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**MMT: MODERN MONETARY THEORY OR MAGICAL
MONETARY THINKING? THE EMPIRICAL EVIDENCE**

Emilio Ocampo

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MMT: Modern Monetary Theory or Magical Monetary Thinking?

The Empirical Evidence

Emilio Ocampo¹

Abstract

This article presents a summary of the main theoretical arguments and policy recommendations of Modern Monetary Theory (MMT) and traces back its intellectual origins to the writings on money of Georg F. Knapp and on fiscal policy of Abba P. Lerner. It also presents evidence on two countries that followed MMT like policies: Germany between 1939 and 1945 and Argentina with brief interruptions since 1946. The main conclusion of the article is that any country that consistently follows the policy prescriptions of MMT will inevitably experience high inflation and lower (and even negative) economic growth.

Keywords: Monetary Theory, MMT, Argentina.

JEL Codes: B00, N14, N16, P40, P47.

¹ I received valuable comments from Jorge Ávila, Nicolás Cachanosky and José Carlos Jaime. Any mistakes are my sole responsibility. The viewpoints expressed herein do not necessarily represent those of Universidad del CEMA.

MMT: Modern Monetary Theory of Magical Monetary Thinking?

The Empirical Evidence

Emilio Ocampo

The money of a State is not what is of compulsory general acceptance, but what is accepted at the public pay offices.

Georg F. Knapp, *The Theory of Money* (1905)

Mr. Keynes, why don't we forget all this business of fiscal policy, public debt and all those things, and have some printing presses.

Abba P. Lerner (1944)

It's the art of statesmanship to tell lies but they must be plausible lies.

John Maynard Keynes' reply to Abba P. Lerner (1944)

1. Introduction

Modern Monetary Theory (MMT), which is neither modern nor a theory, has been getting a lot of attention in the United States thanks to the support it has received from politicians such as Bernie Sanders and Alexandria Ocasio Cortez (Matthews, 2019). As explained by its leading proponents, MMT's key tenet is that "a country that issues its own currency can never run out and can never become insolvent in its own currency. It can make all payments as they come due". Therefore, "for most governments, there is no default risk on government debt" (Mitchell, Wray, and Watts, 2019, pp.13, 15).

According to MMT advocates, the world "hasn't come to terms" with the collapse of Bretton Woods and claim that in a world of non-convertible currencies, governments "are free to print however much [money] they need" and "the natural rate of interest" should be zero. MMTers also claim to be the "legitimate" intellectual heirs of John Maynard Keynes (Boesler, 2020). In

reality, their intellectual lineage can be traced back to Georg Friedrich Knapp, the father of “chartalism”, and Abba P. Lerner, the inventor of “functional finance”. According to Knapp, money and its value (i.e., its purchasing power) were established by the State; according to Lerner, governments can borrow unlimited amounts of money without altering interest rates or print unlimited amounts of money without triggering inflation.² Although Keynes implicitly accepted the ideas of the former (insofar as they related to the viability of fiat currencies) and inspired those of the latter, it is highly unlikely he would have accepted the conclusions derived from their combination.

Even if he had, the evidence has refuted both propositions. As Edwards (2019a) has pointed out, when it comes to evaluating the merits of MMT two difficulties arise. First, its proponents reject the theoretical concepts and methodology employed by mainstream economists. Second, they offer very little empirical evidence on the medium and long-term effects of their policy recommendations. However, according to Edwards, “a number of emerging countries” mostly in Latin America but also in Turkey, Israel and France briefly during Mitterrand’s government adopted policies that resemble those advocated by MMTers. The results were dismal:

Almost every one of the Latin American experiments with major central bank-financed fiscal expansions took place under populist regimes, and all of them ended up badly, with runaway inflation, huge currency devaluations, and precipitous real wage declines. In most of these episodes –Chile, Argentina, Brazil, Nicaragua, Peru, Venezuela– policy makers used arguments similar to those made by MMTers to justify extensive use of money creation to finance very large increases in public expenditures (ibid., p.3).

Although this statement is factually correct, an MMTer would retort that such experiences are not “relevant” to evaluate their theory because, except in the case of France, the countries mentioned by Edwards had large external debts. Therefore, according to MMTers they lacked “monetary sovereignty.”³ In the international finance literature the term “original sin” is used to describe a situation in which the domestic currency cannot be used to borrow abroad or to

² Lerner explicitly recognizes that higher public debt levels increase the interest rate but doesn’t seem to factor in such effect into his accounting identities.

³ In MMT’s lexicon “monetary sovereignty” is equivalent to the combination of an independent monetary policy and absence of original sin.

borrow long-term at fixed rates domestically is described as “original sin” (see Eichengreen and Hausmann, 1999; Eichengreen, Hausmann, and Panizza, 2005a, b).⁴ Original sinners, by definition, lack “monetary sovereignty.” Therefore, their experience (supposedly) cannot invalidate the main tenets of MMT. Besides, it is (supposedly) irrelevant to analyze MMT’s feasibility in the US, UK or most other advanced economies that don’t suffer from that condition.

Given MMT’s increasing popularity in US media, it is worth exploring whether in recent times any countries that were not “original sinners” (i.e. they enjoyed “monetary sovereignty”) applied its policy recommendations and, if so, what were the results. In fact, the experience of two countries is particularly relevant: Germany between 1933 and 1939 and Argentina between 1946 and 1955.⁵ Monetary experimentation is one of many similarities between the regimes of Adolf Hitler and Juan Perón. Both adhered to nationalist corporatism as the “third way” supposedly equidistant from communism and *laissez-faire* and both despised liberal democracy. However Peron lacked the psychotic criminal and thuggish racism that animated the Hitler (although he was openly sympathetic to Nazism) and spared his country the horrors of war and genocide.

The structure of the paper is organized as follows. Section 2 summarizes the ideas of George Friedrich Knapp and Abba P. Lerner, considered the intellectual precursors of MMT. Section 3 summarizes MMT’s major theoretical propositions and policy recommendations as presented by its contemporary advocates. Section 4 reviews the economic policies of Nazi Germany between 1937 and 1939 and of Peronist Argentina between February 1946 and February 1949 and explains their relevance to the current debate about MMT. The final section proposes some tentative conclusions.

2. Intellectual Roots of MMT

MMTers claim to be Keynes’ “legitimate” intellectual heirs (Boesler, 2020). If that were the case they should call themselves heirs of Silvio Gesell, which entails a double irony. Gesell was a German merchant who immigrated to Argentina in the late 1880s and he wrote his first book on economics after Argentina’s 1890 crisis, which resulted from fiscal and monetary profligacy.

⁴ MMTers describe this condition as lack of “monetary sovereignty” (see Kelton, 2020).

⁵ Many critics of Knapp argued that his ideas pervaded the monetary policies that led to Germany’s hyperinflation in 1923.

Keynes admitted Gesell's influence in the *General Theory* (1936, pp.32, 352-355) but according to some scholars he didn't give him the credit he deserved for the interest rate theory he presented as his own (Preparata, 2002).⁶ The first irony stems from the fact that Gesell developed his own monetary ideas while living in Argentina (he later returned to Germany and died there in 1930). In fact, it was Argentina's 1890 financial crisis and default, which brought Baring Brothers and the British banking system to the brink of collapse, that prompted Gesell to write his first book.

The other irony is that Argentina was also the first country that consistently implemented the type of policies that MMTers advocate. However, it is highly doubtful that Keynes would have supported such policies. The intellectual roots of MMT can be traced directly to the ideas of Georg Friedrich Knapp, the father of "chartalism", and Abba P. Lerner, a disciple of Keynes who developed functional finance theory (FFT). Therefore Gesell's influence was indirect. Due to limitations of space, only a cursory review of the ideas of Knapp and Lerner is presented here (their main works are listed in the References Section). The combination of Chartalism and FFT essentially implies two propositions: first, an expansive monetary policy has no impact on money demand, and therefore on inflation, and second, an expansive fiscal policy has no impact on interest rates and/or economic growth. In other words, the government can increase its expenditures limitlessly while simultaneously setting the overall level of prices and interest rates without negatively affecting the economy's long term growth potential.

Knapp's Chartalism

In the beginning of the 20th century, Knapp was the "the arch heretic" of monetary theory. In his *State Theory of Money*, he explained that money "is a creation of law; it appears in the course of history under the most diverse forms. A theory of money must therefore at the same time be a theory of the history of law" (Knapp, [1905], 1924, p.1). Knapp coined a new term to define a unit of money. "Perhaps the Latin word "*Charta*" can bear the sense of ticket or token, and we can form a new but intelligible adjective— 'Chartal.' Our means of payment have this token, or Chartal, form. Among civilised peoples in our day, payments can only be made with pay-tickets or Chartal pieces" (ibid., p.32). This was the origin of chartalism.

⁶ Other scholars claim the connection between Keynes and Gesell went beyond monetary theory and had a philosophical and political dimension (Darity, 1995).

In Knapp's view, money was merely a medium of exchange that owed its existence to the State, which also defined its value (Rist, 1938, p.320). Today this seems uncontroversial. It was not when Knapp wrote his book. At the time, the so-called "metallist-nominalist" controversy was raging. On one camp were those –the metallists– who argued that money could only exist if it was backed by gold or silver. Knapp was the leader of the other camp –the nominalists. It is evident that he won that debate. However, from a theoretical point it was a pyrrhic victory because Knapp's "theory" of money did not say anything about its value, i.e. its purchasing power. Therefore, as Mises pointed out, the problem was not that it was "a bad" monetary theory but that it was "not a monetary theory at all" (Mises, 1912, p.) It was simply "a juridical construction designed, like all such constructions, to provide an explanation of a number of legal decisions. Even in this respect it is far from complete, for it is in direct contradiction with the principles adopted by certain States as the basis of their currency systems" (Rist, [1938], 1966, p.360).

Although Knapp never referred to inflation in his book (or the loss of money's purchasing power) he rejected the idea that money could lose value due to excessive monetary expansion. This idea was quite influential. Rist argued that "the indifference to inflation displayed by the currency authorities in Germany and Austria" was due, in great measure, to the influence of Knapp's ideas (Rist, [1938], p.363). Among Knapp's followers was Karl Helfferich, who as Secretary of the Treasury from 1916 to 1917, was responsible for financing war expenditures through money creation instead of taxes. According to historian Harold James, Helfferich helped "to set up the wartime inflation [in Germany]" (James, 1985, p.11). Although sympathetic to Knapp due to his contributions to German economic history, Schumpeter believed that his "influence on monetary science in Germany" had been an unfortunate one (Schumpeter, 1954a, p.297). In his classic study of the German hyperinflation, Bresciani-Turroni mentioned that the "historical" and "sociological" monetary theory "held by the Reichsbank, by successive German Governments, by the great bankers, by great industrialists, by German officials, and by a great part of the Press" was a contributing factor and mentioned Knapp's work as having been particularly influential in this regard (Bresciani-Turroni, [1931], pp.42-43).

Knapp's Hegelian theory of money was not only outdated by 1925 but also wrong. Schumpeter was right when he described Knapp's theory as "simply a theory of the 'nature' of money

considered as the legally valid means of payment. Taken in this sense it was as true and as false as it is to say, for example, that the institution of marriage is a creature of law” (Schumpeter, 1954a, pp. 1057). It is an apt analogy. A government can impose a currency by law but it cannot unilaterally determine its purchasing power.

When the English edition of Knapp’s *The State Theory of Money* was published in 1925, LSE’s Edwin Cannan wrote a review in which he described it as an “obsolete book” with an “antediluvian ring” about it. Knapp’s attempt “to show that the soul of money is breathed into it by the State helped to divert attention from the fact that the value or purchasing power of the mark, pound, or other unit of account is affected by the supply of counters which pass for that unit” (Cannan, 1927, pp.398-399).

Outside of Germany Knapp remained relatively unknown until MMTers rescued him from oblivion. Ironically, in the preface to the first edition of *The State Theory of Money*, Knapp claimed to have given up any “attempt to influence public men” (Knapp, [1905], p.viii). He would have been surprised to learn that his ideas would resurface in a repackaged form in the United States a hundred years later. Given that he was politically conservative who favored balanced budgets and deficit monetization (Greitens, 2020, p.7), it is also ironic that his ideas today serve as a justification for the exact opposite policies.

Lerner’s Functional Finance

After deserting Austrian economics, Abba Lerner (1903-1982) became one of the strongest advocates of Keynesianism. Lerner introduced the basic ideas behind functional finance theory (FFT) in a 1941 article titled “The Economic Steering Wheel”, expanded its analytical framework in “Functional Finance and the Federal Debt” (1943), which provided the basis for much of MMT’s key concepts and policy recommendations, and later expanded and refined his arguments in a book titled *The Economics of Control* (1944).

Lerner used the term “functional finance” in opposition to “sound money”, which meant balanced budgets. In his view what mattered was not deficit or spending but their effects in a specific set of circumstances. Debt and taxes had to be judged solely by its effects on the economy (the “way they function in society”) said Lerner. Taking Keynes’ *General Theory* to its

extreme logical conclusion, he argued that when it came to inflation, neither deficits nor debt mattered at all. In his view, rising prices were simply the result of aggregate spending growing faster than aggregate output. By increasing or reducing public expenditures or raising taxes, the government could keep aggregate spending “at the required level”, i.e., the level at which the economy operated at full employment without inflation.

Raising taxes simply reduced the amount of money taxpayers could spend and increase the amount of money that government could spend. However, Lerner observed that this last objective could be more easily accomplished by printing money. As to public debt, it should be increased only if “it is desirable” that the public should hold “less money and more government bonds”. In essence, according to Lerner, FFT boiled down to three propositions. First, to eliminate unemployment and achieve price stability, the government should increase its spending when aggregate demand was “too low” and increase taxes when it was too high. Second, public borrowing should be “adjusted” in order to achieve a rate of interest which resulted “in the most desirable level of investment”, i.e., the level that ensured full employment. This would entail increasing the public debt to raise the interest rate and the opposite to lower it. Third, the government should print any money needed to achieve these two objectives.

One of the most controversial corollaries of these three propositions is that “as long as the public is willing to keep on lending to the government there is no difficulty, no matter how many zeros are added to the national debt”. In other words, when debt is owed to residents it is not “a burden on the nation in the same way as an individual’s debt to other individuals is a burden on the individual”. The key assumption in Lerner’s argument is that the public will be willing to lend any amounts to the government at whatever interest rate the government sets. As he put it in *The Economics of Control*: “The weird notion of a country “going bankrupt” because it has a great internal debt can only be explained as the result of private capitalists building up a conception of the state in their own image and impressing this capitalist mythology on the other members of the capitalist society” (1944, p.304). However, Lerner introduced a caveat to his original argument:

All this is true, of course, only of internally held national debt. Increasing debt to other countries or to the citizens of other countries does indicate impoverishment

of the borrowing country and enrichment of the lending country. Of this kind of debt the popular criticism is valid (ibid., p.305).

Using modern terminology, what this means is that the level of public debt is unimportant as long as a country is not an “original sinner,” i.e., it can borrow in its own currency long term.

According to Colander (1984), Lerner was “the perfect prophet of Keynes. Lerner had a simplicity of exposition and a wonderfully simplistic view of policy. For him, if it made sense in theory, it made sense in practice. Keynes was far more of a realist” (p.1573). However, Keynes was not pleased at the way his prophet reinterpreted his theory. The differences between them flared up at a seminar held at the Federal Reserve in New York in 1944. Lerner recalled that when he pointed out that the government “could always induce enough spending by incurring deficits to increase incomes, he at first objected that this would only cause ‘even more saving’ and then denounced as ‘humbug’ my suggestion that the deficits required to induce enough total spending could always be financed by increasing the national debt” (Lerner, 1952, p.118). At a dinner later that same day they had another exchange. According to Alvin Hansen, who was also present, Lerner asked Keynes “Why don’t you forget all this stuff like deficit finance and everything, and just print money?” After confirming that no reporters were around, Keynes replied: “It’s the art of statesmanship to tell lies, but they must be plausible lies.” Colander recently wrote about the contrast between the approaches of Keynes and Lerner to theory and policy and its implication for MMT:

Whereas Keynes was circumspect and nuanced about the policy implications of his model, Lerner was not – he pushed the model to the limit, and if the model said it, then it was the policy to follow. That’s great for teaching models, but it does not provide good policy guidance. Keynes was both a statesman and a theorist; he recognized the difference between policy following from a model and policy following from a full consideration of all issues. So, my suggestion is that in their policy advocacy, MMT advocates should become more like Keynes, and less like Lerner (Colander, 2019).

Keynes admitted that Lerner’s logic was “impeccable” (Colander, 1984, p.1574). Lerner in turn thought Keynes was checked by his own “timidity” and “did not carry his conclusions all the

way” (Lerner, 1978, p.67). According to Scitovsky (1984) Keynes was not fully aware of the logical and practical implications of the theory he had developed.

Lerner’s theory was criticized from other quarters. In his review of *The Economics of Control*, Friedman also admitted that Lerner’s discussion of functional finance was a “brilliant exercise in logic” (Friedman, 1947, p.413). However, he thought Lerner’s theory was inapplicable in real life and therefore useless as a guide to maintain full employment. Part of the problem was that neither government action nor its effects were instantaneous. According to Friedman:

There is likely to be a lag between the need for action and government recognition of this need; a further lag between recognition of the need for action and the taking of action; and a still further lag between the action and its effects. If these time lags were short relative to the duration of the cyclical movements government is trying to counteract, they would be of little importance. Unfortunately, it is likely that the time lags are a substantial fraction of the duration of the cyclical movements. In the absence, therefore, of a high degree of ability to predict correctly both the direction and the magnitude of required action, governmental attempts at counteracting cyclical fluctuations through “functional finance” may easily intensify the fluctuations rather than mitigate them. By the time an error is recognized and corrective action taken, the damage may be done, and the corrective action may itself turn into a further error (ibid., p. 414).

Stigler (1945) thought functional finance had “an attractive simplicity” that was “purchased at the high price of avoiding real problems” (p.115). He observed that persistent deficits would generate fear of future tax increase among businessmen and discourage private investment. He also pointed that FFT was incongruent with the institutions of liberal democracy in which spending and taxing decisions “must be directly controlled by elected representatives in order to maintain responsible government.” He concluded that it was “essentially irresponsible” to “jump from a textbook on theory to Capitol Hill” (ibid., p.115).

From a macroeconomic point of view, James Meade, a leading member of Keynes’ “Circus”, raised an even more serious objection. Meade considered Lerner’s theory “incomplete and inconsistent.” Missing from it was any consideration about the efficiency with which the

economy employed the available factors of production. FFT ignored the impact that the higher taxes needed to pay interest on a growing public debt would have on the incentives to work and invest:

The existence of a national debt will have an adverse effect upon incentives, unless (on the principle of running a budget deficit just sufficient to maintain full employment but not large enough to provoke inflation) the necessary borrowing is as great as the total interest payable on the national debt. But if this is the case, the continued increase in the national debt will sooner or later bring the interest payable on it above the level of the budget deficit required to maintain employment; and at this point, in order to prevent inflation, increasing rates of taxation will be required to finance the debt interest, with consequential ill effects upon incentives (Meade, 1945, p.63).

If the level of taxation has an impact on incentives, it follows, according to Meade, that the overall size of the public debt and the fiscal deficit cannot be a “matter of indifference” to society (ibid. p. 69).

There were several fundamental problem with FFT that were not addressed by these critics. First, the empirical evidence suggests that in most developed economies, in which the level of public capital is already relatively high, the marginal efficiency of public investment (either in public or private goods) is lower than that for private investment.⁷ Therefore, increasing public investment (or consumption) will tend to have a negative impact on economic growth, invalidating Lerner’s policy precepts. Recently Skidelsky (2020) argued that, on the contrary, public investment can safely replace “volatile” private investment “controlled by financial oligarchs.” As empirical support for this statement, he mentioned the experience of IRI in Italy. However, the situation of Italy after WWII was radically different from that of any modern advanced economy. Second, in terms of economic growth and productivity, in the postwar era the Italian economy lagged behind Austria and Germany, two other European countries that were devastated by the war and relied mostly on private investment to recover.

⁷ If public expenditures take the form of consumption and transfers the impact of productivity is even higher.

A lower rate of economic growth can have serious consequences on a government's financial position. A widening divergence between the interest on public debt and the rate of growth of GDP, inevitably leads to debt unsustainability, which in turn has led to financial crises (including default) and lower economic growth (Reinhart, Reinhart and Rogoff, 2012). Also, the empirical evidence (e.g., Argentina) does not support Lerner's notion that a government cannot and would not default on its domestic debt because it can always print money to repay it. As Reinhart and Rogoff (2008) have pointed out, domestic debt defaults tend "to be somewhat rarer than external default, but far too common to justify the extreme assumption that governments always honor the nominal face value of domestic debt" (p.2). One point missing from FFT and MMT is that inflation is an indirect way of defaulting on public debt denominated in local currency, particularly when coupled with financial repression.⁸ Even without the latter, hyperinflation is the most devious way of defaulting on domestic debt. In this and other aspects relevant to FFT and MMT, Argentina offers the clearest empirical refutation since it has defaulted on its local debt several times.

Lerner (as well as his current interpreters) also ignored the "crowding out" effect or any consideration of the impact of fiscal policy on the balance of payments. Both the theory and the evidence suggest that "one should not expect any change in taxation or government spending to have a one-for-one effect on aggregate demand" (Blanchard, 2008). Given the high level of protectionism in the late thirties or during WWII, ignoring the impact of monetary and fiscal policy on international capital and trade flows may have been a pardonable omission. However, to continue to ignore such impacts in a globalized economy is simply wrong.

Finally, one aspect of FFT worth highlighting is its ideological neutrality. According to Lerner, his policy guidelines could be applied under any economic system:

Functional Finance is not especially related to democracy or to private enterprise. It is applicable to a communist society just as well as to a fascist society. It is applicable to any society in which money is used as an important element in the economic mechanism (Lerner, 1943, p.50).

⁸ The economic effect on creditors of an outright default or liquefying the face value of debt through inflation is the same. In both cases it entails confiscating resources from savers.

3. MMT's Basic Theoretical Propositions and Policy Recommendations

MMT is basically a combination of “chartalism” and FFT. MMTers have borrowed from Knapp the idea that money only exists because of a government decision and from this elementary fact it concludes that government can also set its value. To this they add Lerner’s idea that governments face no financial constraint and can spend as much as they either by borrowing or printing unlimited amounts without having an impact on the price level or interest rates. They clarify that for these two principles to work effectively, a country must have a floating exchange rate regime (or a currency that is not pegged to or convertible to the US dollar), follow an independent monetary policy and not suffer from original sin. Drawing on Knapp, Keynes and Lerner and based on a number of truisms, accounting identities and the institutional intricacies and idiosyncrasies of the interaction between the Fed and the Treasury, MMTers have developed a theory that is fundamentally flawed and pretends to be universal. “The theoretical conclusions of MMT concern the usefulness of combining the Treasury and central bank into a government sector, causalities between desired and actual macroeconomic financial balances, the functional role of taxes and bonds, and the relevant constraints on government,” write Tymoigne and Wray (2013). This methodological approach is far from innovative. Macroeconomists have been doing this in Argentina for at least four decades.

MMT begins with the government budget constraint under a system of fiat money in which government expenditures are paid for with taxes, debt, or money. Following Lerner, MMTers argue that a government that issues its own currency can never default on its public domestic debt because it can always repay it by printing its own currency. According to Mitchell, Wray, and Watts (2019), the most important conclusion reached by MMT is “that the issuer of a currency faces no financial constraints... a country that issues its own currency can never run out and can never become insolvent in its own currency. It can make all payments as they come due... for most governments, there is no default risk on government debt.” (*ibid.*, pp. 13, 15). In other words, “monetarily sovereign governments... can afford to buy anything for sale in their

domestic unit of account even though they may face inflationary and political constraints” (Tymoigne and Wray, 2013).⁹

From an institutional perspective it is true that most governments don’t face a financial constraint and –to the extent the Central Bank is not autonomous– it also true that most governments can repay their domestic debt by printing money. However, the corollary MMTers derive from both propositions flies in the face of the historical evidence. In a sample of 65 countries over the period 1914-2005, Reinhart and Rogoff (2008) have documented 68 cases of default of domestic debt. These *de jure* defaults (i.e., not caused by inflation) were effected through unilateral restructurings (with reductions of capital and/or interest payments) and outright suspension of debt payments. In fact, as Reinhart and Rogoff have pointed out, among the countries in the sample there was “no statistically significant difference in the incidence of default on locals versus foreigners.” Therefore the distinction that Lerner and MMTers make about domestic and external in terms of default was of little practical consequence.

Additionally, according to Mankiw (2020), there are three conceptual problems with this conclusion. First, any money the government prints to pay for its expenditures (i.e., monetization of the fiscal deficit) will end up in the banking system as reserves, and the government, indirectly via the Central Bank, will need to pay interest on those reserves (when the government prints money to pay expenditures, it is, in effect, borrowing). MMTers reply that this would not be problematic as such accrued interest could also be paid by printing more money. However, if that were to happen, government expenditures and what is called the quasi-fiscal deficit would increase and an ever-expanding monetary base would eventually and inevitably generate inflationary pressures (contemporary Argentina being the clearest evidence of this). Second, if the Central Bank does not remunerate expanded bank reserves, banks will increase credit which in turn will increase deposits. The increase in monetary aggregates will lead to expanding aggregate demand which would eventually also spur inflation. Basically MMTers implicitly

⁹ Theoreticians of fascist economics also put emphasis on monetary sovereignty, particularly for developing countries (see Arias, 1942, p. 347).

assume that there are no limits to seigniorage and that deficit monetization does not generate inflation.¹⁰

It is true that in the short run, an unanticipated increase in inflation may actually increase seigniorage and reduce the deficit (inflation is a tax after all). However, if inflation becomes permanent and fully anticipated, demand for real balances and seigniorage will fall. At some point, this can trigger hyperinflation. As Krugman (2011) has explained, “any attempt to extract too much revenue from... leads to an infinite upward spiral in inflation. In effect, the currency is destroyed.” Under such scenario, a government may decide “that defaulting on its debts is the best option, despite its ability to create more money,” warns Mankiw (2019).

It sounds like an exact description of a cycle that has repeated itself several times in Argentina in the last four decades (see Kiguel and Neumeyer, 1989). However, according to MMTers, countries experience hyperinflation because they lack “monetary sovereignty” and follow the advice of the IMF (Kelton, 2020, p.149). Other leading MMTers contend that the German hyperinflation of 1923 was not caused by an excess supply of money. In some respects, this explanation is consistent to the balance of payments theory of Karl Helfferich. As Secretary of the Treasury during the war, he had engineered the massive monetary expansion that financed Germany’s war expenditures that eventually contributed to the high post war inflation (see Bresciani-Turroni, 1931, pp.42-46, and Greitens, 2020). As of yet, MMTers have not attempted to explain the Argentine case.

There is only one country in the world that could possibly follow MMT’s policy prescriptions without necessarily triggering inflationary pressures in the short run: the United States. This is simply because the dollar is a global currency: “It costs only a few cents for the Bureau of Engraving and Printing to produce a \$100 bill, but other countries had to pony up \$100 of actual goods in order to obtain one” (Eichengreen, 2011, p.3). However, this “exorbitant privilege” is critically dependent on the credibility of US policymakers, which would be rapidly eroded if they were to guide fiscal and monetary policies according to the principles underlying FFT and

¹⁰ Seigniorage is the value of the real resources that the government can acquire by printing fiat money. If the private sector is willing to hold paper money that the government prints, this means the government can acquire real goods and services at no cost (or at the cost of printing new money).

MMT. Before the world faced the coronavirus shock, Rogoff warned about the danger of extrapolating :

For the moment, the world is quite content to absorb more dollar debt at remarkably low interest rates. How to exploit this increased U.S. borrowing capacity is ultimately a political decision. That said, it would be folly to assume that current favorable conditions will last forever, or to ignore the real risks faced by countries with high and rising debt. These include potentially more difficult risk-return tradeoffs in using fiscal policy to fight a financial crisis, respond to a large-scale natural disaster or pandemic, or mobilize for a physical conflict or cyber war (Rogoff, 2019).

The unprecedented fiscal and monetary expansion announced to mitigate the effects of the coronavirus pandemic –a 20% increase in M2 since March and projected fiscal deficit and net public debt of 14% and 100% of GDP respectively for 2020– suggest that, at least in the short run, the US government can freely abuse such privilege. In essence, the rest of the world is subsidizing the recovery of the US economy. How long will this situation last? According to a leading MMTer, the US “never has to worry about running out of money” (Kelton, 2020, p.19). However, it US policymakers will have to worry about global investors’ demand for US dollars. “A change towards a higher inflation regime is a risk in the medium term, with the lack of a clear exit strategy risking a de-anchoring of inflation expectations in an environment where de-globalization and re-regulation could push costs higher” (Blackrock, 2020).

They also reject the Quantity Theory of Money (QTM) and claim that “no simple proportionate relationship exists between rises in the money supply and rises in the general price level” (Mitchell, Wray and Watts, 2019, p.263). In their view, the problem of inflation is “intrinsic to the power relations between workers and capital (class conflict), which are mediated by government within a capitalist system” (ibid, pp. 255). In other words, inflation results from the natural “class struggle” between workers and capitalists. According to MMT, inflation results from the natural “class struggle” between workers and capitalists. This last sounds a lot like the “structuralist” theory of inflation, which was quite popular in Latin America during the 1960s and 1970s. According to this theory, money is endogenous. Structural bottlenecks that generate

chronic upward pressures on prices and “distributive pressures” are the source of inflation (see Olivera, 1960, Ros, 1989 and Vera, 2013).

As in the case of FFT, perhaps the weakest point in the MMT argument is relying on a closed economy assumption, which is not even valid for the US. This omission may explain why they are such strong advocates of protectionism and controls over capital flows. MMTers also claim that their theory is applicable to developing countries, even those that have experienced high inflation and macroeconomic instability such as Argentina. A leading advocate of MMT (Kelton, 2020, pp.19, 116) has argued that such countries gave up their “monetary sovereignty” by: a) “pegging” their exchange rates to the US dollar (or another hard currency), or b) borrowing abroad in a foreign currency. There are several problems with both statements.

This line of reasoning evidences ignorance of basic principles of international economics and basic facts of economic history. First of all, it is not clear what it means to have a currency pegged to the dollar. A country that trades with the rest of the world can choose a fixed or a floating exchange rate. In either case, the value of its own currency will be measured against the currency of its largest trading partners. This is not a matter of choice but an unavoidable economic reality. Today, the overwhelming share of world trade is priced/invoiced in a small set of currencies, with the dollar the dominant currency even for bilateral trade flows that do not involve the US (see Gopinath, 2015 and Boz, E., Gopinath, G. and Plagborg-Moller, 2017). Only in complete autarchy, an impossibility in modern society, a government could ignore its exchange rate. Contrary to what MMTers assert, Mundell demonstrated decades ago (1960, 1961a and b, and 1963) that even if a country fixes or pegs its currency to the dollar (or any other foreign currency) it can still retain an independent monetary policy by restricting international capital flows and it can also borrow in its own currency (as long as it is not an original sinner).¹¹

As to the second statement, it is equivalent to explaining the origin of a problem by describing it. It is true that countries that suffer from original sin, by definition, have “a currency mismatch on their national balance sheets.” Therefore, movements in exchange rates “have wealth effects that limit the effectiveness of monetary policy” (Eichengreen, Hausmann and Panizza, 2002). The origin of “original sin” is in fact quite simple: “domestic debt markets were dealt a brutal blow

¹¹ Chile is a clear example.

by many governments’ propensity to inflate—or hyperinflate” (Reinhart and Rogoff, 2008, p. 5). Finally, MMT cannot explain the high and persistent inflation rates experienced by countries such as Argentina in the early 1950s when they had no external debt and a non-convertible currency. MMT cannot explain why so many countries became “original sinners” in the first place: why their own citizens were (are) not willing to buy the debt issued by their own government in their own currency (voluntarily)? As Reinhart and Rogoff (2008) have documented, before 1946 many developing countries actually issued significant amounts of domestic debt in their own currency at market interest rates.¹²

MMT’s Policy Recommendations

The best approximation we have of a set of policy recommendations favored by MMTers is the “Green New Deal” (GND) advocated by Representative Alexandria Ocasio-Cortez which seeks to simultaneously eliminate “inequities” in the economic system and fight climate change. Although Bernie Sanders did not explicitly include the GND in his 2019 presidential platform, he endorsed it. Even though in public discussion they are sometimes mingled, it would be incorrect to conflate MMT and the GND. The former is a “theory” of money and public finances that can be used to justify any program that requires a significant expansion of government expenditures independently of its objectives, whereas the latter is a “progressive” proposal for radical reform of the economic system. MMT could just as well have been used to justify a massive expansion of the defense budget. In fact, the fiscal and monetary experiments carried out in Nazi Germany between 1933 and 1937 can be considered a practical application of MMT’s key tenets. However, in the US, advocates of MMT are “heterodox economists and progressive policymakers” who are pushing for a socialist agenda (Sumner and Horan, 2019).

As explained by Stephanie Kelton, one of Sanders’ economic advisors and GND advocates, “we need a mass mobilization of people and resources, something not unlike the U.S. involvement in World War II or the Apollo moon missions — but even bigger. We must transform our energy system, transportation, housing, agriculture and more” (Kelton, Bernal and Carlock, 2018, KBC for short). To avoid misinterpretation a literal transcript is provided:

¹² The distinction between domestic and external debt is related to residency and not currency. A government can issue domestic debt in a foreign currency to domestic residents. However, to the extent local inflation is low, domestic debt tends to be denominated in local currency. Original sinners can only borrow short term in their own currency.

Here's the good news: Anything that is technically feasible is financially affordable. And it won't be a drag on the economy –unlike the climate crisis itself, which will cause tens of billions of dollars worth of damage to American homes, communities and infrastructure each year. A 'Green New Deal' will actually help the economy by stimulating productivity, job growth and consumer spending, as government spending has often done...In fact, a 'Green New Deal' can create good-paying jobs while redressing economic and environmental inequities. One policy vision... is based on a foundation of equity and justice... We must give up our obsession with trying to “pay for” everything with new revenue or spending cuts... The federal government can spend money on public priorities without raising revenue, and it won't wreck the nation's economy to do so. That may sound radical, but it's not. It's how the U.S. economy has been functioning for nearly half a century. That's the power of the public purse... As a monopoly supplier of U.S. currency with full financial sovereignty, the federal government is not like a household or even a business. When Congress authorizes spending, it sets off a sequence of actions. Federal agencies, such as the Department of Defense or Department of Energy, enter into contracts and begin spending. As the checks go out, the government's bank — the Federal Reserve — clears the payments by crediting the seller's bank account with digital dollars. In other words, Congress can pass any budget it chooses, and our government already pays for everything by creating new money... This is precisely how we paid for the first New Deal. The government didn't go out and collect money –by taxing and borrowing– because the economy had collapsed and no one had any money (except the oligarchs). The government hired millions of people across various New Deal programs and paid them with a massive infusion of new spending that Congress authorized in the budget. FDR didn't need to “find the money,” he needed to find the votes. We can do the same for a 'Green New Deal'. Despite lawmakers' stated fears, larger public deficits are not inherently inflationary. As long as government spending doesn't cap out the full productive capacity of the economy –what economists call “full employment”– it won't spin prices out of control. Inflation isn't triggered by the amount of money the

government creates but by the availability of biophysical resources that money tries to go out and buy –like land, trees, water, minerals and human labor... The U.S. government can never run out of dollars... Once we understand that money is a legal and social tool, no longer beholden to the false scarcity of the gold standard, we can focus on what matters most: the best use of natural and human resources to meet current social needs and to sustainably increase our productive capacity to improve living standards for future generations.

This brief description of what MMT can accomplish includes a fallacy in almost every sentence. Only a few are worth highlighting. First, technical feasibility does not imply financial affordability, never has, never will. Second, the New Deal analogy is unfortunate as it was a failure. After seven years, per capita GDP in the US was well below its long term potential. Besides, monetary expansion between 1933 and 1939 was mostly the result of inflows of gold from Europe and not a deliberate Fed policy. Also, budget deficits under Roosevelt cannot be described as “massive” even by historical standards. In fact, Alvin Hansen, one of the apostles of American Keynesianism, complained they had been too modest (Hansen, 1941, p.84). Third, although it is true that Congress can approve any budget it wants, persistent and growing fiscal deficits financed by printing new money are inflationary. Fourth, the fact that the US can print an unlimited amount of dollars doesn’t mean that it can create an unlimited amount of goods. Fifth, the scarcity of gold does not impose any real constraints on any modern economy and in no way prevents the achievement of higher standards of living. The latter only depend on the ingenuity and hard work of a country’s population and the existence of institutions that reward both. Also, in general, the best use of society’s scarce resources does not result from the decisions made by (supposedly) enlightened and good-natured bureaucrats but from the interaction of millions of people in free markets pursuing their own interest.

In summary, MMT offers a refutation of Friedman’s two most famous *dictums*: “there is no such thing as a free lunch” and “inflation is always and everywhere a monetary phenomenon”. When it comes to public finance, according to MMTers there is a “free lunch” that policymakers around the world have not been aware of (or have been prevented from enjoying due to the influence of powerful corporate interests). In reality, many governments have tried the magic of “functional finance” and unlimited monetary expansion. The result has consistently been the

same everywhere: runaway inflation, macroeconomic instability and low growth. As shall be seen below, those like Argentina which did not mend their ways ended up on a path of self-destruction.

4. MMT: A Review of Historical Precedents

This section reviews the experiences of Germany between 1939 and 1945 and Argentina between 1946 and 1955. Both provide a refutation of MMT's tenets and policy recommendations and offer lessons for the present.

The main architect of Nazi economic policies was Hjalmar Schacht, who was President of the *Reichsbank* and Minister of the Economy. However, Schacht's influence was limited to the first years of the regime. In 1937 he was replaced as Minister of Economy by Hermann Goering and in January 1939 he was forced to resign from the *Reichsbank*. It was under Goering and later Albert Speer that MMT-like policies were taken to the extreme. Unfortunately, German economic statistics for the period 1938-1945 are either of dubious quality or have been rendered irrelevant due to the war. Therefore it is very difficult to disentangle the full impact of Nazi economic policies from the effect of the war. However, their impact was felt after April 1945 in the form of repressed inflation, black markets and an acute scarcity of basic consumer goods. The monetary reform of 1948 which established the basis of the postwar German economic miracle in essence eliminated the overhang of fiat money –almost 90% of it– created since 1937 (Klopstock, 1949). In many respects this reform is a refutation of basic tenets of MMT.

The policies implemented in Argentina between 1946 and 1948 offer a stronger and clearer empirical verification of the likely consequences of following MMT's policy recommendations in a "normal" economy at peacetime. In fact, one of those consequences was turning the country into an "original sinner." When Perón became president in February 1946, Argentina had the largest economy in Latin America by a wide margin; it was also the eight largest and the seventh wealthiest economy in the world. Its gold reserves amounted to US\$1.2 billion, the fifth largest in the world (UN, 1952, p.462).¹³ In 1945 more than 130% of Argentina's monetary base was

¹³ According to the UN, in 1945 only the US, Switzerland, UK and France had larger gold reserves than Argentina. However, in the case of the latter the figure is doubtful as a year later they had dropped by 50%. It is important to note however, that in the case of Argentina international reserves were 30% higher than gold reserves due to holdings of substantial sterling and dollar holdings.

backed by international reserves. In the decade before Peron's rise to power, the government was able to borrow long term in pesos in the "voluntary" domestic capital market at an interest rate of between 3.5 and 4% a year (foreign investors also bought long dated securities denominated in pesos). Thanks to Peron's adoption of expansionary monetary and fiscal policies, Argentina initiated one of the most puzzling economic declines of modern history. Today, after having defaulted several times on its domestic and foreign public debt, it ranks 72nd in global GDP per capita and has the third highest inflation rate in the world.

MMTers may argue that their policy recommendations are fundamentally different from those implemented by Perón and his contemporary followers. There are undoubtedly some differences, which to a great extent can be explained by particular circumstances of time and place. However, not only the essence of Peronist policies but also their objectives resemble those advocated by prominent MMTers in the US. In fact, one of them (Kelton, 2020) has argued that the job creation policies adopted by the Kirchner administration in Argentina offer a blueprint for the US and other advanced economies. A recent study (Cembalest, 2019) concluded that Argentina is the country that more closely applies the policies advocated by Bernie Sanders. In fact, it has applied them almost uninterrupted since 1946. Moreover, such policies have been directly responsible for pushing an increasing number of Argentines into poverty. MMTers have a very US centric perspective of monetary and fiscal issues either due to their ignorance or lack of interest. Be it as it may, they are firmly convinced that: a) the US could never experience the levels of inflation and macroeconomic instability seen in other countries (even less so those experienced by Argentina), and, b) their ideas and policy recommendations are universally applicable.

Nazi Germany (1937-1945)

The fact that Nazi economic policies in some respects resemble those advocated by MMTers should be no surprise. Their intellectual genealogy shares many ancestors. Joan Robinson, Cambridge's *Grand Dame* and a Keynesian purist, once quipped that the Nazi leader had "found how to cure unemployment before Keynes had finished explaining why it occurred" (1972, p. 8). More recently Bernanke argued that "the person who sort of most understood fiscal policy, in some sense, was Adolf Hitler. Because the rearming of Germany in the '30s was so big and so extensive — of course, he had other objectives in mind — but the side effect of that re-arming,

together with a big highway building program, was such that Germany, which had a very deep depression, actually came out of it much quicker than other countries” (Bernanke, 2015).

The truth is a bit more complicated. First, Hitler did not introduce a revolutionary change in economic policy, at least until 1938. At first he basically followed the same policies initiated in the second half of 1932 by his predecessors Franz von Papen and Kurt von Schleicher, which involved increases in government expenditure coupled with strict control of wages and prices to insure that their impact would be felt more on output and employment rather than wages and prices (Klein, 1948). The main difference was the intensity with which these policies were applied: under Hitler government expenditures were larger, grew faster and were mostly on defense and rearmament, while controls over prices, wages, and foreign exchange were tighter. The much touted *autobahn* construction scheme had minimal impact on employment. In 1933 no more than 1,000 workers were employed on the first project and only 38,000 twelve months later (Tooze, p.47). One of the most authoritative studies on the subject concluded that Germany’s recovery from the Great Depression was “mainly driven by a rebound effect that was visible in the data already by late 1932” (Ritschl, 2000). Far from being a “textbook exercise in Keynesian demand stimulation” it exemplified “the paradox case of public demand expansion without Keynesian demand creation” (ibid., p.17). Germany’s “miraculous” economic recovery after the Great Depression has a simple explanation: massive fiscal and monetary expansion combined with rising productivity and declining labor costs. The latter was achieved through political repression and strict control of labor unions. There was no miracle: the Nazi recovery was an unsustainable boom. Its almost inevitable outcome was war and economic self-destruction.

The analysis of the impact of German economic policy under the Nazi regime gets complicated after 1938, when MMT like policies were implemented. As a result of the Anschluss the economic statistics of Germany and Austria were merged. Also their quality and reliability became increasingly questionable due to government interference and controls. Starting in 1938 any vestige of rationality in economic policy started to disappear as Germany geared up for war (military expenditures as a percentage of GDP increased from 9% in 1937 to 26% in 1939). This shift coincided with the resignation of Hjalmar Schacht from the Ministry of Economy at the end of 1937. The process accelerated in January 1939 when Hitler fired Schacht as president of the *Reichsbank*. “Until then, currency policy was well run, and the economy was properly under

control,” Schacht would recall decades later (Schacht, 1967, p.111). In 1939 functional finance and monetary profligacy took over to finance Germany’s war machine.

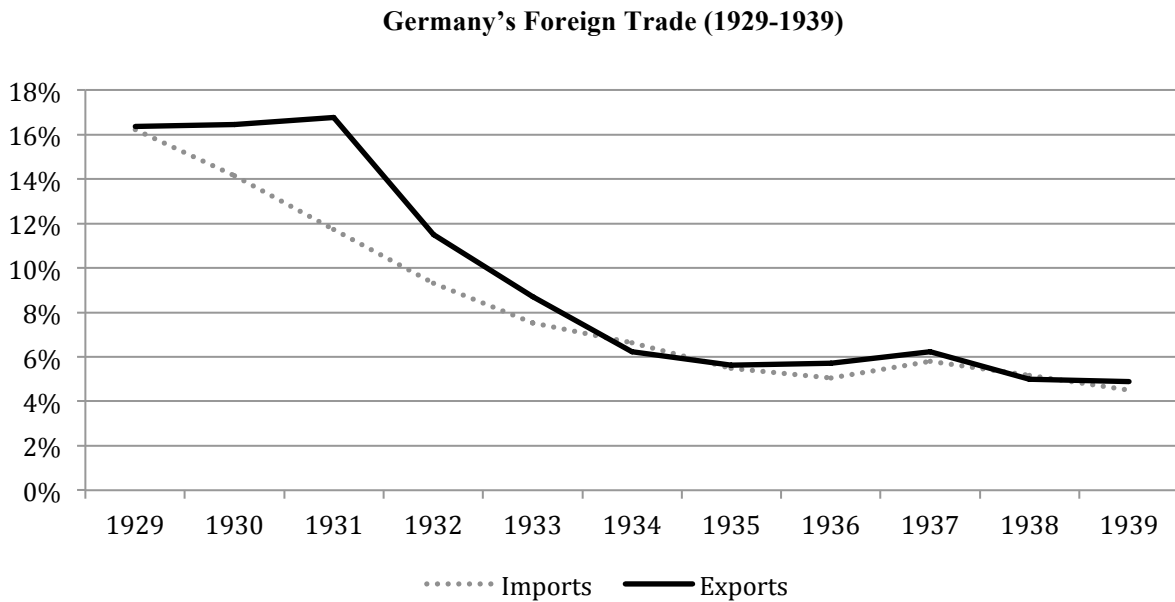
Although Schacht believed “in a creative role for monetary policy” he was “no friend of public works schemes” (Tooze, 2006, p.41). In fact he not only accepted the key tenets of the quantity theory of money (in the long run) but was also a consistent advocate of fiscal restraint.¹⁴ However, in the short run Schacht adhered to a narrow version of the “real bills” doctrine: he believed money creation was harmless only if it was accompanied by a simultaneous increase in the quantity of services and goods (1967, p.355). During the period 1933-1937, although high, the fiscal deficit remained relatively under control. Overall public debt levels remained stable.

Schacht’s economic policy was constrained not only by Hitler’s political objectives (i.e., rearmament) but also by external factors, particularly by the rise of protectionism which limited exports from the industrial sector. The *Reichsmark* was maintained at its pre-existing parity during the whole of the Nazi regime, which obviously generated a significant overvaluation and a loss of competitiveness of Germany’s industrial sectors. However, given the tight exchange controls and an increasing economic autarchy, the exchange rate became an irrelevant price in the German economy. Most of the fiscal expansion, particularly after 1935, sustained growing investments in heavy industries. The dwindling foreign trade was carried under bilateral barter agreements as foreign reserves practically disappeared. Schacht applied “the principle of capital immobilization with exacting thoroughness, and to the extreme limit” (Rueff, [1963](1964), p.12).

Without access to foreign capital, off-budget fiscal expansion was financed with domestic credit expansion. The most original aspect of Schacht’s monetary policies was the issuance of “Mefo-bills”. According to Schacht it was a “daring” scheme that “rejected the trading methods which classic British economic theories had bequeathed to us” (Schacht, 1955, p.548). In his view, the issuance of the Mefo-bills proved empirically an idea that Keynes would later develop theoretically: “whenever there was a shortage of capital savings one could compensate by replacing such capital savings with credits granted by the central bank, and thus by money specially printed for the purpose” (Schacht, 1967, p.116). However, its primary objective was not

¹⁴ After the war Schacht became advisor to several developing countries and in all cases he preached the virtues of fiscal and monetary restraint. See for example the advise he gave to Indonesia (Schacht, 1955, pp.541-542).

to stimulate the economy but to subreptiously finance Germany's growing military expenditures to avoid calling the attention of the Allied Powers.



Source: Federico-Tena Database.

But even Schacht recognized that “the MEFO bill system was not and could not be a *perpetum mobile*.” As soon as full employment was reached, he wrote, “every further granting of credit could only lead to an excess in the circulation of money, and to a rise in the price level, and thus to inflation. This had to be avoided at all costs” (Schacht, 1967, p.114).

The issuance of Mefo bills was supposedly the way out of the Scylla and Charybdis of counter-cyclical policies: it avoided “crowding out” private sector investment while keeping inflation in check. The underlying theory was that in conditions of mass unemployment, government spending “financed by new credit would result in greater real demand, greater production and employment rather than inflation” (Tooze, pp.42-43). In reality,

Hitler's spending without income, was pushing prices up—a typical inflationary pattern. Rising prices were politically undesirable, however, so existing levels were forcibly maintained under drastic penalties, eventually including death.

Since rising prices did not offset excess demand, rationing on an ever-increasing quantity of commodities was instituted (Rueff, [1963](1964), p.13).

With the departure of Schacht from the *Reichsbank* in January 1939, Hermann Goering took full control of fiscal and monetary policies and all semblance of economic rationality quickly disappeared. It was the beginning of Germany's large scale MMT experiment. Financed by monetary expansion, debt and deficits spiraled upwards: the ratio of debt/GDP skyrocketed from 67% in 1938 to 217% in 1944. As Schacht recalled years later:

The MEFO system functioned and played its role in currency and financial policy for five years between 1934 and 1938... In the first days of January 1939, the *Reichsbank* [Schacht] handed Hitler a memorandum in which it indicated its refusal to grant the *Reich* any further credits. The consequences were drastic. On 19 January I was dismissed from my office as president of the *Reichsbank* with immediate effect. On the following day Hitler issued an edict that ordered the *Reichsbank* to grant the *Reich* all credits for which the *Fuhrer* asked. It is true the MEFO bills were now honoured when they became due, but only with the inflated money produced by the printing presses (ibid., p.117).

The second German inflation had begun despite strict price controls and rationing. As Schacht would later explain, only after the war it became evident how "far the purchasing power of the Mark had once again fallen as a result of this second inflation" (ibid., p.109). In fact, the situation in Germany under the Allied occupation offered perhaps the clearest refutation of Knapp's theory of money. The German economy rapidly deteriorated into a barter economy "in which money served neither as a unit of account, nor as a means of payment (except for the purchase of the meager official rations when they were obtainable), nor as a store of value" (Lutz, 1949, p.1). By 1947 approximately 50 % of all commercial trade, at least in the zone occupied by the Western power, was transacted on a barter or compensation basis. American cigarettes became a more acceptable currency than the *Reichsmark*. As a contemporary observer noted, monetary expansion was followed after the end of the war "by the repudiation of the country's currency in large sectors of the economy and by the shift to various money substitutes" (Klopstock, 1949, p.1). By eliminating the overhang of fiat money and liberalizing prices, the

1948 currency and economic reforms established the basis for the postwar German economic miracle.

Argentina under Perón (1946-1955)

Germany was able to overcome Nazism thanks to a devastating military defeat. Argentina was not as lucky with Peronism. Peron’s legacy survives and dominates politics and economic policy. In fact, for anybody who has lived in Argentina in the last seven decades, MMT sounds like a US-centric pseudo-theoretical justification of the economic policies followed by Peronism, particularly between 1946 and 1948, 1973 and 1974, 2007 and 2012 and 2020 (Ocampo, 2020b). Argentina is Exhibit A of what happens to a country whose policymakers believe they face no financial or real constraints. It would be tempting to dismiss this statement given Argentina’s track record of high inflation, secular stagnation and sovereign defaults. This sad state of affairs originated after WWII. Paul Samuelson once admitted that if someone had asked him in 1945 which country was best positioned for an economic take off in the postwar era he would have replied that it was Argentina. He hadn’t reckoned with Perón (or MMT).

From 1900 until 1939, a period during which Argentina mostly abided by the rules of the Gold Standard, its inflation rate and fiscal balances were in line with those of Australia, Canada, the US and the UK, while its GDP per capita grew at comparable rates. Something happened after WWII and its effects proved persistent: since 1945 inflation averaged 143% a year –including three bouts of hyperinflation– and the government had persistent and high fiscal imbalances while the economy stagnated.¹⁵ The country also restructured or defaulted on its public debt, both foreign and domestic, half a dozen times. As a result, Argentina’s position in global GDP per capita rankings averaged 7 during the period 1900-1945 and had fallen to 72 in 2019.

Argentina before and after 1945

Country	Primary Fiscal Balance	Net Fiscal Balance	Average Inflation Rate	GDP per capita Growth Rate
<i>1900-1939</i>				

¹⁵ The first bout of hyperinflation was at the end of 1975 and beginning of 1976 although the monthly inflation rate never exceeded 50% per month which is the definition Cagan provided in his seminal 1956 study. However, Cagan admitted that this definition was arbitrary and solely served the purposes of that study (1956, p.25). In a later work he that hyperinflation “is an extremely rapid rise in the general level of prices of goods and services” for which “there is no well-defined threshold. It is best described by a listing of cases, which vary enormously” (Cagan, 1987, p.179).

Argentina	0.4%	-1.6%	1.6%	0.9%
Australia	0.4%	-1.0%	2.0%	1.0%
Canada	0.0%	-1.8%	1.7%	0.9%
UK	3.0%	-1.9%	1.4%	0.7%
US	-0.8%	-1.4%	1.6%	1.1%
<i>1945-2019</i>				
Argentina	-2.4%	-4.5%	143.0%	1.1%
Australia	0.0%	0.0%	5.5%	1.9%
Canada	0.7%	-2.0%	3.9%	1.9%
UK	-0.3%	-3.0%	5.0%	1.9%
US	-0.7%	-2.7%	3.7%	1.9%

Source: IMF Public Finance Database, IMF World Economic Outlook and Ferreres (2010).

According to Harvard economist Arthur Smithies, after 1945 “a *diabolus ex machina* appeared in Argentina.” He was referring to Juan Perón, who had started his political career in 1943 as a military dictator but later won the presidency in free elections (1946, 1951 and 1973). When Perón became president for the first time in 1946, Argentina was the largest economy in Latin America by a significant margin, it was the eight largest economy in the world and the seventh wealthiest in the planet as measured by GDP per capita (see The Maddison Project for historical comparative data). Another important fact is that in 1945, Argentina had the fifth largest holdings of gold reserves in the world (UN, 1951, p.462). At that time, more than 130% of Argentina’s monetary base was fully backed by gold and the government could borrow in pesos long term at an interest rate of between 3 and 4% a year.

Essentially, based on three erroneous assumption –that the world faced imminent stagflation and a Malthusian trap and Argentina a communist revolution– Perón set out to achieve two mutually inconsistent objectives: a rapid and “total” industrialization of the country’s economy and a significant increase in workers’ real wages. To achieve these ambitious goals he used a policy mix that included nominal wage increases above productivity, radical protectionism and massive public spending, all of it financed with loose credit policies. Under Perón, Argentina was one of the first democracies with a high standard of living to implement in peacetime the type of fiscal and monetary policies that MMTers advocate today.

To achieve his ambitious agenda, Perón nationalized the Central Bank (which until then was partly owned by private banks) and all deposits in the banking system.¹⁶ With both measures the allocation of credit and the determination of its cost became completely discretionary and divorced from economic reality. The underlying assumption of Peronist economic policies was that the government faced no financial constraints and that the Central Bank could issue as much currency as it wanted. Also, neither the government, nor businesses or consumers would have to pay a positive real rate of interest on whatever amounts they borrowed. The economy faced no financial constraint.

Perón used part of Argentina's vast holdings of foreign reserves to repay all the external debt. He also imposed controls over international trade and financial flows. The Central Bank independently set the foreign exchange without any consideration of the external value of the dollar or the convertibility of the peso into that currency. Therefore, according to the definition proposed by MMTers, Argentina enjoyed full "monetary sovereignty."

The man Perón put in charge of running this economic experiment as President of the Central Bank was a wily businessman named Miguel Miranda. The parallel with Hjalmar Schacht was highlighted in an article in *Time Magazine*:

"I am the financial and economic dictator of Argentina," crowed Miguel Miranda to a friend last week. As Juan Peron's closest adviser and president of Argentina's newly nationalized Central Bank, the portly, fiftyish tin-can manufacturer was feeling his oats... All bank deposits and practically all loans were placed under Central Bank control. Henceforth, Miranda's bank would make all the decisions that individual bankers used to make. The Central Bank would merely pay them for handling deposits. This sounded as though only a Nazi could have prepared it –and apparently one had. He was natty 42-year-old Dr. Heinrich Dörge, reputedly the favorite disciple of Dr. Hjalmar Schacht and Schacht's right-hand man in running Germany's famed Industrial Credit Bank (*Time*, 1946).¹⁷

¹⁶ The nationalization took place before Peron was sworn in but was carried out following his instructions.

¹⁷ In 1949 Dörge was found murdered on the streets of Buenos Aires, which led to all sorts of wild conspiracy theories that still make the rounds (Posner and Ware, 1986, p.100).

Dörge (or Doerge) had been included since 1944 in a list of “blocked” people connected with the Nazi regime. In 1946 the Allied Powers had required his deportation from Argentina (Department of State, 1944, p.4, and 1946, p.34). Instead, with Perón’s approval, Miranda appointed him as a financial advisor to the Central Bank. If Perón believed that Miranda would do for him what Schacht had done for Hitler time would soon prove he was completely mistaken.

It is not clear exactly what type of advise Dörge provided Miranda. Apparently, among other things, he tried to bring his former boss on board as advisor to Miranda as confirmed by 1948 CIA report (see CIA, 1948). Schacht himself admitted that the Argentine Central Bank sought his advice and he gave it. Although he provided only superficial details about the nature of the proposed engagement, he clarified that when “the governors of the Argentinian Central Bank rejected my findings with ironical remarks, informing me that their president would shortly fly to Europe and return with a pocketful of credits which would put Argentina’s affairs into order, I could only wish him a happy journey. As could have been foreseen, his trip was most unsuccessful” (Schacht, 1967, p.190).¹⁸

Schacht was right but not even he could have cleaned up the mess created by Miranda. Besides, his ideas about what was needed in Argentina and his attachment to sound fiscal and monetary policies did not square well with Perón’s plans. “This country, richly endowed by nature, suffers only from defective organisation of its monetary economy,” wrote Schacht. “In a country possessing so many commodities for world-wide trading as does Argentina with its valuable meat and other agricultural products, it should be child’s-play to create a well-ordered money and credit system. In such a country the policies pursued by the central bank alone, even without state management, can further the economic order considerably” (Schacht, 1967, p.190). Miranda did exactly the opposite of what Schacht recommended: he totally disrupted the monetary system and unleashed inflationary pressures which successive governments never managed to consistently eradicate.¹⁹

It was Miranda who convinced Perón about the “wonders” of using “other people’s money” (Newland and Ocampo, 2020). In 1944 Perón had asked the experts at the Central Bank’s to help

¹⁸ In 1953 the CIA again reported rumors had circulated for some time “of a prospective visit to Argentina by Dr. Schacht, although the journey has not been made so far” (CIA, 1953, p.9).

¹⁹ Except during the 1990s under the Convertibility Plan designed by Domingo Cavallo.

him find a way to finance an ambitious five-year development plan. The answer he got was that given that the government was already running a deficit his plan was not viable. Perón then turned to Miranda. Many years later he recounted their conversation:

I told him [Miranda] about the exchange with the experts and he said: “General! Do you think that if they were capable of something they would be earning a miserable salary as advisers [at the Central Bank]?” –“But Miranda,” I said, “we have to spend a lot and we don't have any money!”– “That's the way to buy anything, without money,” he replied. “Only fools buy with their own money!” – This is my man, I thought to myself (Perón, 1956, p. 37)

Miranda did try to emulate Schacht’s financial engineering in one respect. He relied on the Central Bank and IAPI to finance large off-budget military expenditures, massive increases in public employment, an ambitious public works program and the nationalization of foreign owned companies. During 1946-1955 off-budget expenditures, of which the most significant were IAPI’s operating losses, amounted to almost half of budgeted expenditures (Reutz, 1991, p.120). The Central Bank extended special credit lines to state owned banks with which they financed those deficits. Between 1946 and 1949 IAPI’s borrowings increased eight times in nominal terms and in the latter year represented 16% of GDP. With this financing scheme, the government didn’t have to report almost all half of its expenditures and the Central Bank avoided statutory limits on financing them. Given that IAPI didn’t publish balance sheets until 1949, Miranda’s gimmicks allowed the regime to hide “under the rug” almost a third of total government expenditures. IAPI closed the loop by financing the government directly with loans.

Also, once Peron was formally in power, the Treasury started using “creative” accounting methods to disguise growing fiscal imbalances. For example, the 1946 annual report indicated that the government had incurred a deficit equivalent to 0.9% of GDP. In reality it was ten times higher. The trick was simply to count the increase in public debt as a cash revenue. This accounting legerdemain didn’t seem particularly troubling given that starting in 1946, a significant portion of the budget deficit was “financed” by the state run pension fund at negative

real interest rates. The following year, the clarity and quality of the information provided by the Treasury about public finances deteriorated further.²⁰

In early 1949 Perón boasted that the prior year’s budget had been closed “with a surplus” (1949, Vol.II, p. 192). In fact, the Treasury had reported in its annual report a slight surplus in fiscal accounts (Ministerio de Hacienda, 1949). However, the government’s actual cash deficit had reached almost 16% of GDP in 1948 and would reach 13% in 1949 (Reutz, 1991, p.136). This “fiscal illusion” had a lasting effect. Several generations of Argentine economists were taught public finance with a book that argued that deficits had no relation to inflation because every year during the period 1947-54 the Treasury “uninterruptedly” reported a surplus, something unprecedented in Argentine financial history, while the cost of living increased 600 percent. “We are confronted with a contradiction according to orthodox financial principles”, confidently asserted its author (see Lascano, 1972, pp.144-145).

**Reported versus Actual Net Fiscal Balance (NFB) during 1946-1950
(as % of GDP)**

	1946	1947	1948	1949	1950
NFB as reported by the Treasury	0.1%	0.0%	0.3%	0.0%	-0.1%
NFB as reported by Lascano (1972)	-2.2%	1.1%	0.5%	0.2%	0.2%
NFB adjusted for off-budget expenditures (ANFB)	-5.1%	-8.7%	-7.2%	-6.3%	-6.9%
ANFB plus off-budget deficits	-15.6%	-10.3%	-16.0%	-12.9%	-7.2%

Source: Ministerio de Hacienda, Memorias 1947-1951, Blanco (1956), Lascano (1972) and Reutz (1991).

Peronism also promoted a monetary illusion. An examination of the Central Bank’s balance sheet shows that monetary expansion to finance the “official” budget deficit was not significant except in 1947 and 1948 (Todeschini 2004, Barbagallo and Rougier, 2017). Most of the “real” deficit was funded not directly by the Central Bank but indirectly through IAPI, which had unlimited lines of credit with state owned banks. IAPI’s operating deficits were partly explained by its payment of off-budget expenditures and partly due to corruption and mismanagement. Other source of credit creation were the operating losses of the national railway system (nationalized in 1947) and those incurred by National Mortgage Bank which extended mortgage

²⁰ In 1946, the Treasury pushed back the discussion of public finances to the back of its annual report instead of starting with it, as it had been the tradition for decades. The quality and clarity of the information included in the *Memorias del Ministerio de Hacienda* deteriorated markedly after 1944.

credit at interest rates significantly below inflation. As a result, even though the “official” public debt declined from 51% of GDP in 1943 to 30% in 1949, off-budget debt increased from almost nil to 30% of GDP which meant that total public debt reached 60% in GDP (and 74% by 1955).²¹

Factors Driving Monetary Expansion

Sources of Monetary Expansion	1946-1948	1949-1951	1952-1955
External sector	-24%	0%	-5%
Private sector	47%	61%	45%
Mortgage Bank	9%	25%	33%
IAPI	48%	13%	29%
Public Sector	10%	14%	5%
Other	11%	-13%	-7%
Total	100%	100%	100%

Source: Based on Barbagallo and Rougier (2017).

Between March 1946, when the Central Bank was nationalized, and January 1949, when Perón fired Miranda, overall credit increased at a compounded annual rate of 47%. As can be seen in the table below, monetary aggregates also increased at high double-digit rates during this period.

Overview Monetary and Credit Policies in Argentina (1940-1955) (compounded annual growth rates)

Period	Reserves	Monetary Base	Currency and Notes	M1	Credit		
					Private Sector	Public Sector	Total
Jun-1940 to May-1943	13.2%	15.3%	12.8%	18.7%	4.1%	23.6%	23.6%
Jun-1943 to May-1946	25.3%	25.3%	23.5%	21.1%	35.8%	16.9%	16.9%
May-1946 to Jan-1949	-20.0%	34.0%	34.0%	33.3%	96.6%	47.0%	47.0%
Jan-1949-Feb-1952	29.5%	30.6%	30.2%	22.3%	42.0%	9.1%	9.1%
Feb-1952-Sep 1955	-11.1%	19.5%	20.0%	19.1%	-30.7%	17.9%	17.9%

Source: Central Bank of Argentina,

Between 1945 and 1948 bank credit to the public sector grew 28 times in nominal terms and loans to consumers and “crony capitalists” almost tripled. Initially these policies seemed to have the intended results. Between 1945 and 1948 real GDP per capita grew at 6.4% annually and real

²¹ The “real” level of public debt was significantly higher than this level given that the interest rate paid by the government was below the inflation rate and did not reflect market levels. Savers and workers’ pensions bore the brunt of this massive exaction.

average industrial wages by almost 45%. Official statistics showed that the burden of public debt in relation to GDP dropped while the government maintained a budget surplus.

In reality this massive credit expansion financed growing budget and off-budget deficits, which were hidden “under the rug” with accounting gimmicks and indirect financing schemes. In 1949 Perón boasted that “we have closed our budgets with a surplus”. He could actually show a Treasury report to back up this statement. However, the government’s actual cash deficit had reached almost 16% of GDP and would reach 13% in 1949. There was no magic behind these numbers simply accounting tricks and disinformation. Taking into account off-budget deficit financing, public debt in relation to GDP increased to 74% by 1955.

In many regards, Peronism can be considered a pioneer in the application of policies predicated on the assumption that deficits do not matter and that increases in the money supply have real effects on the economy and no impact on inflation. Perón himself expressed these ideas in many of his speeches. His underlings tried to justify them theoretically. Ramon Cereijo, Peron’s first Finance Minister, argued that deficits were necessary to inject “vitality” into the economy (Cereijo, 1947, p. 37). Anticipating MMT, Juan De Greef, a leading Peronist Congressman, explained that according to the Peronist “theory” of public finance the notion of a balanced budget was irrelevant. “No other ghost frightened our rulers so much as that of the invincible financial deficit... but the advice was thrown on deaf ears, and the State began to spend.” De Greef proudly boasted that in 1948 public spending had tripled in comparison to 1946. Against demands for greater fiscal austerity, he advocated the principle of “spending well”, which he deemed more appropriate to the management of a “modern” State (Degreef, 1950, pp. 34-35).

Perón became a true believer in the virtues of unlimited credit expansion and of the notion that his government faced no financial constraint. In an address to provincial finance ministers in 1947 he explained the “magic” by which his policies would increase Argentina’s wealth:

We must not forget that we have an annual currency circulation that is much higher than what we had when we took over the government. The old banking system had managed to produce an annual turnover of currency circulation equivalent to four times the issuance: that is, about 16 billion pesos, considering that the value of the issuance was 4 billion. Now we are turning over eight times

the value of the issuance, so that the annual wealth in circulation has become 32 billion pesos. And we have to take it to ten times, so that we have an annual turnover of approximately 40 billion. This increase in wealth will mean an increase in inflation, but also increased activity, which is what matters. In any case, the resulting inflation will always be kept twenty percent below that of the country with the lowest inflation. We cannot abandon the natural relationship that must exist in international trade. I have always thought that, in the economic sphere, we were going to live without any crisis during the six years of my government. Today, as a result of new studies being carried out, I believe that we will have sixty years without crisis (Perón, 1947, p.29).

There are many remarkable things about this speech, which must have surprised the audience, made of bureaucrats well versed on public finance matters. First, it seems Perón believed that there was a link between a higher GDP and the massive expansion of credit Miranda was engineering at the time. Second, his comments also seem to suggest he understood the concept of purchasing power parity. However, the value of the peso in terms of dollars remained unaltered until 1950, leading to a strong appreciation that hurt the export sector and encouraged rampant corruption in the allocation of increasingly valuable import permits. Finally, at the precise moment Peron was delivering this speech –mid 1947– the first signals of an impending currency crisis started to become evident. The analysts at the US embassy noted in their communications to Washington:

All indications are that the financial and economic situation is becoming worse rather than better. Inflation is becoming more and more evident and is being accentuated by shortages of certain foodstuffs, especially potatoes, and also by the current gasoline shortage... Since the beginning of the year, a feeling of uncertainty has been evident in the business atmosphere. It is generally felt that labor is getting somewhat out of control and in addition to the inflation caused by increases in wages, production has fallen at an alarming rate... The Argentine Government recently became suddenly aware of its dwindling dollar balance and has placed restrictions on remittance abroad in foreign currency. Port congestion, decreasing production, the gasoline shortage, precipitate prices, restrictions on

importations and on foreign exchange are factors which have contributed greatly to a general undermining of confidence in the Perón government and constitute the principal source of worry for the administration at the present time (Department of State, 1972, p.205-209).

It took only twelve months for Miranda's credit bubble to burst. It was the predictable outcome of financing a plan that sought to achieve mutually inconsistent goals financed with deficit financing and loose credit policies. Unlike Schacht's Mefo-Bills scheme, in which money was issued against the actual production of goods, in Miranda's scheme, money was issued to finance the government's growing off-budget deficits and subsidized loans to the private sector (particularly individual mortgages and protected manufacturers).

Despite his lack of academic background, Miranda followed policy prescriptions closely resembling those suggested by Abba P. Lerner in *The Economics of Control* (1944). In Miranda's view, inflation was the consequence of, first, the war, and second, an economic blockade imposed by the US, both of which had prevented the country's manufacturers from acquiring the intermediate goods and the machinery they needed to increase output (Miranda, 1948, p.71). Such explanation squared well with the regime's anti-Yankee rhetoric. In his speeches Perón explained the surge of inflation in similar terms. From 1943 to 1948 the Argentine population had consumed "three and a half times what it consumed five years before. According to statistics, the production of 1948 is the same as that of 1943. This imbalance is what creates the phenomenon of inflation." But in Perón's view there was nothing to worry about. Inflation was just a "natural occurrence in any period of economic bonanza" (Perón, 1949, Vol.I, pp.148, 184). The expansion of the money supply had to be weighed against "the satisfaction of the needs of the Argentine masses." Predictably Peron also blamed "foreign agents" (*ibid.*, Vol.I, p.356). In another speech he argued that having the peso backed by gold did not make sense because in Argentina money "was not a measure of value" as in "capitalistic" economies but a public service like the provision of water. If there was "more business, more currency" would be needed, and vice versa (*ibid*, Vol. II, p.228). Not surprisingly, by 1949 gold and hard currency reserves represented less than a quarter of the monetary base (violating the statutory limits of the Central Bank). In 1946 they had exceeded Argentina's it by 65%.

According to official statistics, inflation increased from an average of 2.2% p.a. in 1939-1944 to 31% in 1949. But this number underestimated the true debasement of the currency. First, given that the government imposed strict price and rent controls, the CPI was not a true measure of the actual cost of living. After 1947 scarcity and rationing became the norm. Second, the ratio of gold reserves to the monetary base dropped from 130% in 1945 to less than 50% in 1949, while the value of one US dollar in the black market tripled during that same period. By September 1955, only 22% of the monetary base was backed by gold and hard currency reserves.

During 1946-1955 the effective interest rate on government bonds averaged 3.1%. Given that the inflation rate averaged more than 20%, in real terms the government borrowed money at less than zero. There was no magic here either. One particularly perverse way of accomplishing this objective was by forcibly placing government bonds yielding rates of between 2.5% and 4% per annum in the state managed pension plans. Approximately 85% of the public financing needs accumulated between 1946 and 1955 were financed with this method. What Perón giveth in wages, he taketh a way by diluting pensions. If the Argentine Treasury had paid interest rates that at least kept pace with inflation, by the end of 1955 total public debt would have exceeded 100% of GDP.²²

Perón's misguided financial policies achieved one of Keynes' dreams: "the euthanasia of the rentier". They also destroyed the domestic capital markets and eliminated it as a source of genuine long term funding for the government. Without it and access to foreign borrowings to finance the deficit, the government had no option than to pursue inflationary credit policies and/or find devious ways of confiscating the accumulated savings of generations of Argentine workers. Given that the annual inflation rate during this period averaged 20% (with a peak of 38% in 1951) the economic losses suffered by savers and pensioners were enormous. Keynes couldn't have devised a more ingenious way of "euthanizing" the rentiers. Another unintended consequence of financial repression was capital flight. The destruction of the domestic capital market, ensured that future governments would have to resort to monetization to fund recurrent fiscal deficits.

²² Financial repression was common in other countries to reduce the high level of debt incurred during the war. However, the magnitude of the expropriation of savers were lower than in Argentina.

Peronism refuted the notion that governments face no financial constraints and can print money without generating inflation. As Ludwig von Mises had warned in 1923 when Germany struggled with hyperinflation: “If the practice persists of covering government deficits with the issue of notes, then the day will come without fail, sooner or later, when the monetary systems of those nations pursuing this course will break down completely” (von Mises, 1978, p.5). In Argentina it did break completely.

Peronism also refuted the notion that inflation results from the class struggle inherent in capitalism. In fact, with Perón’s policies those struggles were meant to disappear, particularly given the generous nominal wage increases of the first two years of his presidency. Perón turned wage levels into a political decision and in this way he broke their natural link to productivity. With this decision he not only distorted and degraded democratic institutions but also made it impossible for Argentine industry to be competitive (and thus made protectionism inevitable).

However, magical monetary thinking quickly reared its ugly head. By early 1948 the economy was already experiencing production bottlenecks, a severe dollar shortage and rampant inflation. In May the Central Bank suspended transfer of dollars abroad. The decision of the US to exclude Argentina from the Marshall Plan was the last nail in the coffin of Perón bid to turn Argentina into a global power. In January 1949 year he fired his “finance czar” and a months later he reluctantly accepted a loan from Uncle Sam to avoid a balance of payments crisis (via the Exim-Bank). The Peronist fantasy was over. Within a decade Brazil and Mexico would surpass Argentina in terms of GDP. From then on it was downhill. The worst legacy of Peronism was path-dependence. By implementing similar policies to those advocated by MMTers today, Perón put the country on a path of economic self-destruction from which the country was never able to stray from.

5. Conclusion

In recent times MMT has received increased media attention and garnered the support of the main leaders of the left wing of the US Democratic Party. MMT’s popularity has been immune to consistent criticism by mainstream economists. Some critics have argued that MMT-like policies have been implemented for decades in several emerging market countries with dismal results. Whether MMTers like it or not, their policy recommendations naturally appeal to

populist politicians. Populism is about pretending to solve structural problems with simplistic, costless and arbitrary measures that are predicated on the assumption that society faces no real or financial constraints. The experience of Argentina suggests that if fiscal and monetary anomie becomes the norm, the inevitable results are higher inflation, lower growth and increased macroeconomic instability.

As a result of supply shock provoked by the 2020 coronavirus pandemic governments around the world have launched massive unprecedented fiscal and monetary stimulus packages. A global flight to quality is providing US policymakers, and will likely continue to provide at least in the medium term, substantial degrees of freedom in monetary and fiscal policy not available to any other country. However, from a policymaking perspective the US has entered uncharted territory. The last time the American economy experienced a massive supply shock was in 1973. The fiscal and monetary expansion that followed was also unprecedented. The annual rate of growth in M2, which had averaged 7% during the sixties, increased to an average of 10% between 1973 and 1977. As to the primary fiscal deficit, in 1975 it reached 3.4% of GDP compared to an average surplus of 0.1% in the previous decade. These numbers pale in comparison with what we are seeing today. If history is any guide, the results of this grand scale monetary and fiscal experiment are not hard to predict.

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