



Modern Monetary Theory and Employer of Last Resort in Colombia

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Abstract: This paper critically examines the applicability of Modern Monetary Theory (MMT) in Colombia, focusing specifically on the Employer of Last Resort (ELR) program as a possible development policy. Employing a center-periphery analytical framework, the study underscores the limitations of MMT in peripheral economies, especially those stemming from constrained monetary sovereignty, external dependencies, and persistent structural challenges. While MMT offers a compelling macroeconomic perspective, its core policy tools—particularly the ELR—fall short in fostering long-term structural transformation. Instead, the paper argues that industrial policy is a more effective and sustainable development strategy, drawing on insights from structuralist economic theory and the experiences of East Asian economies. As a peripheral country, Colombia has a production structure that depends on imports and faces significant structural bottlenecks, including its reliance on commodity exports, limited capital accumulation, and its external debt. These factors heighten the country's vulnerability to macroeconomic instability and raise concerns regarding the viability of expansive monetary and fiscal policies. The paper concludes that, although the ELR program can be used as a short-term solution for economic crises and MMT offers valuable fiscal and monetary insights, Colombia's successful implementation of the program requires long-term strategies, such as coherent industrial policies, to promote sustained economic development.

Keywords: Colombia, economic development, peripheral economies, employer of last resort, structural constraints, Modern Monetary Theory.

JEL Classification: F43; O11; O23; O54; P16.

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Teoría monetaria moderna y empleador de última instancia en Colombia

Resumen

Este artículo examina críticamente la aplicabilidad de la teoría monetaria moderna (TMM) en Colombia, con especial énfasis en el programa de empleador de última instancia (EUI) como una posible política de desarrollo. A través de un enfoque analítico centro-periferia, el estudio pone de relieve las limitaciones de la TMM en economías periféricas, especialmente aquellas derivadas de una soberanía monetaria restringida, dependencias externas y desafíos estructurales persistentes. Si bien la TMM ofrece una perspectiva macroeconómica convincente, sus herramientas de política fundamentales –en particular el programa EUI– resultan insuficientes para promover una transformación estructural a largo plazo. En su lugar, el artículo aboga por la política industrial como una estrategia de desarrollo más eficaz y sostenible, apoyándose en los aportes de la teoría económica estructuralista y en las experiencias de las economías del Este de Asia. Como país periférico, Colombia presenta una estructura productiva dependiente de las importaciones y enfrenta importantes cuellos de botella estructurales, entre ellos la dependencia de las exportaciones de materias primas, la limitada acumulación de capital y el peso de la deuda externa. Estos factores incrementan la vulnerabilidad del país a la inestabilidad macroeconómica y ponen en duda la viabilidad de políticas fiscales y monetarias expansivas. El artículo concluye que, si bien el programa EUI puede ser útil como instrumento a corto plazo para mitigar crisis económicas y la TMM ofrece valiosos aportes fiscales y monetarios, su implementación exitosa en Colombia requiere estrategias complementarias a largo plazo –principalmente políticas industriales coherentes– que orienten el crecimiento económico hacia un verdadero desarrollo sostenible.

Palabras clave: Colombia, desarrollo económico, economías periféricas, empleo de última instancia, restricciones estructurales, teoría monetaria moderna.

INTRODUCTION

The Modern Monetary Theory (MMT) is based on the powerful idea of monetary sovereignty. According to this theory, states can fund their budgets unlimitedly as they can issue their own currency (Mosler, 2018). In other words, unlike households, states are not only currency users but also currency issuers, creating money “out of thin air” and thereby able to buy every commodity priced in such a currency (Wray, 2012). On the other hand, taxes are collected not to fund the state but to create demand for the government’s currency¹, which is the only one allowed by law to pay taxes and fines, among other collective obligations (Wray, 2012). Along these lines, in the MMT view, there are no hard-budget constraints, but rather, constraints are self-imposed by the institutional framework. The economic issue is not how an economy will pay for goods and services but how an economy will “resource it”, that is, how it will produce them (Kelton, 2020, pp. 234-235).

MMTers underscore the importance of monetary sovereignty and warn of the dangers of indebtedness in a foreign currency (Tymoigne & Wray, 2013) and overspending in the domestic currency beyond the real resources’ availability (Kelton, 2020). In this sense, MMT acknowledges the significant hurdle that peripheral economies face due to their lack of real resources, such as capital and technology. Additionally, their monetary sovereignty, or the capacity to issue currency, is substantially lower than that of industrialized countries due to their level of productive development. At this point, the MMT approach to investment is crucial for peripheral economies. Unlike traditional economic thought, MMT posits that investment leads to savings, not the reverse. Savings are a real variable resulting from investment, as labor is compensated for producing capital goods that wage earners cannot immediately consume. This abstention from present consumption paves the way for future production of consumer goods (Mosler, 2018). Allocating resources to capital-building activities is essential

¹ Taxes also are collected to control inflation among other policy objectives bus.

for peripheral economies to generate higher output in the future, as capital formation complements their abundant supply of labor.

If resources set the limit for monetary policy, investment becomes the crucial factor that broadens these resources and creates room for monetary expansion aimed at achieving full employment. To combat unemployment, proponents of MMT support an Employer of Last Resort (ELR) program, whereby the government employs the jobless workforce at a minimum wage to produce public goods that are not profitable for the private sector, and even for import-substitution production in developing countries (Kaboub, 2007). Thus, in theory, the ELR program can also be used for investment activities. In the MMT literature (Tymoigne & Wray, 2013; Wray, 2015), the ELR program is proposed as a mechanism to get full employment using functional finance (Lerner, 1955). This program is an automatic stabilizer mechanism in the economic cycle which will expand public employment during contraction, and for the contrary, will shrink public hiring in the recovery as the private sector absorbs the labor stock willing to work. The labor price will be socially established at a fixed basic wage, hence the private sector can hire workers at a mark-up over the ELR fixed wage. One of the benefits of this program lies in the reduction of the depreciation of human capital caused by unemployment and form skills at work by learning by doing

process. By definition, the types of jobs that the ELR program would create are those that are not profitable for private enterprises, such as “companions to the elderly, public school classroom assistants, safety monitors, low-income housing restoration engineers, environmental safety monitors, daycare assistants for ELR workers, community and cultural historians, and ELR artists or musicians” (Kaboub, 2007, p. 4). The funding of this program is not a problem as the state can issue the currency unlimitedly as much as it is decided. Thus, unemployment is a government policy and any limitations on the public budget are essentially self-imposed and stem from a fundamental misunderstanding of money.

The aim of this paper is to critically examine the challenges of implementing a MMT policy approach in the Colombian context from a centre—periphery perspective. It considers Colombia’s structural characteristics as a peripheral economy, drawing on contributions from early structuralist thinkers such as Ragnar Nurkse, W. Arthur Lewis, Raul Prebisch, Hans Singer, and Gunnar Myrdal (cited by Chenery, 1975). To achieve this objective, a literature review is conducted to identify the key challenges that MMT must address in peripheral economies. The Colombian case is analyzed with particular attention to capital accumulation and the external sector, two components highlighted by the literature. Additionally, the ELR program

is examined in relation to industrial policy and structural transformation. This paper contributes to the ongoing economic debate on the applicability of MMT to peripheral economies, with a specific focus on Colombia. Specific arguments are illustrated with historical references where necessary.

The article is organized as follows: The second section presents a literature review of MMT in developing countries. The third section outlines the methodology. The fourth section examines the case of Colombia, focusing on the MMT full-employment program. The fifth section discusses the industrial policy argument as a key strategy for developing economies. The article concludes in the sixth section.

LITERATURE REVIEW

The reviewed literature identifies several case studies on the application of MMT prescriptions in peripheral countries. For instance, [Edwards \(2019\)](#) analyzed the implementation of what he termed “MMT-related policies” in various Latin American nations and observed that these led to “major macroeconomic disasters” (p. 3). Specifically, Edwards noted that historically, populist regimes in Latin America employed extensive central bank-financed fiscal expansions. The common features of macroeconomic populism in this region included efforts to redistribute income through high fiscal deficits and expansive monetary policies, accom-

panied by significant wage increases unsupported by productivity gains. Ultimately, these measures resulted in runaway inflation, massive currency devaluations, and significant real wage declines. [Edwards \(2019\)](#) further delineated four phases of “macroeconomic populism.” The initial phase is marked by government expenditure hikes and income transfers funded by central bank money, increased government debt, and foreign resources. This phase creates an economic boost, often accompanied by wage increases, temporary stability through imports, inventory depletion, and price controls. The second phase emerges with the depletion of international reserves and a scarcity of foreign exchange. In response, governments resort to controls over exchange rates and prices to address imbalances, while central banks continue financing deficits. This leads to an inflationary spiral and the development of black markets. In the third phase, inflation accelerates—sometimes reaching triple or quadruple digits—accompanied by increased fiscal dominance and rapid currency depreciation. At this stage, public confidence in the domestic currency erodes, and transactions shift toward foreign exchange. The final phase involves the replacement of populist regimes, often through coups or elections, leaving successor governments with fragile economies characterized by high inflation, depleted reserves, and defaulted debts. Real incomes and wages often

fall below their levels at the onset of populist policies.

Edwards' (2019) analysis, based on the experiences of countries like Chile, Argentina, Brazil, Nicaragua, Peru, and Venezuela, underscores the risks of fiscal-deficit policies. However, his conclusions raise concerns about neglecting non-MMT-related exogenous factors. For instance, the political turmoil in Chile and Venezuela played a significant role in shaping their economic outcomes. Edwards (2019) attributes instability in these countries primarily to MMT-related policies, underestimating the impact of political conflicts tied to wealth and income redistribution. In Chile, for example, the destabilizing influence of the US government and internal opposition undermined Allende's socialist project, culminating in a military coup (National Security Archive, 2020). Similarly, Venezuela's political turmoil can be traced back to the attempted coup of 2002 and the imposition of sanctions (U.S. Department of the Treasury, 2019).

Silva and Montani (2023) offer a complementary perspective by studying Brazil's policy space and its potential to adopt MMT-related policies for achieving full employment. They identify the key features of peripheral economies, such as higher and more volatile interest rates, fluctuating foreign exchange rates, and limited fiscal policy space. Despite these constraints, Brazil has reduced its foreign currency indebt-

edness, which, according to Silva and Montani, provides it with some policy space. The authors emphasize the role of international reserves and foreign debt as critical variables for policy space. They also highlight the institutional framework of austerity as a significant barrier to implementing MMT-related policies. Fiscal rules, like Brazil's Spending Ceiling, reflect self-imposed constraints driven by concerns over losing investor confidence in a liberalized and globalized financial environment.

Montoya (2023) extends this discussion by empirically examining Colombia between 2007 and 2018. He asserts that coordination between the treasury and central bank, as envisioned by MMT, exists despite institutional restrictions. This coordination enables the possibility of achieving full employment. Montoya (2023) cites Keynes and Wray to argue that income stems from spending and investment, not savings. Banks create loans out of thin air, which are repaid with interest once the economy generates surplus. Governments can also implement job guarantee programs to absorb unemployment, fostering growth in areas where the private sector does not invest. For peripheral economies like Colombia, Montoya (2023) stresses the importance of structural changes to reduce reliance on imports while pursuing economic growth. This aligns with broader development literature, which addresses the challenges of surplus labor and insufficient capital in these economies.

De Paula et al. (2017) contribute to this discussion by examining the hierarchical and asymmetrical structure of the international monetary system. They argue that the system is organized around the US dollar, the most liquid and globally demanded currency. Core countries possess currencies with intermediate liquidity, while emerging economies' currencies lack liquidity. Financial globalization, characterized by high capital mobility and flexible exchange rates, exposes emerging economies to significant volatility in capital flows, exchange rates, and interest rates. According to De Paula et al. (2017), this volatility exacerbates the vulnerability of peripheral economies. During global financial downturns, these economies often experience capital outflows and devaluations, with their currencies and financial assets being the first to be sold off, given their lower-end position in the currency hierarchy. The authors stress that a country's position in the global currency hierarchy is closely tied to its production-export capabilities and external debt levels. Peripheral economies face limitations in issuing globally demanded currencies, constraining their ability to implement expansive Keynesian policies. Thus, the primary victims of global investors' "flight to quality" are the emerging economies with high exchange rate volatility and consequently exchange rate pass-through effects. Ultimately, the value of a currency and its position in the global currency hierarchy depends on the production-export capability:

A low level of net external debt, combined with export surpluses, may be able to create medium term currency appreciation expectations, which would come out with an increasing demand for this currency (...) The subsequent higher growth rates, together with currency appreciation expectations, may in the long term enable this peripheral currency to climb the global hierarchy, allowing gradually the country to issue external debt in its own currency. A pre-condition for this rise, however, is that there are other economies absorbing cumulative trade and current account deficits. (De Paula et al., 2017, p. 12)

Prates (2020), in a literature review, highlights the short-term nature of demand for peripheral currencies, in contrast to the long-term demand for central currencies such as the US dollar—the key currency of the International Monetary and Financial System—which is viewed primarily as a store of value rather than a vehicle for speculation, as is often the case with currencies issued by peripheral economies. Such key currency is the outcome of a supposed natural selective process driven by demand which in turn stem from network externalities and economies of scale. However, Prates (2020) also underlines the importance of the state power relations in shaping such a currency hierarchy, which its main function is to work as a mean of accounting and is issued by the hegemonic state (the United States).

[Aboobaker and Ugurlu \(2023\)](#) build on these insights, emphasizing the adverse impact of currency depreciation on inflation in developing countries. They argue that achieving full employment without addressing structural constraints can exacerbate inflation and trade balance issues. Developing nations often resort to foreign currency borrowing due to underdeveloped domestic financial markets and higher interest rates, further limiting fiscal policy options. [Aboobaker and Ugurlu \(2023\)](#) also critique MMT's perception of trade. While MMT views imports as beneficial and exports as costly, the authors argue that this perspective overlooks the long-term implications of trade deficits and external debt. They highlight the importance of structural policies that prioritize capital accumulation and address sectoral disparities in peripheral economies. Finally, [Aboobaker and Ugurlu \(2023\)](#) address the challenges of implementing Employment of Last Resource (ELR) programs in developing economies. They caution that these programs may strain fiscal and monetary policies, triggering inflation and trade imbalances. They also stress the importance of resource allocation for capital accumulation, suggesting that policies must balance current consumption with investment in future growth.

[Cruz and Mario \(2021\)](#) argued that the ELR program is affordable in peripheral economies, highlighting benefits such as its role in disciplining the distributional struggle over income, as ELR

employment competes for labor with non-ELR private sector employment. Moreover, unemployment and poverty, they contend, should not be used as mechanisms to control imports, foreign exchange demand, or inflation as proposed by the mainstream economic approach. However, although these authors acknowledge the importance of [Vernengo and Pérez \(2019\)](#) echo these concerns, highlighting the balance of payments constraints faced by developing countries. They argue that the need for foreign currency to import essential goods and service debts limits fiscal expansion. Devaluations, while addressing short-term balance of payments issues, can lead to recessions and reduced imports when capital flows and reserves are insufficient.

In conclusion, the literature highlights two primary constraints for peripheral economies: real constraints related to factor endowments and balance of payments constraints tied to technological imports and capital goods. As [Diamand \(1977\)](#) observed, peripheral economies often face bottlenecks that require targeted policies to overcome structural challenges. We will explore how these constraints manifest in Colombia, a developing Latin American economy.

METHODOLOGY

This article employed a mixed-methods approach, combining a literature review (as previously discussed) with statistical analysis to assess the appli-

cability of Modern Monetary Theory (MMT) in Colombia.

First, an extensive literature review on MMT in peripheral economies was conducted using academic databases such as Redalyc and Scopus, complemented by tools and platforms like Google Scholar, ResearchGate, and SciSpace AI. This review included previous studies that analyze the implementation of MMT-related policies in various Latin American contexts, as well as specific examples illustrating the challenges and limitations of these policies in countries with structural characteristics similar to those of Colombia. Additional articles were identified through references cited in other works, allowing for a deeper understanding of the subject. The literature review is framed within a structuralist approach, considering Colombia's economic characteristics and its vulnerability to macroeconomic instability.

In addition to the literature review, the study incorporates a statistical analysis of key economic indicators relevant to Colombia. These include dependency on commodity exports, capital constraints, and external debt. By integrating statistical data, the study contextualizes theoretical findings within the country's economic reality and assesses the feasibility of MMT policies, particularly the Employer of Last Resort (ELR) program.

Together, this methodology aims to provide insights for both academic and policy audiences, highlighting the challenges and opportunities of applying MMT in Colombia. The study underscores the necessity of complementing MMT with effective industrial policies to promote sustainable economic growth. It is important to clarify that, in this study, the terms *periphery* or *peripheral economy* refer to stages prior to achieving economic development and encompass classifications such as *developing economies*, *emerging economies*, and *underdeveloped economies*.

RESULTS

This section argues that the ELR program is insufficient for promoting economic development, as the Colombian economy lacks adequate capital and remains heavily reliant on a volatile external sector dominated by international natural resource markets. Consequently, an increase in employment and the monetary base would raise aggregate demand, which—due to the country's import-oriented productive structure ([Gutiérrez Naranjo, 2023](#)) and its peripheral condition marked by structural bottlenecks ([Diamand, 1977](#))—is likely to result in a significant rise in import volumes, thereby exerting pressure on the external balance and increasing debt denominated in foreign currency. This, in turn, may lead to currency depreciation and inflationary pressures—driven by exchange rate pass-through effects—without a

corresponding expansion in domestic productive capacity or structural transformation.

It is important to clarify that capital accumulation is widely recognized as crucial for economic development. From a classical economic perspective, employment results from capital accumulation (Smith, 2018; Ricardo, 1997; Marx, 1976), and technical change arises endogenously from competition among individual capitalists (Marx, 1976). Therefore, employment levels are determined by the volume and quality of fixed capital, which includes means of production and embodies technical change. Empirical evidence supports a positive relationship between employment levels and the stock of fixed capital globally (Duque, 2023a), including specific evidence for the Colombian context (Duque, 2023b).

To examine Colombia's capital accumulation, we will analyze GDP, investment, and the growth of the stock of fixed capital. Additionally, we will explore the external sector, considering that peripheral economies face external constraints (Thirlwall, 1979, 1997, 2011). Their technological dependence on industrialized countries (producers of capital and intermediate goods) has been acknowledged since Prebisch's (1949) center-periphery framework and in the contributions of Singer (1950) and Myrdal (1959), and more recently in the context of Global Value Chains by

Lauxmann et al., (2021) and Torres and Ahumada (2022).

Colombia's Resource-Based Growth Context

The MMT approach to full-employment policies is challenged by the reality of peripheral economies, as inflation pressures can arise before full employment is achieved in these regions. Diamand (1980) referred to them as "bottlenecked economies" (p. 21), noting that external bottlenecks, such as a lack of foreign exchange, impede full employment. Thirlwall further developed this idea, emphasizing the importance of external demand as a driver of economic growth. Even Keynes (2013) pointed out that an economy might not reach full employment due to the decreasing returns on capital stock.

Thus, inflation tends to be structural, as explained by the German Balance of Payments School and Latin American Neostructuralists. These two approaches argue that price hikes are caused by disequilibria in the external sector, and that the fiscal deficit is a consequence of inflation rather than a cause (Camara-Neto & Vernengo, 2004). Diamand (1980) clarifies that the fiscal deficit results from inflation, as spending occurs at current prices while taxes are collected at the previous period's price level.

According to Ocampo (2021), from a structuralist perspective, both aggre-

gate demand and inflation are primarily determined by external sector dynamics. As a result, public decision-makers are constrained by the dominance of the balance of payments; in other words, the short-term cycles of peripheral economies are heavily influenced by foreign exchange flows. Consequently, fluctuations in international commodity prices significantly affect these countries' GDP performance. [Prates \(2020\)](#)

highlights the financial dimension of these fluctuations, which pose macroeconomic challenges: during booms, global investors' demand for peripheral currencies expands, while in busts it contracts. Ultimately, a "flight to quality" prevails—investors retreat to central currencies, triggering currency depreciations and inflation in peripheral economies through exchange-rate pass-through effects (p. 505).

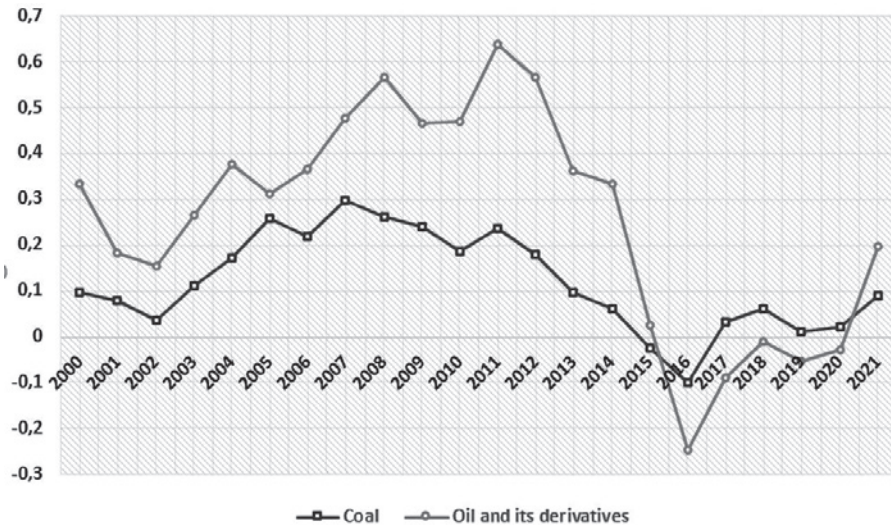


Figure 1. Four-Year Moving Average of Colombia's Commodity Export Growth Rates

Source: the author using FOB data from DANE (National Administrative Department of Statistics). The percentage changes were calculated in US dollars.

These structural vulnerabilities are evident in the dynamics of Colombia's external sector, which is characterized by an import-oriented productive structure. The country's international trade has been marked, on the one hand, by the importation of capital and intermediate goods, and on the other, by the

export of raw materials and primary products as empirically evidenced by [Gutiérrez Naranjo \(2023\)](#). This pattern has resulted in an unstable evolution of the external sector, largely driven by natural resource exports such as coal and oil. The economy experienced a resource boom between 2003

and 2011—when the value of exports peaked—characterized by a sharp increase in the production of these commodities (bp Statistical Review of World Energy) and international prices, which was reflected in a surge in export revenues. After the boom, the value of raw material production declined significantly.

Since the 1990s, Colombia has become increasingly reliant on international trade, with both exports and imports

rising sharply (Figure 2, Panel A). However, the trade balance turned negative in 2014, following a decline in international coal and oil prices. This shift contributed to an increase in external debt (Figure 2, Panel B) and reduced policy autonomy in the MMT sense, as such debt is contracted in foreign currency. For further discussion on the relationship between international oil prices and foreign debt, see the stylized facts presented by [Gutiérrez Naranjo \(2023\)](#).



Figure 2. Colombia's External Sector

Source: figure made with data from DANE

Figure 3 shows that Colombia's investment and GDP growth rates (Panel A) followed a similar trend to resource production (Figure 1). Both variables accelerated during the resource boom

(2003—2011) and contracted once the boom ended. Consequently, capital accumulation growth persisted only for the duration of the resource boom (Figure 3, Panel B).

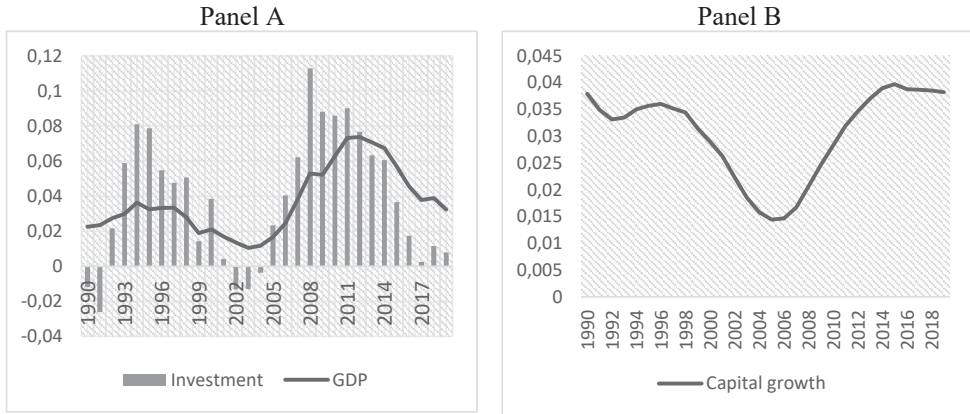


Figure 3. GDP, Investment and Capital Stock Growth Rates

Source: figure made by the author with data from Penn World Table 10.0

After the resource boom, less foreign exchange came into the economy, causing the external debt to rise faster than the domestic debt and approach its levels (Figure 4). The external debt must be paid in dollars, meaning it is settled with exports. According to these styl-

ized facts, during the period studied, the performance of the Colombian economy relied on resource activities and was highly vulnerable to fluctuations in international commodity prices. That is to say, the debt settlement depends on unstable commodity-exports.

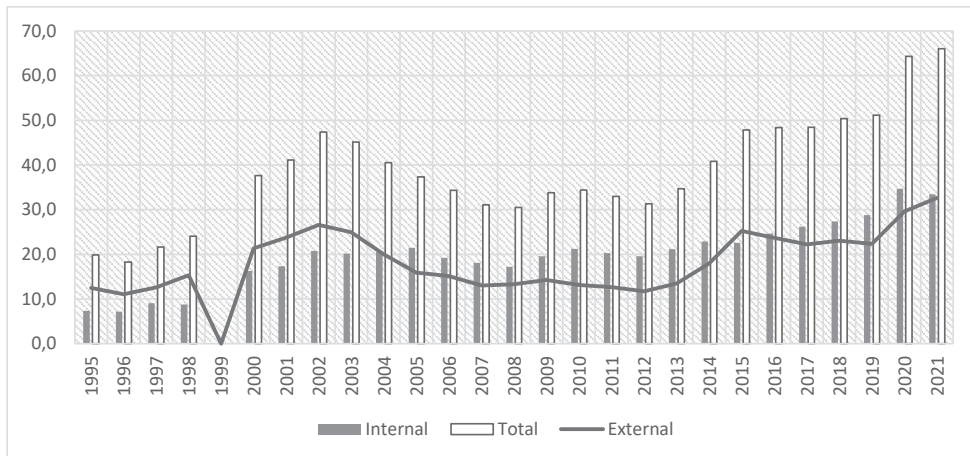


Figure 4. Internal and External Debt as a Percentage of GDP

Source: Figure made by the author of the article with data from Banco de la República de Colombia.

This evidence suggest that Colombia faces important challenges to adopt the prescriptions of MMT as it is a price-taking, small open economy subjected to external constraints as it lacks capital, and its exports are commodity-based.

The Limits of the Employment of Last Resource Program

Pettis (2019) identifies three fundamental ways a government can allocate funds: (i) transfer wealth to the rich, (ii) provide resources to the poor, and (iii) invest in infrastructure. The ELR program aligns with the second category as it seeks to reduce unemployment by offering jobs at a fixed wage for non-profitable private activities. While it can also be utilized for infrastructure development (Kaboub, 2007), the program predominantly focuses on addressing social needs. Advocates of MMT argue that during periods of private sector stagnation, full employment can be achieved through public employment in social sectors such as elderly care, classroom assistance in public schools, cultural services, and similar areas (Kaboub, 2007, 2008). Although these areas are vital to societal well-being, a developing economy also requires the production of goods such as machinery, equipment, motor vehicles, construction materials, fertilizers, and chemical products. These goods are essential for scaling up productive capacity and reducing

import dependence, thereby conserving foreign exchange.

The ELR program primarily targets full employment during economic downturns but operates within a framework where market forces drive economic development. MMT advocates for a market-oriented economy, emphasizing profit-driven production. Consequently, the ELR program's fixed wage, set by decree rather than by market mechanisms, does not reflect labor's marginal productivity as posited by the neoclassical framework. Lewis (1954) illustrates that industrialization within a market economy requires a labor force that is compensated according to its productivity, which incentivizes workers to join high-productivity capitalist sectors. In his model, wage differentiation is a crucial factor in mobilizing the workforce to achieve industrial diversification. Historical evidence from the USSR highlights this dynamic; even under a state-planned economy during Bolshevik rule, industrial wages exceeded rural incomes—a disparity famously known as the “price scissors” (Preobrashensky, 1965). It is difficult to envision how an ELR program could effectively establish diverse industries capable of producing all the industrial goods required to fill gaps left by the private sector due to its lack of competitiveness.

Furthermore, wages play a significant role in driving innovation dynamism. There is a positive relationship between

capital accumulation and labor demand, but a negative relationship between labor productivity and employment, as capitalists innovate to save on wage costs. High wages, therefore, encourage the adoption of labor-saving innovations² (Duque, 2023a). From this perspective, wages are fundamental to economic development. However, a fixed-wage program for temporary activities in a depressed economy appears ill-suited to addressing long-term development requirements.

The ELR program's temporary nature underscores its limitations as a tool for fostering industrialization. While it may alleviate unemployment, it lacks the ambition to create productive capacities, drive structural transformation, or stimulate endogenous technological development. Structural transformation is critical for mitigating inflation, trade deficits, and balance of payments crises in peripheral economies. Although the ELR program can help preserve human capital by preventing its erosion during unemployment (Kaboub, 2007), the high levels of underemployment and informality often observed in peripheral economies suggest that the labor force lacks the skills necessary for integration into a modern, high-productivity sector.

Achieving full employment does not necessarily guarantee structural transformation, as evidenced by Cuba's experience. After the "Special Period"

following the Soviet Union's collapse in 1991, Cuba achieved near-full employment with an average unemployment rate of 2.2% between 2004 and 2018 (World Bank, s.f.). Despite political efforts to ensure employment through training and hiring, the Cuban economy struggled to diversify and remained technologically dependent (Tsokhas, 1980; Ritter, 1990). This case illustrates that full employment, even under socialist planning models, does not automatically translate into economic diversification or technological advancement (Tsokhas, 1980).

Peripheral economies have historically been characterized by structural heterogeneity—a dual economic system marked by underemployment and productivity gaps between sectors due to uneven diffusion of technological progress (Mancini & Lavarello, 2013; Torres & Ahumada, 2022). In Colombia, for instance, informality affects approximately 50% of the labor force. Imported technology is often adopted mechanically, with its benefits failing to extend across the economy because it is designed for capital-intensive rather than labor- and resource-intensive production (Torres & Ahumada, 2022). This structural asymmetry, a concept highlighted by structuralist economists, reflects the challenges of achieving sustainable development in Latin America (Lauxmann et al., 2021; Torres & Ahumada, 2022).

² The economic history of the United States is a recurrent case of innovation driven by high wages (Vernon, 1966).

Colombia's economic challenges extend beyond deficits in capital and technology; they are further compounded by persistently high levels of labor informality. Employment in the informal sector—characterized by low productivity, minimal technological integration, and limited adherence to institutional norms—provides subsistence for a significant share of the population (Uribe & Ortiz, 2018). According to Uribe and Ortiz, unlike core economies, peripheral economies such as Colombia face qualitative disequilibria rooted in informality, which adversely impacts employment quality and living standards. Their dual-economy general equilibrium model shows that surplus labor, unable to find employment in the modern sector, is absorbed by the informal sector, which struggles with limited diversification and competitiveness. This finding suggests that MMT-inspired ELR programs may not adequately address the structural issues of peripheral economies with underdeveloped modern sectors incapable of accommodating rising labor supply.

Given this context, while an ELR program financed through public spending may increase employment, expand the monetary base, and stimulate demand for existing goods and imports, it is unlikely to generate structural transformation. Instead, such a program risks functioning merely as a counter-cyclical recovery tool, without addressing the underlying productive constraints of the Colombian economy, which is

characterized by an import-oriented productive structure. An increase in employment and the monetary base will raise aggregate demand, which—due to the country's structural dependence on imports—will likely result in a significant rise in imports, thereby exerting pressure on the external balance. This, in turn, may lead to currency depreciation and inflationary pressures, without a corresponding expansion in domestic productive capacity.

The extensive literature on economic development highlights the root causes of the periphery's challenges, including capital shortages (Nurkse, 1953), low industrialization levels (Prebisch, 1949; Singer, 1950), and the technological and productive underdevelopment that defines their position within global value chains (Lauxmann et al., 2021; Torres & Ahumada, 2022). Within this context, the ELR program appears incompatible with a development strategy focused on industrialization in Colombia. As a demand-side policy, it cannot replace supply-side measures aimed at capital accumulation, technological progress, and modernizing traditional sectors to transition toward capitalist production. According to structuralist thought, Colombia's economic development requires policies that promote technical innovation, technological upgrading, and comprehensive structural transformation to overcome its deindustrialized and resource-dependent equilibrium (Murphy et al., 1989; Sachs & Warner, 1999).

Industrial Policy as a Strategy for Economic Development

If we define economic development as the capacity of an economy to grow through the generation of new dynamically productive activities (Ocampo & Martínez, 2011), historical experiences of economic development demonstrate that such a sustained progress in peripheral economies requires a comprehensive set of measures and programs aimed at overcoming bottlenecks and building productive capabilities. These efforts must be framed within a broader strategy known as industrial policy (IP). While a full-employment program may serve as a complementary measure, it is insufficient on its own to drive structural transformation.

Economic development is a complex process of structural transformation that requires the development of the ability to increase domestic production and substitute a broad range of imported goods. IP, defined as a set of government interventions that deliberately support specific industries and firms to enhance productivity and technological advancement (Hauge, 2020), has played a crucial role in the experiences of Newly Industrialized Countries (NICs) in East Asia (Lall & Teubal, 1998)—such as Japan and South Korea (Kagami, 1995)—as well as in the earlier industrialization of Western economies (Chang, 2003, 2007). These countries successfully implemented IP

as a strategy for technological development by fostering manufacturing capabilities (Amsden, 2004).

In East Asian economies, state support for the private sector was conditional on performance within a framework of incentives and discipline—often described as a “carrot and stick” approach (Chang, 2007). For example, in Taiwan, government subsidies were highly selective due to excess demand for state assistance. Consequently, firms receiving subsidies were required to meet concrete performance standards that were both measurable and verifiable (Amsden, 2004). In Taiwan, government intervention was instrumental in import substitution and the development of new technologies and products. A range of strategic goods and components were developed with support from public agencies in key industries, including investment in Research & Development (R&D), strategic product selection, and firm selection as key agents of industrialization. Government-led initiatives were pivotal in fostering industries such as CD-ROMs, Liquid Crystal Displays (LCDs), and integrated circuits (Amsden, 2004).

Similarly, Mazzucato (2013) examined the case of the United States, where various government projects led to the development of groundbreaking innovations, including the internet, smartphones, and GPS, among others.

Today, however, the global economy is significantly more integrated than when the early-industrialized nations and NICs first developed their industries. As a result, industrial policy must now operate within an internationally competitive environment, where Global Value Chains (GVCs) play a critical role in economic development (Hauge, 2020). Given these realities, it is difficult to argue that an ELR program—designed to achieve full employment through state hiring at relatively low wages, unrelated to labor productivity, and in competition with private enterprise—could successfully foster the diverse industrial sectors needed for structural transformation in peripheral economies.

Economic development requires substantial investment in R&D, the establishment of publicly funded laboratories, strong public-private partnerships, the strategic selection of priority sectors, and the coordination of multiple actors, including educational institutions, the private sector, and government agencies (Amsden, 2004). Moreover, it demands a broader vision, where government policies extend beyond employment generation to actively shape institutional conditions and build the infrastructure necessary for government efficiency and structural change (Evans & Wolfson, 1996).

Evans and Wolfson (1996) underscore the importance of state capacity in ensuring the efficient allocation of

public budget and the establishment of robust institutions to implement and oversee industrial policies. The success of Japan and Taiwan's industrialization was largely attributed to the effectiveness of governmental bodies such as Japan's Ministry of International Trade and Industry (Mazzucato, 2013) and Taiwan's Industrial Technology Research Institute (Amsden, 2004), which played key roles in orchestrating their respective industrial policies.

Evidently, both MMT and industrial policy challenge the orthodox liberal perspective on economic management. However, rather than being mutually exclusive, they can be complementary, as Cruz and Mario (2021) point out. Further research should explore how industrial policy and MMT can be integrated to address the challenges faced by peripheral economies, providing a more comprehensive framework for sustainable economic transformation and serving as a guide for concrete public policies and development programs.

CONCLUSIONS

This article has critically examined the applicability of Modern Monetary Theory (MMT) in the Colombian context, highlighting its theoretical premises, practical constraints, and the broader structural limitations faced by peripheral economies. While MMT presents an alternative macroeconomic framework that challenges traditional fiscal constraints, its policy prescrip-

tions—particularly the Employer of Last Resort (ELR) program—appear insufficient as a development strategy for economies constrained by external vulnerabilities, technological dependence, and structural imbalances.

A central argument of this paper is that Colombia's economic structure, as a resource-dependent and externally constrained economy, limits the feasibility of unrestricted fiscal expansion as proposed by MMT. The analysis demonstrates that, while advanced economies with strong monetary sovereignty can engage in deficit spending without major risks of currency depreciation, developing economies face structural constraints that reduce their policy space. The historical experiences of Latin American economies, illustrate the risks associated with fiscal expansion financed through monetary issuance, particularly in contexts where external shocks and balance-of-payments constraints exert macroeconomic instability.

Furthermore, the ELR program—a cornerstone of MMT's approach to full employment—is found to be an inadequate mechanism for fostering long-term economic transformation in Colombia. While the program may provide short-term relief from unemployment, it does not address the underlying structural factors necessary for sustained economic growth—namely, capital accumulation, technological progress, and industrial

diversification. The ELR program primarily focuses on low-productivity social services, whereas economic transformation requires strategic investment in productive sectors that enhance technological capabilities and global competitiveness. This is particularly important in addressing the structural bottlenecks associated with import-oriented productive structures, such as Colombia's, which relies heavily on commodity exports.

We argue that industrial policy, rather than MMT-driven demand-side measures, offers a more viable path to economic development in peripheral economies. Drawing on historical evidence from East Asian industrialization, this paper highlights how targeted government interventions in strategic sectors—combined with public—private partnerships and investment in research and development—have proven more effective in achieving long-term structural transformation. Unlike the ELR program, industrial policy is directed toward enhancing productivity, fostering technological innovation, and reducing external vulnerabilities, thereby aligning with the structural needs of peripheral economies. These successful industrialization experiences also relied on the availability of a highly skilled workforce, supported by targeted education and training systems tailored to national development priorities. In this context, it is difficult to envisage how an ELR program—primarily designed to ensure full employment

through state-funded jobs at fixed minimum wages and largely disconnected from productivity goals or sectoral strategies—could replicate such outcomes. While ELR may serve important social and counter-cyclical functions, its capacity to contribute meaningfully to long-term technological upgrading and structural transformation remains limited, unless it is embedded within a broader industrial policy framework.

Ultimately, this paper's findings suggest that, while MMT provides a useful critique of orthodox fiscal policy, its application in peripheral economies requires substantial modifications and complementary policies. Without a robust supply-side strategy focused on industrialization and technological upgrading, a purely demand-driven approach is insufficient. Future research should explore the integration of MMT with structuralist and industrial policy frameworks, ensuring that fiscal expansion aligns with the broader objective of sustainable and inclusive economic development.

Thus, for Colombia and other similar economies, the real challenge is not merely achieving full employment through monetary expansion but ensuring that employment leads to the creation of productive capabilities. Without addressing the deep-rooted structural constraints of the economy, MMT's prescriptions risk becoming short-term stabilizers rather than long-term development solutions.

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DECLARATION OF CONFLICTS OF INTEREST

The author declares no conflict of interest.

DECLARATION OF AI USE

Artificial intelligence tools were used to support academic literature searches (SciSpace AI) and for language and style editing (ChatGPT).

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