Can an Institutional Arrangement Defeat Globalization?
Central Bank Independence at Forty

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ABSTRACT

While the idea of central bank independence turns forty in 2017, major flaws in its theoretical foundations have been exposed with the advent of policy globalization. This paper examines the performance of central banks worldwide over the past twenty years, drawing on new institutional economics, new institutionalism in sociology, and complexity theory, and reopens the debate on the desirability of central bank independence. In particular, I make a two-pronged critique of central bank independence: in the first instance, the argument for independence relies on a utilitarian rather than institutional analysis, one that neglects the genesis of central banks and their relation to other institutions within a country system. Secondly, I show that central bank independence continues to neglect the complex interdependencies of the global monetary and financial system, concluding that the concept of central bank independence as an institutional arrangement fails under the reality of globalization as much as it does in a domestic context. In light of this reality, new and possibly radical institutional alternatives for monetary policy need to be explored to achieve the same ends that independence promised.

I. Introduction

Much like the *Cambridge Journal of Economics*, the idea of central bank independence (CBI) also turns forty years old in 2017. The guiding principle of modern central banking, Kydland and Prescott (1977) are widely acknowledged as the forefathers of central bank independence, offering a game theoretic approach to time-inconsistency that serves as the intellectual basis for CBI. Their original work started a long line of research, refined by Rogoff (1985) and brought into mainstream macroeconomics by Cukierman (1992), which is now a staple of all policy and most theoretical discussions regarding central banking. Indeed, the idea of central bank independence, of an institutional arrangement that insulates monetary authorities from political pressures, is now uniformly accepted as international best practice. This belief on the optimal institutional arrangement for monetary policy is backed up by a plethora of empirical evidence regarding economic outcomes, with papers relating CBI consistently to better inflationary outcomes (but with no consistent trend observed between CBI and growth, as shown in Alesina and Summers 1993).

However, major theoretical flaws in the conceptualization of central bank independence have been exposed over the past two decades, flaws that have not yet begun to crack the policy consensus but which have the capability to at least shake its economic foundations. In the first instance, the development of globalization, creating interlinkages and dependencies across economies, has also led to a globalization of policy, undercutting the idea of "independence." As Simmons and Elkins (2004:171) note, no longer is economic policymaking driven predominantly by domestic concerns, as "policy transitions are influenced by international economic competition as well as the policies of a country's sociocultural peers." Policy sovereignty is also restricted by movements of capital across borders, one leg of the "open-economy trilemma" (Obstfeld and Taylor 1998), making domestic economic policy more difficult to operate across a broad set of goals.

In the monetary policy realm, this globalization has become highly pronounced, with developed country central banks setting policy in close harmonization with each other (and emerging markets often following their lead so as to not be left behind). The ostensible reason for this coordination is out of a necessity to avoid macroeconomic imbalances across major actors in global markets; during recent events such as the September 11th terrorist attacks in the US and global financial crisis, concerted coordination was seen as a way to avoid major systemic disruption (Scotti 2006). This explicit policy coordination in times of crisis is reinforced by informal mechanisms at other times, such as personal relationships, conferences, and organizations such as the Bank for International Settlements, all of which help to forge an *esprit de corps* amongst central bankers (Irwin 2013). As Benoît Cœuré (2015), a member of the Executive Board of the European Central Bank, noted recently, such interaction is desirable, as "central banks need to be engaged in a constant dialogue so as to remain ready for rapid coordinated action in exceptional circumstances." And while regular policy coordination amongst banks is not yet perfectly aligned and may occur with a lag, there is no doubt that clustering of policy has massively increased in tandem with financial and trade globalization.

But if economic harmonization such as this is already occurring is the case, what does this mean for CBI? That is, how can there be true central bank independence when the world's major central banks are pursuing exactly the same policy? What then exactly are central banks independent *from*? As Forder (1998:310) noted, "whenever an institutional proposal - such as central bank independence - is proposed as a solution to a time consistency problem, there is the danger that the problem is simply relocated, or displaced." Having (theoretically) removed political pressure in the setting of monetary policy, has it been replaced by peer pressure?

This takes us directly to the second issue regarding central bank independence, as mainstream thought about CBI, and in particular the economics literature, has studiously avoided insights from new institutional economics (NIE) or new institutionalism from sociology and political science in understanding where CBI may be effective and where it may not. In its current form, the CBI literature has removed a focus on the normative reason for a central bank's existence ("*why* it should exist") and instead concentrated on "*what* function it should perform" (Giannini 1995:217) – or, more accurately given the CBI literature, on how to *avoid* actions that it would have the power to implement. Indeed, as Forder (1998) rightly noted, central bank independence is an *institutional* solution to an *incentives* issue, with the basis of CBI research focusing on how independence removes the a banker's incentive to inflate the money supply in support of political ends (the time-inconsistency problem). But the focus on organization rather than institutional goals has ignored the reality of the central bank as a monetary institution embedded within a broader system of economic and political institutions. This approach also blinds policymakers to the idea that alternative monetary institutional arrangements may be possible, even necessary, in a framework of institutional complexity. It may have also foreclosed even more radical solutions, such as no (planned or designed) monetary arrangements at all. But without taking an institutionalist lens to the problem, the CBI debate has remained facile and devoid of critical analysis.

The purpose of this paper is thus to examine the synchronization of central banks worldwide over the past twenty years, drawing on new institutional economics and complexity theory, and reopen the debate on central bank independence. In particular, I argue that the idea of central bank independence continues to neglect the complex interdependencies of the global monetary and financial system. Moreover, examining the actual performance of major central banks over the past four decades, I conclude that the concept of central bank independence as an institutional arrangement fails under the reality of globalization, focusing as it does solely on national systems. In light of this reality, I conclude that new and possibly radical institutional alternatives for monetary policy need to be explored to achieve the same ends that independence promised.

II. Central Bank Independence: Genesis of a Concept

The original central bank independence literature approached the problem of inflation, a macroeconomic phenomenon, by using microeconomic foundations and game theory, in particular regarding incentives, to fashion an institutional solution. The earliest research on the conduct of monetary policy focused on "dynamic inconsistency theories of inflation" (Kydland and Prescott 1977, Barro and Gordon 1983), where policymakers in charge of monetary policy would be enticed by a theoretical short-term boost to employment from inflation. Indeed, this incentive would be much higher than the consequences of not inflating for a politician, who could push off the negative political (and especially economic) consequences of inflation to another day. Moreover, the "benefits" of inflation would accrue immediately for politicians who were already in power, as the sudden appearance of money from the skies would increase stock prices and push other asset prices higher (see Nordhaus 1975).

Given such an overriding temptation for a policymaker to artificially inflate money supplies, there was little doubt that weak-willed politicians would easily go this route. The issue, however, as outlined in the early literature, was that this incentive for inflation would be understood and anticipated by markets, and thus inflationary expectations would already be built into the system. In fact, if there were perfect knowledge on the size and scope of a policymaker's intent, the theoretical boost from inflation would never materialize, but the inflation continuously would. As Cukierman (2006:3) warned, under such a situation, "employment [would] remain at its natural level but monetary policy is subject to a suboptimal inflationary bias." Even with imperfect knowledge, as in the world we live in, the understanding of policymaker incentives would result in high levels of inflation for little gain.

To fight against such an eventuality, an economy had to either change the incentives for a central banker to create inflation or, more dramatically, remove discretionary the power entirely from the hands of policymakers. The "rules versus discretion" debate approached this issue from the first vantage point, describing how altering the incentives of monetary authorities could be done through the creation of "binding" monetary rules. Barro and Gordon (1983) designed a model that showed how monetary rules would provide a lower inflation rate than discretion, focusing on the external constraints to the individual policymaker. Going in a different direction, Rogoff (1985) proposed a solution that is a familiar one for any earnest student of public administration: if only we could appoint a better policymaker who would be more conservative than society in his preferences for inflation! In Rogoff's model, the intrinsic motivation of the banker was able to overcome the incentives provided by an institutional system that rewarded inflation with little punishment.

These workarounds appeared to address the time inconsistency problem, but even the authors of these papers acknowledged that their solutions left some bias towards inflation. More importantly, the notable conclusion of much of the work on policy rules, no matter how well-crafted they were, was that policymakers could always fall prey to the political process (and their own incentives that derived from that process). Even mainstream economists pointed out this reality, as Alesina and Grilli (1992) in their exposition on the "median voter," pointed out that the populace could *ex post* wipe out gains of the conservative banker by replacing him with someone more amenable to inflationary temptations.

Thus, with people fallible and political pressures omnipresent, it was more important to shift away from the personalities running the monetary system and focus instead on the design of the institutions themselves. The main papers that took up this new emphasis on the central bank and its independence from government were Grilli *et al.* (1991), Eijffinger and Schaling (1993), and Cukierman (1992), which posited that *de jure* independence led to more beneficial macroeconomic outcomes. In particular, they conjectured, an independent central bank would not have the pressure or incentive to deliver temporary boosts to the economy via inflation, nor would it have the incentive to inflate away debt burdens (having no control over budgetary matters). A single-minded bank, independent from other levers of power, would also have a statutory mandate to avoid deficit financing via money creation, a situation that would theoretically bring about more disciplined fiscal policy.

The independence granted to the institution of the central bank that was required to generate these outcomes was further divided into "goal independence" and "instrument independence." As Fischer (1996:202), explained it, "a central bank that is given control over the levers of monetary policy and allowed to use them has *instrument independence;* a central bank that sets its own policy goals has *goal independence.*" Grilli *et al.* (1991) showed this divide more explicitly in their examination of central bank legislation, noting the different attributes of each facet of independence:

- *Political* (goal) *independence* – "ability of the central bank to select its policy objectives without influence from the government," including:
    - o "whether or not its governor and the board are appointed by the government,

    - the length of their appointments,
    - whether government representatives sit on the board of the bank,
    - whether government approval for monetary policy decisions is required, and
    - whether the "price stability" objective is explicitly and prominently part of the central bank statute"
- *Economic* (instrument) *independence* – "ability to use instruments of monetary policy without restrictions."

This distinction on types of independence has also been fleshed out in the literature in regards to the desirability of one form of independence *vis a vis* the other, with some researchers opining that a bank should have instrument independence alone (Fischer 1996, Siklos 2008) while others pushing for full goal independence as well (Baltensperger *et al.* 2007, Romer and Romer 2007). In reality, as Baltensperger *et al.* (2007) show, most "independent" central banks today have full instrument independence and some version of goal independence, where the "goal" is generally agreed upon but vague (as in the amendment to the Federal Reserve Act of 1977), allowing banks some leeway to define what "price stability" actually means (Martin 2015). In either case, the benefit of an independent central bank was that it would allow for specialists to work on the intricate details of monetary policy exclusively, rather than generalists at a Treasury or Finance Ministry who may have differing objectives.

This institutional reform of monetary policy was soon adopted throughout developed and, eventually, emerging economies, as it offered a neat theoretical explanation and an easy administrative fix to avoid inflationary pressures. A wealth of empirical evidence was also marshalled in favor of independence, with papers such as Grilli *et al.* (1991), Cukierman *et al.* (1992), De Haan, and Van 't Hag (1995), Brumm (2002), and countless others finding a strong negative relationship between inflation and central bank independence.[1] With central bank independence established as the leading institutional arrangement for monetary policy, not even hiccups such as the global financial crisis could cause a re-evaluation of the tenets behind CBI (Quiggin 2009 is a notable exception). Indeed, the onset of the crisis and its aftermath only strengthened the resolve of bankers to maintain their independence and aggrandize more policy power, with unconventional monetary policy, expanded mandates, and forays into financial regulation (Cukierman 2013). Even though the reasoning behind independence has strayed far afield from the original theoretical basis of a single-minded banker, the momentum propelling CBI has been maintained or even increased since the crisis.

III. A Critique of CBI (Part I): How Can We Talk about Institutions without Mentioning Institutions?

The mainstream consensus in favor of central bank independence has not been without its fair share of detractors, mainly, but not exclusively, coming from various heterodox stripes of economics. Mainstream critiques have been leveled at CBI from a neoclassical perspective, typified in McCallum (1997), who argues that incentives for a central bank to inflate need not imply that this approach is the only one that will be taken. Relying on rational expectations theories, McCallum argues that expectations will shift based on the central bank's actions, and the central bank will then take these

[1] Interestingly, this same literature found no significant relationship between output and CBI, with one paper (Jordan 1998) actually finding that, while average growth rates were unrelated to legal independence, high degrees of CBI caused real output loss during the 1980s.

expectations into account; as he notes (McCallum 1997:108), “central bankers, like businessmen, are capable of learning from experience and adopting new strategies.”

On the other hand, critiques from the Keynesian side posit that it is central banks that need to be constrained and not the incentives of policymakers, and thus central bank independence would make the banks themselves too powerful. While acknowledging that Keynes himself may have allowed for the idea of central bank independence (Bibow 2002), the original Keynesian conception of independent central banking was to allow for a broad range of specialists to contribute to policy, and thus necessarily a broad range of goals for the central bank to concentrate on (Sawyer 2006). Unfortunately, the current conception of CBI meant that the central bank’s singular mandate against inflation would inexorably become the dominant policy in government, drowning out all others; as Arestis and Bain (1995:163) note, “if the constitutionally sanctioned central bank refuses to cooperate and insists on taking into account only its own target, this becomes dominant (whether or not this was intended by the authors of the constitution). The central bank's monetary policy is no longer an instrument of government, but is rather a control upon it.” Thus, the worry for Keynesians, although never explicitly stated as such, is that one institution in the policy-setting realm will become too powerful and impose its preferred policy (monetary stability) as the dominant paradigm, turning independence into supremacy.

Similar to this worry, Post-Keynesian criticisms of CBI have challenged central bank independence on many different grounds, both related to the bank’s goals and in its relation to democratic institutions. In regards to goals, many Post-Keynesians join with Keynesians to decry the removal of monetary discretion and the singular goal of modern central banks on inflation targeting (Le Heron and Carre 2006).[2] Secondly, in regards to accountability, Post-Keynesian (and other) critiques of CBI note that there is usually little accountability for a central bank once it has gone independent, leading to governance by bankers rather than the people (Epstein 1992, Levy 1995). Usually couched in terms of democratic governance or the rightful place that economic policy has in being subordinated to government ends, this criticism notes that CBI leads to a central bank becoming an unelected “fourth branch” of government (Mas 1995); perhaps more troublingly, this divorces the far-ranging consequences of monetary policy from elected representatives, an eventuality that can only be corrected if “central bankers [are] held accountable for all of the ramifications of their policy, not just the inflation rate” Levy (1995:191). Central bankers, conscious of this possible threat to their independence, have instituted various means to demonstrate accountability, including a move towards greater transparency (Baltensperger *et al.* 2007, Crowe and Meade 2008). But as Mas (1995) notes, the only way to institute true accountability is to threaten the banks’ independence, meaning a logical Mobius strip of where independence ends and begins (if a central bank can have its independence threatened was it ever truly independent?).

These criticisms, while potentially valid in the aggregate, dance around the most damning critique of CBI and how to properly analyze it. As noted above, central bank independence is suggested as an *institutional* solution to an *incentives* issue; unfortunately, the vast majority of literature examining CBI comes at this issue from the incentives side and ignores the institutional genesis of the bank itself, how it functions with other political and economic institutions, and how CBI itself acts (or doesn’t) as an institutional mechanism. In short, the insights of new institutional economics (including, one might argue, Austrian and mainstream public choice economics) are assumed away, with CBI an institutional

[2] Wray (2007) offers another Post-Keyensian approach, based on Keynes’ admonition to “euthanise the rentiers,” by setting the overnight interest rate to zero. This policy would of course be an extreme rule-based regime, showing that there is some diversity of thought in Post-Keynesian critiques of CBI.

"black box" in which incentives go in and then are magically transformed coming out. But how can we talk about an institutional solution when we don't even mention institutions?

This is not to say that the recognition of CBI as an institutional solution has been neglected in the mainstream literature. In reality, many of the papers showing empirical evidence of CBI's efficacy or the theoretical models that presume to solve time-inconsistency make ample reference to CBI as an institutional solution. Romer and Romer (1997) even devote a chapter in an NBER Conference Proceeding (as mainstream as one can get) to issue of "institutions for monetary stability;" acknowledging the institutional basis of CBI, they back into the solution of central bank independence by focusing on three specific issues in monetary policy, including time inconsistency and three different instances of asymmetric or non-existent information. They conclude that "the institutions of monetary policy should be designed to give control over policy to specialists with discretion about both the ultimate goals of policy and the specifics of policy operations" in order to "account for the facts that knowledge is likely to continue growing, that policymakers' skills are heterogeneous, and that elected leaders' and voters' knowledge is likely to be especially limited" (Romer and Romer 1997:327).

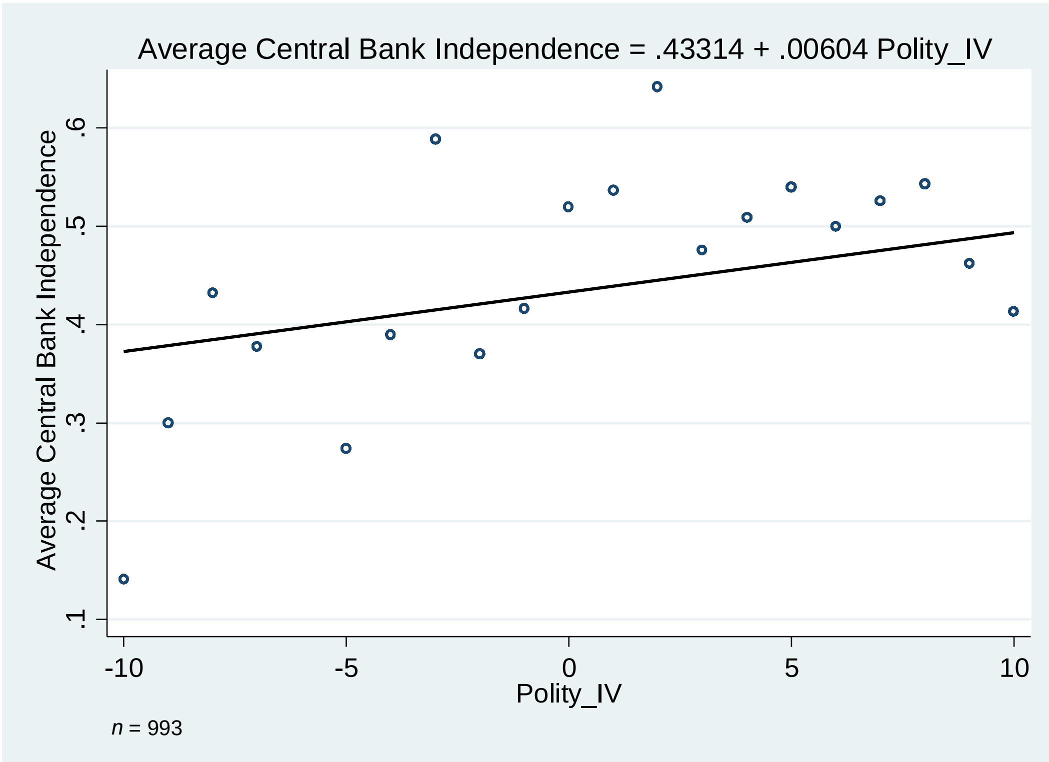
However, even this nod to the institutional development of a monetary authority suffers from an obsession on possible macroeconomic outcomes, removing the crucial focus on what a monetary policy institution should do – and then reasoning from this base principle various suppositions on the institution's organization and placement within a complex institutional web – rather than what issues it should overcome. By starting at the point of "problems in achieving optimal monetary policy," the answer has already been assumed as part of the question. Such an approach merely notes that a central bank *is* an institution, but without taking an explicitly institutionalist lens to the bank itself and, by extension, its possible independence, to understand its operations.

This issue thus bedevils the whole concept of CBI, as it erroneously categorizes problems within a country's institutional structure, problems that may create a certain set of incentives, as exogenously-given; if we assume that the incentive to inflate is an exogenously-generated problem, such an issue can then be overcome by the "correct" institutional structure. Unfortunately, the reality of an institutional system is that problems are very rarely exogenously created, and in the case of incentives to inflate or the need to constrain political creatures, the problems are endogenous to the system. Put another way, the political system of democracy actually creates the incentive structure for a pandering central bank (or politician) to inflate the money supply, in order to receive more votes. In an impressive reversal of the Post-Keynesian worry that central banks will subvert democracy, the whole need for an independent central bank is driven by democracy itself, as a polity somehow needs to remove from itself the temptation to inflate prices for evanescent gains. If not for the incentives provided by the specific political institution of democracy or representative government, an independent central bank would not necessarily be "required." Thus, the creation of an independent central bank flows from the overarching political institutions, as can be seen in Figure 1: the countries that have the highest central bank independence on average also are rated as the most "democratic" on the Polity IV scale (a point also made by Bagheri and Habibi 1998).[3] Seen in this light, attempting to analyze the effects of central bank

[3] Interestingly, as can be faintly seen in Figure 1, re-running the same basic regression including a quadratic term gives a Kuznets Curve relationship between central bank independence and democracy. This adds credibility to the argument, developed further below, that the most highly democratic societies likely have pulled back on full-throttle central bank independence simply because they prefer inflationary bursts/macroeconomic imbalance in the here and now.

independence without taking into account the bank's predetermined (and endogenous) political framework becomes an exercise fraught with its own informational asymmetries.

Figure 1 - Levels of Democracy versus Central Bank Independence



Source: Author's calculations based on data from Polity IV and Dincer and Eichengreen (2014)

Recognizing the reason *why* an independent central bank has been created may focus specifically on its genesis, but such an institutional analysis can also help understand how such an institution, once created, then behaves within the same democratic system that gave it life. As Giannini (1995:217) notes, "it is… questionable whether one could deal with complex institutions--as central banks undeniably are--without taking into account their evolutionary logic," a criticism which cuts to the core of the issues that neoclassicals, Keynesians, and Post-Keynesians have with CBI. A key example of this ignorance of evolutionary logic can be seen in the commonly leveled charge against CBI noted above, in that it supposedly subverts the very democratic system that it came out of (Levy 1995). The most obvious problem with this argument is that it not only misunderstands the institution of the central bank but it misunderstands the political institutions of democracy; indeed, there is no concrete definition of what "democracy" means in these critiques, nor is there a recognition that there are varying degrees of democracy, different democratic political institutions, and even different democratic outcomes (i.e. a polity can vote *en masse* for an outcome that Post-Keynesians would find abhorrent).

Leaving this aside for a moment, such an argument also fails to understand the fact that we have just honed in on, that is the genesis of central bank independence as a democratic institution and facing the same incentives as the democracy it emerged from. As Mas (1995:1639) pointed out, "a country's inflation record and central bank institutional arrangement are both shaped in part by political forces bearing on government." The reality is that central banks, no matter how "independent" they are designed, are influenced by their environment and influence the institutions around them. One need only look at the personalities of central bankers to understand that they too are politicians, and they love adoration and acceptance as much as any President or Finance Minister (Alan Greenspan and his tarnished "rock star" status is a prime example of this). Their statutory goals may be different but their incentives remain the same. This reality is directly *contra* to Issing's (2013) assertion that an independent central bank is the guarantor of sound money, and if the state were to collapse, such an emphasis would be lost in anarchy; if the system were to collapse, the predilection for sound money would be the same as within the system, only the political institutions implementing this preference would no longer exist.

This reality turns the Post-Keynesian argument on its head: if a central bank is but an institutional expression of a prevailing institution system that is somehow supposed to act counter to that system, where then is its actual "independence?" That is, even though they may be "independent" from government, at no point is the central bank ever wholly insulated from politics, much less from market and societal institutions. In particular, as a political institution, staffed by political appointees, and having chosen a political approach to overcome economic problems (likely politically-determined), central banks are both political and economic institutions, nested within one set of political institutions (government), nested within another set of economic institutions (the institutions of the marketplace), nested within the meta-institution of society and then even further embedded into an international system. McCallum (1997:107) even makes this point in a neoclassical framework, stating that a "disagreement with the standard literature involves the notion that it is useful to conduct analysis, involving institutional design, under the presumption that central banks can have preferences that are systematically different from society's." Mas (1995) takes such an argument to its logical conclusion, noting that CBI itself is needed least where it is most likely to succeed, given that the conditions for low inflation and/or fiscal rectitude are already present. Put another way, the central bank as an institution already reflects the institutional make-up of a society, which is predisposed to better economic outcomes and political governance; simply by attempting to separate out the central bank institutionally will not create this incentive structure.

In practice as well, the exigencies of monetary policy have required independent central banks to cede some of their independence in pursuit of political goals. As Quiggin (2009) asserted in a (perhaps-premature) polemic, CBI was effectively neutralized as a result of the global financial crisis, simply because crisis responses by definition required coordination between national treasuries and central bankers. Thus, while bankers may have wanted to be independent, there was no way to get around the need for dealing with Finance Ministries in developing a crisis response. McCallum (1997:106) accurately predicted this reality by noting that "rules cannot plausibly be made contingent on all conceivable types of shocks that might occur… in this case… it can be better to violate an incomplete state-contingent rule and implement the discretionary outcome in those periods in which some shock realization is unusually large and of an unanticipated type." Capie and Wood (2013:379) were more explicit in their assessment, saying that "central bank independence never has survived a crisis and never can."

Given this situation, the political cycle may be the only true determinant of a bank's independence, and thus the current favored solution for ensuring independence focuses on appointing directors of the bank by elected officials for longer-terms, so that electoral cycles are not concurrent with governor cycles (Crowe and Meade 2008). But such "independence" can only last until the next election (Mas 1995), and the more democratic the society, the more the access points to influence central bank policies. Moreover, governments still retain some lever of power over central banks through control of their budgets (Beblavy 2003), a necessity in order to remove the central bank's incentive to inflate in order to maximize its own profits (Mas 1995). In fact, the pervasive nature of a country institutional structure means that central banks will always be constrained and acted upon by government entities and society at large, as the same system that created an independent central bank to rein itself in can take away the independence. As Alesina and Grilli (1992) noted, a conservative central banker can be turned out by a populace that desires a little inflation now and then, and even Walsh's (1995) solution of a contract concluded with the central banker to create an "optimal" level" of inflation can be revised by the populace (or penalties lessened). As Hayo and Voigt (2008:752) correctly noted, "if government has the capacity to create a formally independent central bank, it might also be strong enough to overrule its decisions, simply ignore them, or abolish the independent central bank again." This fact that is hinted at in Figure 1, where the highest levels of democracy correspond to lower CBI on average than countries with lower levels of democracy, meaning that the most democratic countries have likely voted to revoke some independence in favor of more discretionary monetary policy. It appears that, given all of the ways in which the populace can exert an influence on monetary policy, in a clash between democracy (loosely meant to include the manifestation of majority will through elected and representative institutions) and central bank independence, independence will surely lose (Adolph 2013).

IV. A Critique of CBI (II): Independence from What?

This overview of the difficulties that the CBI literature has in understanding the institution of the central bank has laid the groundwork for examining the behavior of an independent central bank within the global financial system, populated by a myriad of central banks. Unfortunately, while the mainstream economics literature has at least acknowledged the institutional nature of a central bank (if in a facile way) domestically, the international institutional environment has been almost completely ignored as a factor in how such a bank would behave. Indeed, the original conception of central bank independence was a way to remove political pressure from a central bank's policy decisions, anticipating that this pressure would come *solely* from incentives generated within a national economy. However, the experience of the past two decades shows conclusively that central banks as an institution are also influenced by their external environment, as well as their peer group, further calling into question just what a bank is supposed to be independent from.

Central banks as an institution have always been intimately connected with the global monetary system, although, prior to the 1980s, the central bank acted "as yet another state agency, without much discretionary decision-making power," with real power wielded by Finance Ministers (Polillo and Guillén 2005:1767). But the rise of central bank independence in the late 20th century gave banks the power to determine monetary policy autonomously, with the banks of the largest developed countries gaining the ability to tremendously impact world monetary and financial conditions. This shift of power was amplified by a series of concurrent international policy moves that allowed these newly-defined institutions to influence, and be influenced by, global forces. Indeed, the rise in globalization of trade and finance, including the dismantling of capital controls and expansion of international financial markets, created both opportunities and obstacles for newly-independent central banks. On the one hand, globalization "reinforced the quest for price stability and raised the importance of CBI as a signal of macroeconomic nominal responsibility to domestic and international investors" (Cukierman 2008:726). This point was echoed for emerging markets by Wagner (2005:627), who noted that central bank independence became crucial for governments "in order to be able to sell bonds on the international financial markets, at least at a 'reasonable' price." Diffusion of information across newly-opened networks also helped to forge the consensus on central bank independence, with ample evidence that central banks have been consciously modeling their actions and institutional imperatives on others; the revision of the law of the Bank of Japan in the late 1990s, which attempted to adopt the "western" central bank model wholesale, is such an example (but unfortunately, as Dwyer (2004) notes, this move did not translate through to greater credibility). The concomitant rise in power of a supra-national institution, the International Monetary Fund (IMF), also gave a push to the globalization of CBI policies, as the IMF "increasingly attached certain conditions, including an independent central bank, to its lending agreements" (Polillo and Guillén 2005:1774).

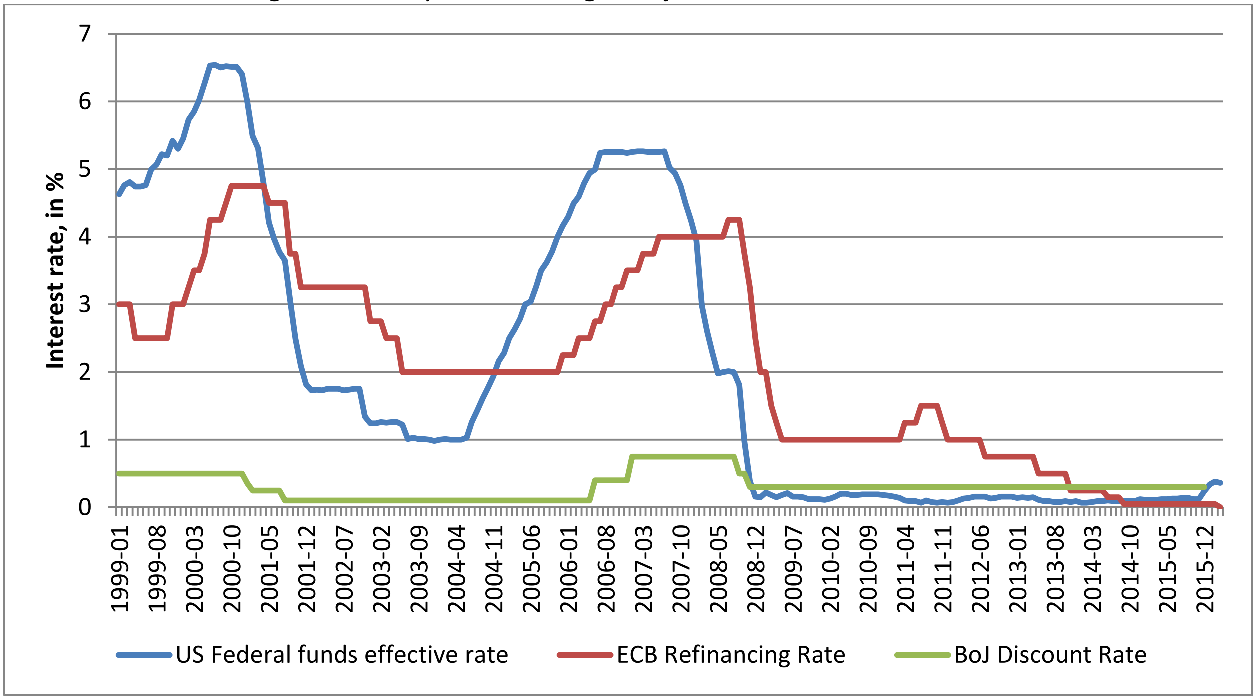
On the other hand, expanding economic integration also placed restraints on the policy sovereignty that a bank could exercise; this was seen most notably in the "open economy trilemma" noted by Obstfeld and Taylor (1998) and Rodrik (2000), where open financial markets, fixed exchange rates, and monetary autonomy could not exist together, forcing a government to choose only two of the three. Polillo and Guillén (2005) expand on this point, noting that the expansion of trade and foreign direct investment itself created dependencies that reduced the room for governments to maneuver (perhaps encapsulated in US political advisor James Carville's famous statement that, if reincarnation were a reality, he "would like to come back as the bond market. You can intimidate everybody"). In short, while a central bank may have been (theoretically) insulated from political pressure at home, it still had limited instrument independence to operate in its policy space due to the exigencies of international macroeconomics.

Although the policy trilemma has been shown, in the post-global financial crisis world, to be more of an extreme bounds case rather than a hard-and-fast rule (Klein and Shambaugh 2015), an additional constraint to central banks in their overall independence has emerged. In particular, the globalization of trade and finance has also led to a further consequence for central banks that has thus far been relatively unexplored, and that is the globalization of policy. While a large body of evidence explores the needs for coordination between central banks and other domestic political institutions, there is relatively little work describing the coordination amongst central banks internationally. But given the large ramifications that conduct of monetary policy by the Federal Reserve, the ECB, or the Bank of Japan have on each other's economies via trade and investment channels, as central banks have gotten more independent from their home governments, they have become more dependent on each other. Indeed, independent central banks in different countries have started to converge with their policies and policy goals, coordinating and harmonizing with each other in an *ad hoc* but growingly regular manner (Cœuré 2015).

Regular coordination to prevent monetary imbalances has accelerated in the last fifteen years (Taylor 2013), and harmonization of central bank policy became more pronounced with the advent of the Euro in 1999, itself a currency forged by harmonizing many disparate monetary policies under the aegis of one supra-national central bank. As Figure 2 shows, the trend in the modern central bank's most important policy tool, the interest rate mechanism, has all but followed the same track for the ECB and the US Federal Reserve since 1999, with the Bank of Japan following the same trend but at a much lower level. In fact, a simple Pearson correlation between the rates utilized by the Fed and the ECB over this timeframe gives a result of 0.79, an incredibly strong positive correlation (which is significant well beyond the 1% level). At the time that central banks were assuming their highest levels of legal independence from domestic political pressure, they were suddenly beginning to move in lockstep with their peers, with the Fed often taking the lead.

Nowhere was this more apparent than during the global financial crisis. Papadia (2013) expertly detailed the unprecedented coordination of the Fed and the ECB, the Swiss National Bank, the Bank of England and the Bank of Japan in 2007-2009 in setting up a swap mechanism to guarantee funding. This mechanism allowed central banks to issue liquidity in currencies different from their own, creating a global network with reciprocal privileges. As Papadia (2013) correctly notes, even more so than the similar small-scale mechanism set up after the September 11th attacks, the swap network instituted during the crisis represented the first instance of "global monetary policy."

Figure 2 - Policy Rates amongst Major Central Banks, 1999-2016



Source: US Federal Reserve, European Central Bank

What can explain this move towards coordination amongst (ostensibly) independent central banks? There are undoubtedly macroeconomic reasons for such policy harmonization, even beyond a crisis, but there also exist institutional incentives of the central bank which play a large part in explaining this central bank coordination. While globalization may have reinforced central bank independence through "normative network pressures" (Polillo and Guillén 2005:1778), these same network pressures have now moved beyond merely influencing institutional design and are now permeating institutional functions. In reality, the network of central banks and central bankers has created an informal mechanism for coordination, with personal relationships and conferences forging an *esprit de corps* amongst central bankers (Irwin 2013). Even before ascending to the commanding heights of an economy, central bankers could have known each other via their work, given that the vast majority of central bankers come from a background within their own government, the financial sector, or as an economist (Adolph 2013). Additional formal organizations such as the Bank for International Settlements, meeting every second month and fostering "a collegial spirit among the members" while remaining patently "non-transparent" (Bayne 2008:11), reinforce these interactions, comprising a "transnational governance network" (Marcussen 2007). There is also likely an element of competition here that has also facilitated the convergence of policies, as Guler *et al.* (2012) noted in the context of trade policy, competitors are likely to adopt similar patterns of behavior so as not to lose ground to others, a reality that could be motivating policy as much as a worry of imbalances.

The peer group pressure and "echo chamber" of this network is designed to shape consensus, and has created an atmosphere of policy emulation similar to that seen in the run-up to the Euro across Europe

(McNamara 1998). And the combination of peer pressure and (perceived) macroeconomic imperatives have also been driving common policies since the global monetary crisis, namely the branching out of central banks beyond inflation targeting and into new areas of responsibility. The tools utilized have been constrained by each bank's institutional characteristics and the constraints of the domestic political institutional environment (Lenza *et al.* 2010), but the goals have been the same and the timing and utilization of these tools has also been converging. Whether it is the desire to target growth, employment, or asset prices in addition to inflation, or whether it is the rush to "quantitative easing" and "unconventional monetary policy," central banks around the world have been working together to forge a new consensus.

The outcome that this has created is quite ironic, as independent central banks are even less constrained in preventing inflation, undertaking precisely the type of profligate policies that CBI was intended to stop. In this sense, central banks appear to have slipped the bonds of their anti-inflationary shackles by forging common cause across borders, aggrandizing power to themselves to create inflation if necessary and removing this power from national governments. This reality would seem to reinvigorate the charge that central banks have become too powerful and that they have the capability to run roughshod over democracy, creating a spontaneous transnational order memorably described by Slaughter (2001) as "agencies on the loose." As Bibow (2013) pointed out, "ECB policymakers are always quick to denounce any commentary made by politicians on monetary policy as an attack on their independence while happily considering it to be part of the bank's monetary policy mandate to notoriously call for budgetary discipline, wage restraint, and structural reform." But, as noted above, central banks, as institutions, are inextricably linked with the polity that they emerged from. Even in an environment where the institutional incentives faced by central banks are skewed to working with their peer group internationally rather than with their fellow institutions in government, the central bank cannot escape the limitations that accompany being part of a domestic political structure.

Indeed, the dirty secret accompanying the continued aggrandizement of power that central banks have taken on after the crisis, including an expansion of policy goals (and policy independence), is that such an approach has been generally approved by the public. Put another way, central banks have expanded their remit to look at growth, unemployment, or asset prices in a manner that has received implicit (and in some cases, explicit) validation through the democratic process. US President Barack Obama won re-election and was able to install Janet Yellen, an ardent champion of central bank power, at the Federal Reserve, and even in the midst of the Eurozone crisis, protestors did not target the ECB but instead turned their ire on national governments that attempted to implement "austerity." As James (2010: 25) notes, "After the financial crisis we have become wiser. Making monetary policy is more complex. But as a result it is also more politicized." Following on this point, Adolph (2013) shows that partisan influence on monetary policy is still alive and well, while Ennser-Jedenastik (2014) demonstrates empirically how the ideology of the party in power continues to matter for who is being appointed as a central bank governor. Thus, the political institutions of democracy have been able to circumvent the institutional arrangement that was designed to keep the temptation of inflation at bay, controlling the parties that appoint central bank governors and keeping the central bank searching for ways out of the mess that polities have been clamoring for. In this sense, even globalization of policy and central banks moving in lockstep is not a manifestation of central bank independence, but a convergence of democratic preferences across countries. One institution, the central bank, cannot defeat such a globalization.

V. Conclusions

This paper has examined the fortieth anniversary of central bank independence by challenging it to own up to its provenance. Despite critiques of CBI from both utilitarian and policy perspectives proliferating in the literature, analysis of central bank independence from an institutional angle in economics has (until now) not been made. In particular, I have examined the idea of independence itself, and shown how central bank independence is impossible given the political institutional structure from which the central bank has emerged. Moreover, given the imperatives of globalization and the pressures that accrue to banks from their placement in an international institutional system, independence of policy is even further constrained. If an institution's policies are contingent on what other political institutions are doing, either domestically or internationally, it is difficult to say that this institution is truly independent, no matter how vociferously such independence is defended at the next conference.

However, despite pointing out many of the problems inherent in the Keynesian worry of an independent central bank becoming too powerful, there are some valid concerns that a central bank can upset the institutional balance. Previous research has ignored the central bank as an institution unto itself, focusing on incentives on the conduct of monetary policy. But as a political institution, it also has its own incentives in terms of staffing, budget, and power within the system, in addition to its own preferences regarding inflation. The true danger of "independent" central banking is if the bank begins to aggregate to itself many more policy goals beyond inflation targeting, including reserving the right to target output, unemployment, and even asset prices. Thus, an independent central bank might actually transfer duties from other political institutions to itself as part of a broader mandate (Clark and Arel-Bundock (2013) have already shown evidence of a partisan bias in monetary policy in the United States). There is no guarantee that such an outcome would be a subversion of democracy, for, as noted above, there is always a constituency for perpetual gain and never any pain. But the real threat may come from how such a transfer of responsibilities alters the political system and how other institutions then react. Such a political struggle could then have ramifications for monetary policy.

Given this reality, the economics profession may need to look at other institutional arrangements to understand how to divorce political processes from monetary policy (if such an arrangement is even desirable). Indeed, the only true independence for a monetary institution from the political process, and the only insulation for a polity from an overbearing central bank, would be to remove the oversight of money from political institutions entirely. Introducing competition into the money system, utilizing competing free monies issued by private institutions, would form a more powerful barrier to politics and remove all incentives for inflation (King 1983). While such a solution may increase volatility in the short-run, it also decisively removes time-consistency issues and can deal with the boom-bust policies inherent in the modern central banking world (Smith and Weber 1999). But the likelihood of such a solution will also be predicated on the prevailing institutional order, and in particular the acquiescence of political institutions. Such an eventuality is highly unlikely given the experience of central bank independence, which held sway for only a short period and gave way to political imperatives once a crisis erupted. Without a political consensus on the desirability of a truly independent monetary policy, any institutional arrangement under this political system is thus doomed to subservience.

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