differences in inflation experiences. Countries with independent central banks may differ in ways that are systematically related to average inflation. After controlling for other potential determinants of inflation, Campillo and Miron (1997) found little role for central bank independence.

Second, treating a country’s level of central bank independence as exogenous may be problematic. Posen (1993) has argued strongly that both low inflation and central bank independence reflect the presence of a strong constituency for low inflation. Average inflation and the degree of central bank independence are jointly determined by the strength of political constituencies opposed to inflation; in the absence of these constituencies, simply increasing a central bank's independence will not cause average inflation to fall.

Theoretical models of independence

Central bank independence has often been represented in theoretical models by the weight placed on inflation objectives. When the central bank’s weight on inflation exceeds that of the elected government, the central bank is described as a Rogoff-conservative central bank (Rogoff 1985). This type of conservatism accorded with the notion that independent central banks are more concerned than the elected government with maintaining low and stable inflation. Rogoff's formulation reflects both a form of goal independence – the central bank's goals differ from those of the government – and instrument independence – the central bank is assumed free to set policy to achieve its own objectives. Because the central bank cares more about achieving its inflation goal, the marginal cost of inflation is higher for the central bank than it would be for the government. As a consequence, equilibrium inflation is lower.

One problem with interpreting independence in terms of Rogoff-conservatism is that Rogoff's model implies a conservative central bank will allow output to be more volatile in order to keep inflation stable. Yet the empirical research finds no relationship between real fluctuations and measures of central bank independence.

An alternative way to model central bank independence is to view the central bank as having its own objectives, but it must also take into account the government's objectives when deciding on policy. The central bank might have either a lower desired inflation target than the government or an output target that, unlike the government's target, is consistent with the economy's natural rate of output. If actual policy is set to maximize a weighted average of the central bank's and the government's objectives, the relative weight on the central bank's own objectives provides a measure of central bank independence. With complete independence, no weight is placed on the government's objectives; with no independence, all weight is placed on the government's objectives. If the objectives of the central bank and the government differ only in their desired inflation target, then the degree of central bank independence affects average inflation but not the volatility of either output or inflation. Such a formulation is consistent with the empirical evidence discussed above.

Often, theoretical approaches have not distinguished clearly between goal and instrument independence. Suppose independence is measured by the relative weight on the government's and the central bank's objectives. This can be interpreted as reflecting goal dependence – the objectives of the central bank must put some weight on the goals of the government – or as instrument dependence – the actual instrument setting diverges from what would be optimal from the central bank's perspective to reflect the government's concerns.

Independence and accountability

While many countries have granted their central banks more independence, the idea that central banks should be completely independent has come under criticism. This criticism focuses on the danger that a central bank that is independent will not be accountable. Although maintaining low and stable inflation is an important societal goal, it is not the only macroeconomic goal; monetary policy may have no long-run effect on real economic variables, but it can affect the real economy in the short run. In a democracy, delegating policy to an independent agency requires some mechanism to ensure accountability. For this reason, reforms have often granted central banks instrument independence while preserving a role for the elected government in establishing the goals of policy and in monitoring the central bank's performance in achieving these goals.

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Cross references, indexing

Inflation targeting, conservative central banker, inflation bias