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On the Political Economy of Monetary Policy

Saul Keifman

Abstract

Little progress has been made so far in understanding the causes of Argentina's worst socio-economic crisis. This paper analyzes the intellectual roots of Argentine convertibility as a small contribution to this necessary and pending discussion. The country implemented a radical monetary reform, technically known as a currency board, although its popular name was "Convertibility", allegedly launched to impose fiscal discipline and gain credibility. This paper argues that it is very important to understand that Argentina's problems with the currency board stem from major flaws in its underlying theoretical model, which is based on the assumptions of rational expectations and natural rate of unemployment.

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The author is Professor, Department of Economics, University of Buenos Aires, Argentina.

Email: s_keifman@yahoo.com

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On the Political Economy of Monetary Policy¹

Saúl Keifman

“We must not be led aside by a feeling that monetary troubles are due to ‘bad’ economic policy. ... In so doing, we are no better than the Thebans who ascribed the plague to blood-guiltiness.”

John Hicks²

1. The Intellectual Roots of Convertibility

The social costs of the crisis associated with Argentine convertibility are already well known. Tensions accumulated under the currency board led to a macroeconomic implosion, which was worse than the impact of the Great Depression on the Argentine economy in the 1930s. It is only after four years of an impressive economic recovery, that poverty indicators are returning to (the relatively high) pre-collapse levels. However, little progress has been made in understanding the causes of Argentina’s worst socio-economic crisis. This paper analyzes the intellectual roots of Argentine Convertibility as a small contribution to a necessary and pending discussion.

Argentina’s latest crisis was very disturbing for the IMF and the World Bank since the country was considered their “best pupil” in the 1990s. In fact, Argentina went all the way in the implementation of the eo-liberal reform program. Not only did she privatize all state-owned enterprises and the administration of pension funds, liberalize trade and the capital account, adjust the budget, but also implemented a radical

monetary reform, technically known as a currency board, although its popular name was “Convertibility”. The reform was allegedly launched to impose fiscal discipline and gain credibility. A currency board combines the following:

- (1) A fixed exchange rate or peg
- (2) Full convertibility of all foreign exchange transactions
- (3) Elimination of domestic credit creation

As a result of (1) and (2), the Central Bank has to sell or buy as much foreign exchange as is necessary to maintain the peg. The three conditions imply that the monetary base strictly follows the changes in the stock of international reserves. The regime mimics most features of a gold standard. However, while the latter was an international *system* of fixed exchange rates, the Argentine currency board was launched in a world of floating exchange rates.

We believe that it is very important to understand Argentina’s problems with the currency board, since they reveal major flaws in its underlying theoretical model, which is based on the assumptions of rational expectations and natural rate of unemployment. This model underpins not only the currency board, but also a whole family of monetary regimes known as *hard pegs*, which includes the former as well as monetary unions, official dollarization, and the gold standard.

Official dollarization has been in place in Panama for a century, and in recent years has been implemented in Ecuador and El Salvador. In turn, most members of the European Union launched a monetary union a few years ago. Although hard pegs are exchange rate arrangements, its proliferation in the past 16 years was not based on the theory of optimal currency areas, but on arguments grounded on monetary policy credibility gains. The weight of these arguments was important in the discussion preceding the launch of the Euro. For example, Giavazzi and Pagano (1988) claimed that if Italy were to adopt the German Mark, it would be importing credibility from the Bundesbank because the Italian government’s monetary hands would thus, be firmly tied.

The “tie your hands” argument to achieve monetary stability can be traced back to Robert Barro and David Gordon’s influential article (1983), which deals with the problem of dynamic inconsistency and the pros and cons of rules versus discretion in economic policy, which Finn Kydland and Edward Prescott (1977) and Guillermo Calvo (1978) had previously posed. In turn, the “rules versus discretion” literature is part of the tradition led by James Buchanan (Buchanan and Tullock 1993 [1962], Buchanan 1987) who had proposed constitutional constraints on government’s economic policymaking power.

Mutatis mutandi, we believe that our critique of the model behind hard pegs also encompasses some versions of inflation targeting models. Remember that the so-called new exchange rate orthodoxy claims that you have to choose between a clean float or a hard peg. However, there seems to be an important practical difference between hard pegs and inflation targeting. The former are much more rigid than the latter because they are very transparent. The opacity of inflation targeting regimes might make them more flexible in practice.

2. The Barro-Gordon Model

Barro and Gordon’s article (1983) poses a rational expectations and natural rate of unemployment model allegedly consistent with US postwar macroeconomic experience, as well as with perceptions of excessive inflation and countercyclical monetary policy during that period. It introduces two important innovations regarding other similar articles: (a) the rationality of the government; and (b) the identity between the government and private-sector preferences. The non-rationality of the government in a rational expectations model, previously assumed, was not a coherent assumption. What the government’s preferences should be is a far more complex matter. However, if Barro-Gordon’s main result can be derived even when the government and society have the same preferences, we could say that in the opposite case, it should hold *a fortiori*.

The model explains the existence of a “prisoner’s dilemma” between the private sector³ and the government, in monetary policy. The unemployment rate at time t (U_t) differs from the natural rate (U^n) only if realized inflation (Π_t) differs from expected inflation (Π_t^e), according to the well-known short-term Phillips curve (Equation 1).⁴ The government minimizes an objective function (that of society), which is a quadratic function of the inflation rate and of the deviations of the unemployment rate with respect to a goal rate that

is lower than the natural one (Equation 2); to this end, the government takes the private sector inflation expectations as given and chooses the inflation rate. The private sector's inflation expectations are based on its knowledge of the government's objective function. In the rational expectations equilibrium, inflation expectations coincide with the inflation chosen by the government (Π_t^*) and the unemployment rate equals the natural rate. In equilibrium, the inflation rate chosen by the government is positive⁵ (Equation 3).

$$U_t = U^n - \alpha (\Pi_t - \Pi_t^e); \alpha > 0 \quad (1)$$

$$Z_t = a(U_t - kU^n)^2 + b \Pi_t^2; a, b > 0, 0 < k < 1 \quad (2)$$

$$\Pi_t^* = \Pi_t^e = a \alpha (1-k)U^n/b \quad (3)$$

Note that although both the government and the private sector optimize, the outcome is not a social optimum since welfare would be greater with zero inflation. Why is a social optimum not achieved? Let us suppose that the government announced a zero inflation policy. According to Barro and Gordon, the private sector would not find this announcement credible, as the government would be able to increase welfare by cheating the private sector with positive inflation aimed at reducing the unemployment rate. The only way to achieve a social optimum would be by implementing institutions that "tied the hands" of the government in order to grant credibility to its monetary policy rule.

The outcome is paradoxical and shocking: both the government and the private sector want the same thing (they have the same objective function) and they know the same things (they all have rational expectations), but they will not achieve them so long as the government's monetary policy is discretionary. Let us examine the assumptions and circumstances that produce this result in greater detail so as to judge its validity.

3. The Objective Function of the Barro-Gordon Model

(a) The unemployment goal

The crucial assumption behind this paradoxical result is $k < 1$, as can be seen in (3). This is an *ad hoc* assumption and is inconsistent with the hypotheses of identity and rationality of the preferences of the government and society. Why is it that the government and society obtain more welfare from an

unemployment rate that is lower than the natural one? In a natural-rate model, if the unemployment rate is lower than the natural rate, the real wage will be lower than the marginal disutility of work, which is incompatible with the utility maximization assumption. Society would face an inconsistency between its policy preferences and its perception of the world, which is incompatible with rational expectations.

Barro and Gordon offer the following justification. In the absence of public expenditure, society's desired unemployment rate would coincide with the natural rate, and, therefore, $k = 1$. The existence of public expenditure financed with distortionary taxation (e.g., income taxation) raises the natural rate of unemployment; however, the desired unemployment rate increases less, if at all, so that $k < 1$. They go on to affirm that the tendency toward higher public expenditure as verified in the post war period diminished the value of k and consequently increased inflation. The argument is clearly incompatible with the rational expectations hypothesis. It is curious that the government's irrationality implied in the above models that Barro and Gordon proposed to overcome, is reintroduced surreptitiously for the government and the private sector.

At the same time, the argument that higher government expenditures increase the natural rate of unemployment implicitly assumes, besides distortionary taxation, that government expenditures are only money transfers. Ironically, if we applied the production function of Barro's model (1990) of endogenous growth, which stresses the expenditure on public goods, we would get just the opposite result, even with distortionary taxation. In effect, as long as the income tax rate is lower than the elasticity of output with respect to expenditure on public goods, higher expenditure on the former financed by a higher tax rate will produce a fall in the natural rate of unemployment (see Appendix).

(b) The disutility of inflation

According to the objective function in (2), inflation has a social cost. However, to ground such claim on a neutral money model is a veritable challenge. After having stated that economists have not found convincing arguments to explain why inflation is so costly, the authors conjecture that the direct costs of changing prices would easily fit into their model.⁶ They do not seem to be aware that the assumption of costly price change contains two implications that are incompatible with their natural-rate model: (a) imperfect competition (who bears the costs of a change in prices if not the price maker?); and, (b) nominal price rigidity, which is

incompatible with the neutrality of money, as models with near-rational behaviour or menu costs prove.⁷ Once again we encounter an *ad hoc* assumption that is also incompatible with the model into which it is introduced.

(c) The time horizon and the temporal interdependency of decision making

Barro and Gordon assume that the government chooses the inflation rate at any given time so as to minimize the present value of future Z_t s with an infinite horizon. On the other hand, as the unemployment rate at any given time solely depends on the difference between realized inflation and expected inflation at that time (Equation 1), monetary shocks do not persist. This allows the government to solve the problem of choosing the inflation rate at each time without considering its future repercussions. This simplification is by no means naive. We will comment on the consequences in the following section.

4. The Nature of the Game at Stake

Barro and Gordon made an important innovation by modeling the problem of monetary policy as a game. However, the game they chose is only one of several possibilities. If the main result of their paper depended on the kind of game chosen, then, it would not be robust. Barro and Gordon represent the problem of monetary policy as a static simultaneous game so that each period game is solved independently from those of other periods. This choice loads the dice against the zero inflation cooperative solution.

What would happen if the game were dynamic instead of static? Let us suppose that the private sector waits for the government to make a decision on monetary policy before it determines its inflation expectation and acts accordingly in goods and factor markets. In such a case, “cheating” is not possible; monetary policy is transparent and the result must be the cooperative equilibrium. In fact, the almost ongoing and public nature of monetary policy actions enables agents to follow the policy quite accurately and with little delay. The attention drawn by the monetary policy announcements made by the Federal Reserve and other central banks appears to be more consistent with a dynamic game representation.

Let us now consider the temporal interdependency of unemployment and inflation rates. This mere change in Equation 1 substantially reduces the government’s incentive to cheat the public. The government should then counterweigh the short-lived gain of an unemployment rate that is lower than the natural one against

the loss coming from a persistently higher rate of inflation over a very long horizon. In this case, the inflation rate given by (3) would not be the government's choice. If we assume that the government can cheat the public for one period, in which it expects zero inflation and then maintains the initial inflation rate with unemployment equal to the natural rate, the inflation rate chosen will be considerably lower than the one given by (3) but still positive as shown in Equation 4:

$$\alpha(1-k)U^n/(b/r + \alpha^2) \quad (4)$$

where r is the discount rate.

In addition, if convergence to the long-term inflation rate were cyclical because of nominal inertia (due to either contractual rigidity or nominal adjustment costs), the inclusion of the cost of periods with unemployment rates higher than the natural rate and inflation rates higher than the long-term equilibrium rate, could make the sign of the profit coming from "cheating" the public uncertain.

Let us consider now the cost of "cheating". In business and politics, codes of conduct have been established that penalize such acts as cheating. In the case of politics, it is clear that high ranking government officials or representatives that break these codes may not be reappointed or re-elected, respectively. Some constitutions foresee impeachment in the executive branch or allow voters to revoke the terms of office of representatives that have seriously violated codes of conduct. At a less formal level, popular pressure has produced similar results on a number of occasions. With this background, it would make sense to introduce either a constraint on government cheating or, at least, an additional variable in the objective function to represent the cost of cheating. Obviously, this modification could totally reverse Barro and Gordon's result.

The above modification is linked to the treatment of monetary policy as a repeated game. It makes more sense to think of such issues as re-electing a politician or reappointing an official, in terms of repeated games. A well-known result of game theory is that chances of cooperation are far greater in repeated games.⁸ Our comment on the temporal interdependency of inflation and unemployment in the repetitions of the game can also be interpreted in the following way: if we insist on treating the problem of monetary policy as a simultaneous game, it will be inevitable to treat it as a repeated game. Earlier comments, both

on the lower gains from “cheating” in the context of temporal interdependency of the game repetitions and on the costs of cheating are applicable to the case of a repeated game with simple reinterpretations.

5. Countercyclical Monetary Policy

One virtue of the model according to its authors is its consistency with the stylized fact of post war countercyclical monetary policy, that is, monetary expansions that follow increases in unemployment. Barro and Gordon assume that the natural rate of unemployment is affected by independent real shocks (ε_t) with identical zero-mean distributions, of a temporary nature. Thus, the natural rate of unemployment at time t is defined as:

$$U_t^n = \lambda U_{t-1}^n + (1 - \lambda)\underline{U}^n + \varepsilon_t, \quad 0 < \lambda < 1 \quad (5)$$

where \underline{U}^n , the mean long-term natural rate of unemployment is a constant. The “explanation” of the countercyclical monetary policy is based on the assumption that $k < 1$. Hence, from (3) we can see that if U_t^n fluctuates cyclically, Π_t^* will do so countercyclically. Once again, we can question the rationality of the government’s reaction (driven by the assumption $k < 1$). Another problem with this explanation is its dependence on the assumption that real shocks are short-lived. However, technological shocks, the cornerstone of real-business cycle theory, appear to be rather permanent than temporary. Besides, the empirical relevance of real-business cycle theory has been seriously contested.⁹ It would seem easier to explain the countercyclical nature of monetary policy by the existence of short-lived monetary disturbances.

6. Rules, Discretion, and Monetary Institutions

(a) From announced rules to institutional reforms

Some years ago, Milton Friedman proposed a monetary policy rule based on a constant growth rate of money supply. His proposal assumed a natural unemployment rate and adaptive expectations. Friedman’s classic argument against discretionary monetary policy was not based on the short-term neutrality of money (in which, as a good quantity theorist, he did not believe), but on the difficulty of managing it correctly, given the uncertainty he ascribed to its effects. Since this uncertainty is a matter of judgment,

Friedman's underlying model could also substantiate a stabilizing policy rule with fluctuating money supply growth rates based on, for example, changes in the velocity of money.

Kydland and Prescott (1977) reinforce Friedman's argument favouring constant monetary growth rules with a natural rate model and rational expectations. They show that a policy rule is better than a discretionary policy which optimizes at each period. Barro and Gordon (1983) use similar arguments, but introduce a key innovation. They argue that adopting rules can be problematic for their lack of credibility when there are no binding legal mechanisms to enforce them. Instead, they propose fundamental reforms in monetary institutions to establish strict rules such as the gold standard or a monetary constitution. Consequently, the authors state that abandoning the gold standard and fixed exchange rates was a mistake. They conjecture that the persistence of the *status quo* despite its supposed inferiority to a hard peg can be explained by the costs associated with institutional changes.

Curiously, the authors feel no obligation to substantiate their belief about the abandonment of the gold standard. Given the high cost of institutional changes, how would Barro and Gordon model's explain such a mistake? The collapse of the gold standard occurred during the Great Depression, a historic event that was incompatible with a model based on the assumptions of rational expectations, natural rate of unemployment, and real-business cycles (Bernanke and Parkinson, 1991). Perhaps, the authors' silence is deliberate.

(b) The gold standard and the Great Depression: a significant omission

As Barry Eichengreen (1985) points out, the appeal of the gold standard for those favouring policy rules versus discretion is based on a mythical view of the former. Table 1, based on Robert Triffin (1968), refutes the myth of price stability under the gold standard. Rather than price stability, we see price level reversibility given by a succession of deflationary and inflationary periods.

Period	United States	Great Britain	Germany	France	Italy
1814-1849		-49			
1849-1872		39			
1872-1896	-50	-39	-36	-43	
1896-1913	49	32	41	41	35

Note: Great Britain had a *de facto* gold standard from 1717, and a *de jure* gold standard from 1821; Germany, the United States, and France joined the gold standard in the 1870s; and Italy at the end of the 19th century.¹⁰

Source: Triffin (1968, Pp. 32.)

Michael Bordo (1981) compared the rates of inflation, unemployment, and real income growth between the periods 1880-1913 (when the gold standard enjoyed its greatest acceptance worldwide) and the Post-World War II period for Great Britain and the United States. Even though the average rates of variation of wholesale prices were more moderate under the gold standard, this was the result of averaging two decades of deflation followed by two decades of inflation (as Table 1 suggests). On the other hand, the comparison between *per capita* income growth and the unemployment levels shows that the postwar monetary institutions were better. Bordo (1981) also compared the variability of inflation and real-income growth for the same periods in the two countries. The standard deviation of prices was somewhat lower in Great Britain and somewhat higher in the United States under the gold standard, than during the postwar period. However, real-income growth rates were more variable under the gold standard in both countries.

Contemporary economic historians have found a close link between the Great Depression and the gold standard. According to Peter Temin (1989, Pp. 33) the Great Depression was triggered by tensions over the gold standard following World War I (Temin, 1989, Pp. 33). The war altered the patterns of international payments: Great Britain and Germany turned from capital exporters to importers, while the United States became the main creditor nation after having been a major debtor nation just before the war. Yet, when the gold standard (suspended during the war) was restored in the second half of the 1920s, all these nations returned to their pre-war parities.

The main problem with the gold standard was the asymmetry between deficit and surplus countries, which penalized the former (due to gold outflows) but not the latter. Hence, since deflation was the only adjustment mechanism available to deficit countries, they had to bear the brunt of adjustment costs. Temin (1989) concludes that the deflationary pressure of monetary and fiscal policies in the late 1920s destroyed the gold standard and gave rise to the Great Depression.

Eichengreen (1991) identifies four causal factors of the Great Depression; two international ones and two in connection with the United States itself. The first international factor coincides with Temin's: the international economic tension resulting from the Great War. The second factor is the fragility of the re-established gold standard.¹¹ The crisis was apparently triggered by the contractionary stance that US monetary policy adopted from 1928, in an attempt to fight speculation in the stock exchange, and which ultimately led to the crash. This raised interest rates and stopped lendings abroad, forcing the rest of the world to follow a similar monetary policy and also fall into recession. The propagation of the crisis at the international level was because of the gold standard.

According to Eichengreen (1991), the only way out of the crisis under the gold standard, would have been a coordinated international effort among the world powers to lower the interest rates and pursue fiscal stimulation policies. However, the absence of international cooperation ruled out this solution. Hence, each country was left alone to deal with the crisis, and nations could only begin to recover after they had abandoned the gold standard. Only after they had suspended convertibility and depreciated their currencies could they regain international competitiveness and apply expansionary fiscal and monetary policies.

Eichengreen and Temin's (2003) views have in recent times fully converged; they now attribute the simultaneous fall in production and prices in so many countries in the early 1930s to the deflationary policies of the countries that followed the dictates of the gold standard. The choice of deflation over devaluation was the most important factor in determining the course of the Depression.

7. The Political Economy of Monetary Policy

Why hadn't the gold standard been as fragile in the 1800s as it was during the interwar period, and what made it disappear? Eichengreen (1996, Pp. 4) offers a forceful interpretation that, in addition, has the virtue of re-establishing the link between the economic and the political on an analytical level: "What was

critical for the maintenance of pegged exchange rates... was protection for governments from pressure to trade exchange rate stability for other goals. Under the nineteenth-century gold standard the source of such protection was insulation from domestic politics. Because the right to vote was limited, the common labourers who suffered most from hard times were poorly positioned to object to increases in central banks' interest rates adopted to defend the currency peg. Neither trade unions nor parliamentary labour parties had developed to the point where workers could insist that defence of the exchange rate be tempered by the pursuit of other objectives. The priority attached by *central banks* to defending the pegged exchange rates of the gold standard remained basically unchallenged. Governments were therefore free to take whatever steps were needed to defend their currency pegs." (Op cit, Pp. 4)

According to Jan Tinbergen's theorem of economic policy, in order to achieve n independent economic policy goals you need no less than n independent economic policy instruments. James Meade stated a particular case of the theorem with two policy goals: internal balance (high employment with price stability) and external balance; and two kinds of instruments, expenditure-switching policies and expenditure-reducing policies. In an open-trade world, the exchange rate is the foremost expenditure-switching policy instrument, while monetary and fiscal policies are the main expenditure-managing policy instruments. One consequence of a hard-peg regime is the loss of policy instruments; fiscal policy¹² is addressed to reach either internal or external balance. Policy dilemmas arise, as both goals cannot be achieved.¹³

Eichengreen's interpretation is of paramount importance: subordinating economic policy to achieving external balance was only historically possible under non-democratic political regimes. Karl Polanyi (1957) describes how the triumph of market institutions such as free trade, free capital mobility, and the gold standard (that were not able to ensure internal balance), typical of central countries in the late 1800s, generated a powerful resistance in society which culminated in the victory of democracy and the creation of mixed-economy institutions that combined the welfare state, countercyclical policies, market regulation and the end of the gold standard. Eichengreen (1996) takes up Polanyi's idea to explain why Bretton Woods could not withstand the re-emergence of free capital mobility. It was because under consolidated democracies it was impossible to give up the pursuit of internal balance. The result was the floatation of the principal currencies.

To summarize, we can present the political economy of monetary policy as the Polanyi-Eichengreen triangle. This triangle is a modification of Mundell's. We can only achieve two out of the three objectives

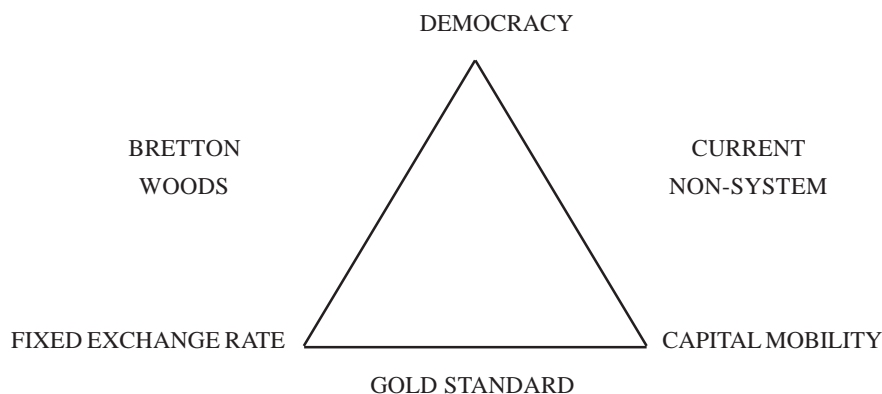
(surely of diverse hierarchy) that appear on the vertices: democracy, a fixed exchange rate and international capital mobility. And there are three policy regime options that appear on the sides of the triangle: the gold standard, Bretton Woods and the current non-system (as labelled by Rodrik, 2003). Although the gold standard mixed fixed exchange rates with free capital mobility, it could not survive democracy. Bretton Woods combined fixed exchange rates (though sporadically adjustable) and democracy with strict restrictions on capital mobility. Over the past 30 years democracies in central countries have abandoned fixed exchange rates within a context of high capital mobility and liberalization of capital flows.

The large majority of the members of the European Union (EU) have recently launched a common currency. The initiative is part of a deep integration process that is directed towards political and economic unification. The challenge of building a multinational state is daunting and has few antecedents. If the triangle is right, the survival of the euro will depend on EU's success at building a democratic European state.

The Argentine experience with the currency board is consistent with the triangle: the social tensions arising from deflationary policies led to a severe political crisis that challenged democracy. The currency board collapsed and the political crisis was resolved democratically; but the legacy will be hard to overcome.

Let us return to Barro and Gordon. Their proposal to go back to hard pegs has a clear political connotation and implication. Beyond the technical arguments, which as we have seen are inadequate, the authors propose a change in the *political* regime, for economic policy is a key component of the *polity*. The outright elimination of discretion they favour is tantamount to leaving one of the basic instruments of economic policy -that is, monetary policy - out of the democratic debate.

THE POLANYI-EICHENGREEN TRIANGLE



Their underlying assumption is that there exists one optimal rule that must be sanctioned by force of law. Who knows what this rule is? Everyone in Barro and Gordon's article knows it and everyone wants it. But, for some reason, perhaps because of an unsubstantiated implementation cost, the rule is not enacted. This is a fantasy of unanimity in vision and objectives. The rule (or lack of it) may not be unique because perceptions of how the world works differ. Besides, there are conflicting objectives given the absence of a representative agent. This is quite clear in the case of monetary and exchange-rate policies. The rational expectations-equilibrium paradigm is not the only one in our profession. Conflicts over objectives are usual; there are debtors and creditors, exporters and importers, and so on. On the other hand, even if unanimity of vision existed, an optimal policy à la Pareto would not always be possible to implement since transfers from winners to losers would be costly. Political institutions in a democracy are the ones to process the plurality of views and interests that generally exist.

The above argument is not intended to dismiss the debate on rules or norms to limit the discretionary power of policymakers. Once we have accepted that there often is a diversity of interests, as much among rulers as among the ruled, the institutional design issues take on greater importance. What we question is the wisdom of a rigid and extreme stance which, while purporting to eliminate the discretionary powers of democratically-elected authorities, actually eliminates any margin of flexibility to accommodate policies to the innovations coming from political coalitions, agents, prevailing views or the national and international economic environment.

Establishing rigid rules could reflect the predominant conditions at the time they are imposed. But if there is one thing we do know, it is that conditions will change in unpredictable ways. The problem with institutional rigidity is that the inherited rule will only be modified when the perceived cost of maintaining it is greater than the cost of institutional change. The Argentine case illustrates the high cost of modifying extremely rigid rules. As Aristotle and Buddha said 2300 and 2500 years ago respectively, virtue lies in the middle road.

8. Concluding Remarks

Economic theory pursues the ideal of science. However, economists are subject to ideological fashion of the day. Some of the worst mistakes that economists have made in the past decade did not come from

what we did not know, but rather from what we knew and forgot or considered obsolete because the “world had changed”. To forget the gold standard lessons when supporting a caricature of it, is an example. The problem, nonetheless, does not lie solely with Argentine economists, as we have attempted to show in this paper.

Barro and Gordon’s article engages in a revealing inversion of a problem that is not new. In 1956 Robert Strotz posed the problem of dynamic inconsistency, but with regard to consumers. The original statement of the problem referred to the impossibility of a consumer to make time-consistent plans when the discount function was not exponential. This led to the discussion of the mechanisms consumers could follow to force themselves to save. Strotz’ time inconsistency explains temporal myopia and self-control problems. As theoretical problems, they were hardly new in the 1950s and could be traced back to Irving Fisher in the early 1900s or his predecessor, John Rae, in the 1800s. Also it must be remembered that social security institutions were designed in response to the high incidence of poverty among the elderly due to their low accumulation of savings, a fact coherent with temporal myopia or lack of self-control.

Barro and Gordon (and Kydland and Prescott before them) shift the problem of time inconsistency from the private sector to the public sector. Now, the government is the agent which cannot fulfill an optimal plan as a result of its discretionary power. Problems that are formally similar can have opposite interpretations and policy implications. For good reason we economists pay particular attention to the formal aspects of our colleagues’ models. But, we tend to accept the authors’ implicit assumptions or interpretations without much discussion, which can make us inadvertent victims of what is ideologically fashionable. Strotz’s original idea has become a fertile field of research in recent years as much from a theoretical as from an empirical perspective, especially in regard to David Laibson’s version of hyperbolic discount functions.

Barro had already developed an ideologically similar inversion with respect to intertemporal preferences. Of the original statement, the so-called Ramsey model only preserves the infinite horizon of the utility-maximization problem. The problem Frank Ramsey had posed from a social planner’s perspective was to determine a society’s optimal savings rate.¹⁴ This was a problem of normative economics. Given the then prevailing view among neoclassical economists about the myopia of consumers, the government was the only authority that could pose an infinite-horizon maximization. The normative character of Ramsey’s

preferences was upheld until the 1960s, when some modifications were incorporated into optimal-growth models, as can be seen, for example, in the literature that Stiglitz and Uzawa compiled.

Nowadays, the so-called Ramsey's preferences are used basically in positive economics, as it is believed to describe household behaviour or, more specifically, household dynasties behaviour. Barro (1974) led this shift in his famous article on Ricardian equivalence. Parents leave bequests to their children keeping in mind the utility of the latter, which, in turn, includes the utility of the grandchildren and so on until we recursively get an infinite horizon.

Note the coherence of the two inversions of inherited models led by Barro: from a vision emphasizing private-sector myopia and the need for a government to reach a social optimum, we move to a vision in which the private sector can achieve social optimum as long as it depends on its own decision-making, but it is being hindered from achieving it by the discretionary powers of a government acting myopically.

Over time, these inversions became widely accepted among economists. However, in retrospect, their acceptance appears to reflect more the ideology of the period than a higher explanatory power of new hypotheses grounded on robust empirical evidence. This is quite curious for a science which considers itself the "Queen" of social sciences.

Appendix

Consider a Cobb-Douglas aggregate production function where variables have their usual meaning; G denotes government expenditures on public goods and τ is the income tax rate. We assume that expenditure on public goods raises labour efficiency and a balanced budget.¹⁵ Then:

$$Y = AK\alpha(GL)^{1-\alpha}; \quad 0 < \alpha < 1, \quad G = \tau Y,$$

By replacing G in the production function and solving for Y we get: $Y = K(\tau L)^{(1-\alpha)/\alpha}$

The marginal product of labour is then: $\partial Y / \partial L = [(1-\alpha)/\alpha](K/L)(\tau L)^{(1-\alpha)/\alpha}$

Under a competitive-market equilibrium the after-tax wage rate is: $W = (1-\tau)[(1-\alpha)/\alpha](K/L)(\tau L)^{(1-\alpha)/\alpha}$

The effect of an increase in τ (and therefore G) on the after-tax wage rate is:

$$\partial W / \partial \tau = -W / (1-\tau) + [(1-\alpha)/\alpha](W/\tau) = W[(1-\alpha)/(\alpha\tau) - 1/(1-\tau)]$$

The sign of $\partial W / \partial \tau$ equals the sign of: $(1-\alpha) - \tau$. The after-tax wage rate of a worker is maximized when τ equals $(1-\alpha)$. Then, as long as the tax rate is less than the elasticity of output with respect to public

goods, its increase will raise the after-tax wage rate, and if the labour supply has a positive slope (an implicit assumption in Barro and Gordon's argument), employment will also increase and the natural unemployment rate will fall.

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Notes

- ¹ This is an updated version of a paper presented at IDEAs' International Workshop on 'Policy Trends, Growth Patterns and Distributional Outcomes under Globalisation' held at the Shanghai Administration Institute, 21-24 August 2006, Shanghai, China.
- ² In Julio H. G. Olivera (1964, Pp. 321).
- ³ Barro and Gordon's article uses the terms society, public and private sector synonymously.
- ⁴ For the sake of simplicity we have omitted the difference between short-term and long-term natural rates proposed by the authors.
- ⁵ Replace (1) in (2), take the derivative of (2) with respect to Π_t , equal this to zero and then solve for $\Pi_t = \Pi_t^e = \Pi_t^*$.
- ⁶ Barro and Gordon (1983, Pp. 594).
- ⁷ See Akerlof and Yellen (1985), and Mankiw (1985).
- ⁸ For example, Kreps (1995), Chapter 14.
- ⁹ See Romer (1996, Pp. 186-189).
- ¹⁰ Eichengreen, 2000, Chapter 2.
- ¹¹ The domestic factors of the Great Depression in the United States were: (a) the greater importance of consumer durables and (b) less flexibility in the labour markets.
- ¹² As a result of a hard peg combined with free capital mobility, monetary authorities would lose control of the money supply.
- ¹³ Foreign borrowing might help to achieve both goals for a while, but it would not be sustainable in the long term.
- ¹⁴ Another important difference is that Ramsey considered it immoral to discount the utility of future generations.
- ¹⁵ Barro (1990).