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The role of political institutions for the effectiveness of central bank independence

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ABSTRACT

This paper empirically studies the impact of the quality of political institutions on the link between central bank independence and inflation. Making use of data on the evolution of central bank independence over time and controlling for possible nonlinearities, we employ interaction models to identify the conditions under which more central bank independence will enhance a country's inflation performance. Examining a cross-section of up to 69 countries, we are able to show that granting a central bank more autonomy does not necessarily lead to better inflation performance. To lower inflation by increasing independence, two conditions must be fulfilled: (1) The change in independence must be sufficiently large, and (2) the quality of the political institutions must be sufficiently high.

1. Introduction

In the last 30 years, academics and policymakers have shown increasing interest in the independence of central banks. Especially during the 1990s, many countries around the world adopted new central bank laws and granted their monetary institutions a greater degree of autonomy [see e.g., Cukierman (2008)]. In the European Union, the Maastricht Treaty has enabled the European Central Bank (ECB) to pursue monetary policy independent of national governments. The United Kingdom granted the Bank of England full autonomy in 1997 and many other countries followed suit. Fig. 1 displays the evolution of central bank independence (henceforth: CBI) from the 1980s to 2003 for a sample of 69 countries, separately for OECD and non-OECD countries.[1] It is clear that the vast majority of central banks have become more independent.

At the same time, average inflation rates have decreased in almost all countries. This co-movement of independence and inflation has occurred in both OECD or non-OECD countries. As an example, OECD countries have on average experienced a reduction in average inflation by roughly 15 percentage points. CBI has on average increased by 0.30. However, the scatter-plot shows no clear negative relationship between the changes in CBI and the changes in inflation. In addition, the empirical literature on this

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[1] Indicators of central bank independence are taken from Cukierman et al. (1992) and Crowe and Meade (2007). Both indicators are based on the methodology of Cukierman et al. (1992), overlap for 69 countries and are normalized to the unit interval. Countries with inflation rates above 50% are excluded from the figure.

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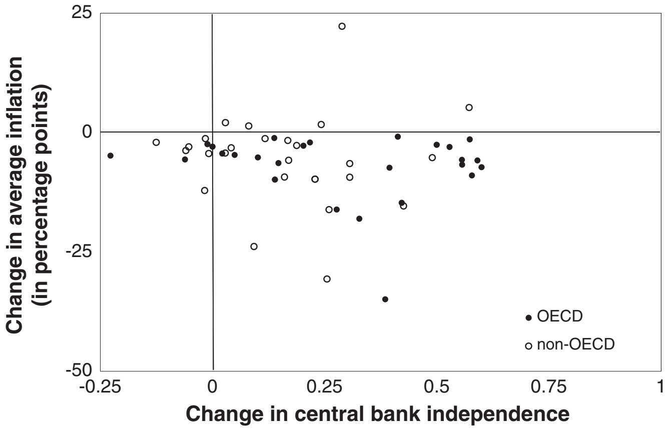

Fig. 1. The evolution of central bank independence and inflation.

issue casts doubt on the effectiveness of CBI for price stability. Although earlier studies primarily identify a negative link between CBI and inflation, especially in industrialized countries [see e.g., Grilli et al. (1991), Cukierman (1992) or Alesina and Summers (1993)], the results of more recent studies are rather ambiguous [see e.g., Eijffinger and de Haan (1996), Campillo and Miron (1997) or Klomp and de Haan (2010)]. The previous literature has made numerous attempts to explain the impact of CBI on inflation using different indicators of CBI, employing different sample periods and countries and controlling for all kinds of additional determinants of inflation. Surprisingly, comparatively few attempts have been made to study the conditions under which CBI can enhance a country's inflation performance. While many studies include a wide variety of control variables for inflation, the literature sparely addresses the interaction between certain control variables – e.g., the quality of political institutions – and CBI. In this paper, we argue that the quality of political institutions is an important determinant of the relationship between CBI and inflation.

From a theoretical point of view, increasing CBI helps to solve time-inconsistency problems by strengthening the reputation of monetary policy. However, indicators of CBI convey little information about the credibility of such an arrangement. To achieve the beneficial reputation effects of CBI, the established institutional design needs to be credible. High-quality political institutions might generally be associated with greater trust in governmental decisions and legal arrangements. As a result, the quality of institutions might be a positive determinant of the reputation effects of CBI. Chile and Venezuela provide helpful anecdotal evidence in support of our hypothesis. In the 1980s, both countries suffered from similarly high average inflation rates (21% and 20%). In addition, Chile and Venezuela increased the independence of their central banks to a similar extent (0.33 and 0.37).[2] However, whereas Chile established price stability in the first decade of the twenty-first century (with an average inflation rate of around 3%), the inflation problem in Venezuela persisted. The remarkably different inflation performance of these two countries may be reflected in discrepancies in institutional quality. If we measure institutional quality on the basis of political stability, rule of law or democratic accountability using the World Bank's governance indicators (Kaufmann et al., 2009), Chile displays much higher institutional quality on average than does Venezuela (0.64/0.74/0.65 and 0.31/0.29/0.42). These differences may be crucial to the reputation of monetary policy design and hence to the effectiveness of CBI. We expect that institutional quality directly influences the marginal effect of CBI on inflation.

The main questions of our paper are as follows. Can we identify a relationship between CBI and inflation? If so, does the institutional quality of countries influence this relationship? How do institutional quality and CBI interact with each other?

To answer the above questions, we examine a dataset of up to 69 countries. Unlike in most of the literature, which primarily focuses on pure cross-section samples, we study the relationship between CBI and inflation by exploiting the time dimension of CBI data. Additionally, we allow for possible nonlinearities in the relationship between CBI and inflation. The impact of institutional quality on the marginal effect of CBI is studied by estimating interaction models. Our main findings can be summarized as follows. Institutional quality has a significant impact on the relationship between CBI and inflation. Increasing institutional quality is correlated with improved CBI effectiveness for a country's inflation performance. Our analysis reveals that granting a central bank more autonomy does not necessarily lead to better inflation performance. To lower inflation by increasing independence, two conditions have to be fulfilled: (1) The change in independence needs to be sufficiently large, and (2) the quality of institutions has to be sufficiently high.

This paper is organized as follows. Section 2.1 briefly discusses the theoretical and empirical literature on the relationship between CBI and inflation. In Section 2.2, we discuss the role of institutional quality in the effectiveness of CBI with regard to inflation performance enhancement. Section 3.1 describes the empirical methodology and the dataset. Section 3.2 presents the estimation results. A large number of robustness checks are presented in Section 3.3. Section 4 concludes.

[2] Detailed data descriptions can be found in Section 3.1 and in the appendix.