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Non-canonical Dutch disease in Mexico: two episodes under contrasting development agendas (1988-1994 and 2018-2025)

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Abstract: This article examines two non-canonical episodes of Dutch disease in Mexico (1988-1994 and 2018-2025), demonstrating that sustained real exchange rate appreciation and manufacturing debilitation can arise absent commodity-driven terms of trade improvements. The first episode originated in exchange rate mismanagement under the *Pacto de Solidaridad Económica*; the second, in financially mediated carry trade dynamics amid elevated interest rate differentials. Drawing on structuralist and new-developmentalist frameworks, we show that both episodes engendered deindustrialization symptoms, stagnant domestic manufacturing output despite resilient exports, transmitted through financial rather than commercial channels, thereby tightening the balance-of-payments constraint on long-term growth.

Keywords: Dutch disease; real exchange rate appreciation; deindustrialization; carry trade; capital inflows; manufacturing exports; balance-of-payments constraint.
JEL Classification: F31; F41; L60; O11; O14.

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INTRODUCTION

The discovery of vast reserves of petroleum in Mexico in the late 1970s, coincident with a rapid increase in global oil prices, and the launch of an ambitious industrialization plan triggered an accelerated expansion of economic activity accompanied by a substantial real exchange rate appreciation. In a textbook expression of Dutch disease, when oil prices staggered few years later, the economy faced a full-blown fiscal cum balance-of-payments crisis with a collapse of GDP, in particular of manufacturing. This collapse triggered a drastic change in Mexico's development agenda, to adopt market reforms and abandon State-led industrialization. Since then, Mexico has faced more episodes of volatile exchange rate movements, with frequent spurts of real appreciation. However, they have not been associated to commodity booms but to massive financial inflows and/or macroeconomic mismanagement.

This article examines the two most conspicuous episodes of Dutch disease dynamics in Mexico since the mid-1980s, when it had already adopted a Neoliberal agenda of development. The first episode, 1988-1994, is associated with the application of a heterodox stabilization program in late 1987 that aborted hyperinflation, in the midst of the drastic liberalization of its trade and financial markets. The second one, goes

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from 2018 and continues at the time of writing in March 2026, began with Mexico's Left Turn under López Obrador presidency. It is marked by the extraordinary "*superpeso*", in the aftermath of the recovery after the Sars-Covid19 pandemic.

CLASSICAL AND FINANCIAL DUTCH DISEASE: A LATIN AMERICAN PERSPECTIVE

The phenomenon known as the Dutch disease, a term coined by *The Economist* in 1977, refers to the experience of the Netherlands and its discovery of a huge natural gas field that detonated an economic bonanza. It lasted for some years, led to a massive appreciation of the guilder, and a fast increase in wages of the energy sector over manufacturing, that gradual and persistently affected the latter's competitiveness and growth. The outcome was its relative deindustrialization, with an increased deterioration of manufactures' trade balance as its exports lost momentum and its imports gained more and more presence. More generally, the Dutch disease now refers to episodes of short-term mineral or agricultural booms and their adverse consequences on manufacturing output and exports.[1]

In its canonical expression, formally developed by Corden and Neary (1982), the Dutch disease refers to episodes where a boom in a tradables sector – say mining or agriculture – leads to massive export revenues, diverts productive resources away from other tradable industries, typically manufactures, and lowers their relative prices and profit margins vis-à-vis services and the booming sector. These processes lead to a real exchange rate appreciation and a relative or absolute deindustrialization.[2] Such appreciation may be reinforced by massive inflows of foreign capital that accentuate the crowding-out dynamics of manufacturing as its international and domestic competitiveness is undermined even more.[3] Following on this last point, the Latin American structuralist school has stated that to fully understand the Dutch disease phenomena it is necessary to capture the influence of international capital flows. This implies that the analytical framework has to be extended beyond the canonical model – that focuses on commodity booms – in order to cover financial factors. In addition, countries whose public sector that either significant and directly participate in the (booming) natural resource sector or capture a significant proportion of the windfall an additional fiscal dimension must be included in the analysis of Dutch disease dynamics. Thus, the canonical model has been extended to cover, besides the strictly commercial channels, financial and fiscal considerations and implications.

In Latin America, Celso Furtado and Marcelo Diamand are pioneers – from a structuralist perspective – on the study of the effects of commodity booms on the productive structure and growth path of developing economies. Furtado,[4] working on the case of Venezuela, identified the following effects of an oil boom: i) tendency to exchange rate overvaluation, ii) premature deindustrialization, iii) laggardness of other exporting sectors, and iv) a structural dependence on petroleum rent that locks-in its production and export matrices (Furtado, 2008; Soares, 2020). He also identified a number of social and political distortions generated by the fiscal dependence on such export windfalls. As he stressed, an extraordinary inflow of foreign revenues ended up funding imports for conspicuous consumption, unproductive projects, electoral coffers and far from transparent or legitimate rents for certain groups. All this underscores the difficulty of translating

[1] There is a vast literature on the macroeconomic effects of resource-based in semi-industrialized economies. See, in particular, Bresser-Pereira's analysis that focuses on market failures derived from the existence of Ricardian rents and on the greater wage gap between skilled and unskilled workers in the periphery than in wealthy countries (Bresser-Pereira, 2008).

[2] Similar episodes in South America in the early 2000s, triggered by commodity booms, resulted in a re-primarization of its export basket and a slowdown of manufacturing.

[3] An important, and sometimes neglected aspect, is the elasticity of substitution between domestically produced manufactures and imported ones. The higher the elasticity, the greater the deindustrialization effect of the Dutch disease as import penetration – induced by the real exchange appreciation – has a stronger displacement impact of local producers by foreign ones. See, inter alia, Stern (2025).

[4] Indeed, in his original essay, of 1957, he stated: "Venezuela is the underdeveloped economy with the highest level of per capita product in the world. Its gross territorial product per inhabitant approached 800 dollars in 1956, that is, a level similar to the average of the industrialized countries of Western Europe [...] and more than double the Latin American average" (Furtado, 2008, p.35, our translation).

commodity-based export windfalls to a profound transformation of the productive structure capable of guaranteeing long-term national development and not merely benefitting a rentier elite.

The new developmentalism stresses the Dutch disease's financial dimension given that, as mentioned above, the exchange rate appreciation is also pushed by massive foreign capital inflows stimulated by financial liberalization. Putting it more succinctly, middle-income economies face "two structural causes of the tendency toward exchange rate overvaluation: i) Dutch disease [commodity based] and ii) higher profit and interest rate [differentials] attracting foreign capital" (Bresser-Pereira, 2010). They end up with a critical dependence of their foreign exchange revenues on the fate of volatile international markets of commodities and capital flows, a decline of their manufacturing industries and increasing difficulties to enter into an industrial-led growth path. All this deepens their macroeconomic vulnerability and makes more binding the balance-of-payments constraint on their long-term rates of growth. An additional and major concern is that, in this process, the policy autonomy for promoting a national industrialization strategy is weakened (Bresser-Pereira, 2017).

The commodity dependence of public revenues and, per forza, of public expenditure ends up introducing enormous volatility/vulnerability in their fiscal space. Another adverse and most worrying effect may be the perennial postponement of a fiscal reform, as political support for it may be very difficult in the face of massive windfall commodity-based revenues. Thus, much needed tax reforms are not implemented as long as the commodity bubble continues with its considerable net foreign capital inflows. Other element to take into account is the State's planning capacity for the use of such temporary, massive windfall gains. Their adequate use conveys complex technical analysis and is subject to political pressures to dedicate them to very different ends, for example, to increase current transfers or to strengthen much needed fixed capital accumulation.

Certainly, from a policy-maker's perspective, special attention must be paid to keep the budget/public debt and the balance-of-payments on sustainable trajectories, and to monitor exchange rate movements and their impact on domestic manufacturing. Adopting fiscal rules, via structural balance techniques, and creating stabilization funds may help to ensure that the windfall revenues contribute to the nation's long-term development.[5] An option is to impose special taxes on windfall export revenues, adjusted to variations of the prices in the international markets of the relevant commodities (Bresser-Pereira, 2018, 2020). Having a Central Bank that is willing and capable to target the real exchange rate to avoid its significant appreciation is suggested as a legitimate policy too.[6] The challenge is to neutralize the adverse effects of the commodity cum capital flows boom (the Dutch disease) and, at the same time, profit from the extraordinary foreign exchange (in some cases cum fiscal too) revenues to launch an industrialization agenda and place the economy in a path of high, sustained, sustainable and inclusive growth.

DUTCH DISEASE IN MEXICO: ITS TWO CONSPICUOUS EPISODES SINCE ITS NEOLIBERAL TURN

As mentioned in the introduction, Mexico experienced the Dutch disease syndrome in its canonical form during the late 1970s, when oil windfalls and massive capital inflows led to a pronounced appreciation of the real exchange rate, and ultimately a dramatic boom-bust that inaugurated the international debt crisis (Moreno-Brid and Ros, 2009; Usui, 1997). In subsequent decades, Mexico experienced more complex manifestations of the phenomenon, with heavy presence of financial and monetary factors. In this regard, there is a substantial body of empirical work on the Mexican economy linking foreign capital inflows to movements in its real exchange rate (Dabós and Juan-Ramón, 1997; Ibarra, 2011a, 2011b, 2015). Puyana (2012)

[5] For an empirical study of Dutch disease dynamics, based on a model that encompasses the fiscal dimension, see Arezki and Kareem (2013).

[6] See Ros (2015).

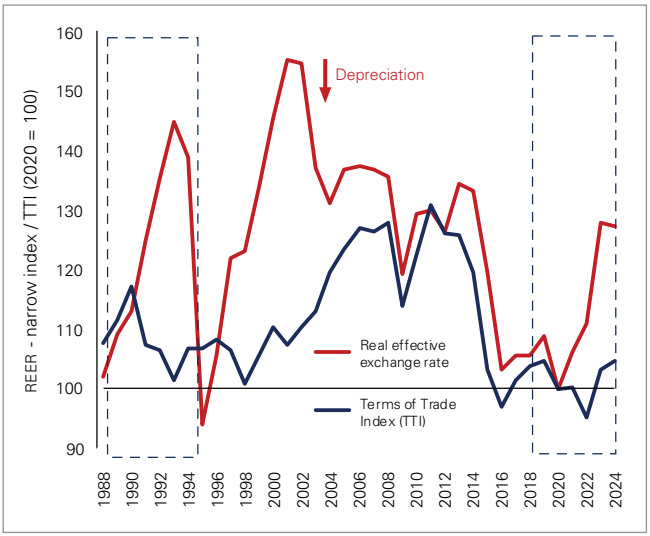
characterized Mexico's trajectory as an "overvaluation syndrome" manifested in low long-term economic expansion and persistently high informality in the labor market. Certainly, other factors besides the trend to over-valuation, have contributed weighed against the development of its manufacturing sector, *inter alia* China's ascent as a global manufacturing power and the demise of active industrial policies.

Real exchange-rate appreciations and the terms of trade in Mexico: 1987-2025

Recapping, in the canonical Dutch disease model, a favorable terms of trade shock – due to a boom in commodities – pushes up the relative prices of services vis-à-vis manufacturing (i.e. induces a real exchange-rate appreciation) and squeezes its profitability due to its inability to increase its prices to compensate the rise in domestic costs (Auty, 2004; Corden and Neary, 1982; Van Wijnbergen, 1984). The real exchange appreciation – boosted by capital inflows – partly shaves the manufacturing sector's competitiveness in the foreign and in the domestic markets; an effect modulated by the composition of their export basket and position in global value chains, as well as by the effect on import penetration. The result is deindustrialization; an outcome that may be traumatic when the commodity boom collapses, as the balance-of-payments constraint on the economy's long-term growth drastically becomes more binding.

In the case of the Mexican economy, since its adoption of market reforms in the mid-1980s, there is no clear co-movement between its real exchange rate and its terms of trade (see Figure 1). In the episode of persistent exchange rate appreciation, from 1988 to 1994, the terms of trade did not improve. One likely reason behind their divergence is the radical change in Mexico's export basket, as oil was rapidly replaced by manufactures in a context of market reforms and trade liberalization. The terms of trade have a stronger influence in the international competitiveness and overall performance in economies whose exports are not concentrated in manufactures.

Figure 1. Mexico: Real Exchange Rate and Terms of TradeIndex (2020=100)



Source: Authors' calculations based on official data from Banco de México and the BIS.
Note: The research data is available in a repository from Banco de México and the BIS.

After the sharp devaluation in 1995, the real exchange rate soon recovered its appreciation trend, even though the terms of trade remained essentially unchanged. The appreciation was stimulated by the global capital markets' regained confidence in Mexico, boosted by NAFTA (USMCA) and by the swift recovery of

economic activity post-1995 with the support of the US Treasury and the IMF. Between 2001 and 2008, in the midst of an extraordinary commodity boom worldwide, the trajectories of Mexico's terms of trade and real exchange rate went in opposite directions. As its export and import basket did not significantly depend on oil or on other commodities, the boom in agricultural and mineral world prices did not significantly affect its terms of trade, its commercial balance or its growth performance. In this episode, foreign capital flows were attracted to other emerging markets much more commodity export-oriented than Mexico, thus creating financial pressures to depreciate the *peso*.

Now, to understand Mexico's second episode of real exchange rate appreciation here analyzed (2020-2025), recall that its financial liberalization and the global easing of liquidity, led by the United States' unconventional monetary policy post-2009, led non-residents to increase their holdings of Mexican certificates and thus pushed for an exchange rate appreciation. Its momentum lasted until 2013, when the Fed's tapering triggered massive capital outflows, and inaugurated a depreciation path of the *peso*. Breaking away from its pattern in 2001-2007, there was a co-movement of the exchange rate with the terms of trade.[7] When the pandemic lockdown eased, Banco de Mexico's hike in domestic interest rates in an effort to contain inflation –cum a rather contained fiscal policy – triggered vast foreign capital inflows. The widened gap vis-à-vis the interest rate of the industrialized financially developed world, was a powerful incentive for traders to borrow abroad and invest short-term in *peso* denominated financial assets, with virtually guaranteed, conspicuous gains.[8] Pressured by such carry trade operations, the exchange rate strengthened from 25 *pesos* per US dollar in 2020 to slightly over 17 *pesos* in early March 2026, just before the outbreak of the war on Iran and the beginning of the USMCA renegotiation. Measured by the Big Mac Index, it has strengthened since then more than 45% in real terms;[9] again, with no parallel improvement in its terms of trade, though in a context of acute weakening of the dollar in the global markets.[10]

In summary, in the two episodes of real exchange rate appreciation of the Mexican *peso* since 1988 here selected for analysis, the suggested co-movement with the terms of trade was absent. Macroeconomic mismanagement in the first episode – as the priority to cut down inflation paid scant or null attention to the Mexican/US inflation differential – and intense carry-trade operations in the second episode – driven by its high domestic interest rate over and above the international one – are at the root of the exchange rate appreciations. This phenomenon is a terrain mapped by Acosta *et al*. (2009), Botta (2015, 2017) and Bresser-Pereira (2008): a Dutch disease process increasingly mediated by finance, cross-border flows and expectations that are likely to become self-reinforcing and not by terms of trade influences.

Mexico's manufacturing exports

A key reason, as various authors have argued, is that the real appreciation of the Mexican *peso* from 1988 to 1994 onwards was driven by the *Pacto de Solidaridad Económica*, the heterodox macroeconomic stabilization program launched late in 1987 that set the nominal exchange rate as an anchor to bring inflation down.[11] With the *Pacto* – with total disregard of the evolution both of the terms of trade and of net exports – Banco de Mexico fixed a pace of nominal depreciation of the *peso* vs the US dollar to lag behind inflation.

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[7] See Loría and Nalin (2023), as well as Brookings Institution (2011), Cárdenas and Levy-Yeyati (2011).

[8] According to the BIS, the Mexican *peso* by the end of 2025 was "the 14th most traded currency globally […] and ranks as the third most traded emerging market currency behind the Chinese renminbi and Indian rupee", its [recent] appreciation "largely driven by high liquidity, high interest rates (carry trade), and increased nearshoring investment" (BIS, 2025). "The sharp rise in silver prices […] could have also helped" (Mexperience, 2026).

[9] Kalifa (2026).

[10] Federal Reserve Bank of Dallas (2023, 2024) argues that much of the strength of the *peso* around that time is due to Banco de Mexico's insistence on keeping a conspicuous interest rate differential vis-à-vis the one of the United States.

[11] See *inter alia* Cárdenas (2015), Dabós and Juan-Ramón (1997), Ibarra (2011a), Lustig (1995) as well as Moreno-Brid and Ros (2009) conclude that the real exchange rate appreciation in Mexico from 1988 up to the international financial crisis of 2008 was related not to shifts in its terms of trade, but to capital inflows in the context of financial liberalization.

Such policy, coupled with selected wage and price controls, were crucial to slash inflation but provoked a systematic, significant appreciation of the real exchange rate and a cumulative deterioration of Mexico's external accounts. In December, a full-blown balance-of-payments crisis exploded that forced an acute nominal depreciation of the *peso* in more than 50%. A few months later, Banco de Mexico, with its recently gained autonomy, declared the formal adoption of a floating exchange rate regime. The experience of Mexico in the early-1990s may help to explain the interaction among relative prices, external shocks and some structural asymmetries.

The appreciation since 1988 ended in an acute – though short lived – balance-of-payments crisis in late 1994 forcing a massive depreciation of the *peso* in 1995. Cárdenas, Lustig and Moreno-Brid and Ros *inter alia* show how the 1988-1994 real exchange rate appreciation increased import penetration, enlarged the external deficit, and eventually detonated a balance-of-payments crisis that plunged the economy into a recession. The massive devaluation of the *peso* in December 1994 cum the extraordinary financial support of the US Treasury were crucial to promptly put Mexico back on a track of economic expansion. Mexico's manufacturing exports, stimulated by NAFTA, boomed. They averaged two-digit annual rates of expansion for many years. However, their increasing reliance on imported intermediate inputs – in the absence of an industrial policy aimed otherwise – debilitated their domestic backward and forward linkages.[12]

The second period of our analysis, 2018-2025, is marked by some resilience of manufactured exports and a slowdown of economic activity; over and beyond the impact of the pandemic shock in 2020. The recovery of exports in 2021-2022 was impressive, but lost some steam thereafter affected by, *inter alia*, the *Superpeso*, the surge of trade protectionism in the United States, and the scant dynamism of domestic and foreign investment in new plants. Nevertheless, by 2025 in constant prices, total exports were 60% higher than in January 2020. They registered a fast expansion in the first months of that year as US businesses advanced their purchases of imports as a preemptive measure in the (correct) expectation of a rise of tariffs by the Trump administration. By the end of the year, automotive exports were 25% and non-automotive ones 75% above their volumes in January 2020. In more detail, automotive exports (vehicles and auto parts) recovered rapidly from 2020 to late 2023 but then entered a declining trajectory, yet to be reversed. The rest of exports of manufactures also expanded rapidly pots-pandemic and, though losing momentum in 2023, regained impetus in 2024-25.[13]

In spite of exports' considerable resilience, manufacturing´s overall output has been rather dormant these seven years. The same goes for Mexico's real GDP. With its annual average rate of expansion under 1%, by 2025 real GDP per capita was lower than in 2017. The poor performance of manufacturing and of the overall economy's activity these years is only partly rooted – à la Dutch disease – in the real exchange appreciation. Certainly, it undermined the domestic income and employment multiplier coefficients, and stimulated a spectacular rise of imports *pari passu* with the increase in private consumption. But, as most analysts agree, it is much more determined by the weak performance of private investment, the contraction of public one – both weighing heavily against labor productivity improvements – and the insufficient backward and forward linkages of exports with domestic suppliers.[14] And as valid as in previous periods, this configuration is not independent of the demise of active industrial policies when Mexico shifted away from State-led industrialization (Palma, 2019).

[12] As Dussel and Gallagher (2014) and Gallagher *et al.* (2007) show, in spite of NAFTA, the irruption of China in world manufacturing had a massive adverse effect on Mexico's exports to the United States. See Rodrik (2016) for an analysis of how this phase of globalization has reduced the, say, scope of industrialization in most middle-income economies.

[13] Data from Banco de Mexico (2026).

[14] As Casar (2025) and Moreno Brid and Pérez (2026) have stressed, the laggard performance of fixed capital formation since mid-1980s abruptly interrupted the long-term trajectory of rising capital/labor ratios and, with it too, of labor productivity.

The Mexican economy´s growth performance: a long-term case of Dutch disease?

The long-run trajectory of Mexico's manufacturing sector and its relationship to aggregate economic performance constitute a critical lens through which to assess the structural consequences of the two episodes of non-canonical Dutch disease examined in this study. Figure 2 provides a synoptic view of this trajectory by plotting the annual growth rates of total real GDP and manufacturing output, together with the share of manufacturing value added in GDP, over the period 1980-2024. Figure 2 depicts the growth rates of Mexico's total real GDP and its manufacturing sector, alongside the manufacturing share of GDP, over the period 1980-2024. A salient feature of the series is the progressive erosion of dynamism in both aggregates over the four-and-a-half decades under review. Whereas the 1980s and 1990s exhibited sharp cyclical swings, with manufacturing growth occasionally surpassing 10 percent and GDP growth reaching comparable peaks, the amplitude and central tendency of both series have visibly contracted since the early 2000s. This secular deceleration is consistent with the structural constraints discussed in the present study, notably the persistent real exchange rate appreciation that has undermined the relative profitability of tradable activities and curtailed the expansion of domestic value added.

A particularly instructive contrast emerges when comparing the behavior of the manufacturing share across the two episodes of Dutch disease identified herein. During the first episode (1988-1994), the slowdown in manufacturing output growth was accompanied by an even steeper loss of momentum in aggregate GDP, resulting in a modest but discernible rise in manufacturing's share of total output throughout the early-to-mid 1990s. This relative resilience of the manufacturing sector, in the context of an appreciating real exchange rate, reflects, in part, the compensating role of trade liberalization and export-oriented fiscal incentives that sustained its exports although the domestic demand faltered.

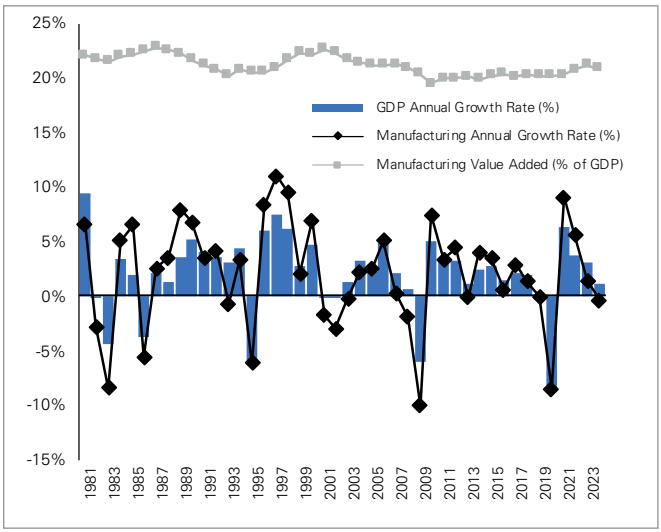
In the second episode (2018-2025), however, this pattern does not replicate. Despite the renewed appreciation of the real exchange rate, this time driven by financially mediated carry-trade dynamics rather than by exchange rate policy *per se*, the manufacturing share of GDP has remained essentially flat, in fact what we now see is the stagnation of overall manufacturing output since mid-2023, as its exports resilience is no longer able to offset the contraction of demand and the increased penetration of imported consumer goods. Rather, we register a structural limitation whereby export dynamism fails to translate into broader GDP expansion, compounded by subdued fixed capital formation and weak greenfield FDI, constrains both manufacturing and the aggregate economy simultaneously, tightening the external constraint on Mexico's growth trajectory.

Mexico's experience from the mid-1980s onwards shows that, in general, changes in its terms of trade do not line up with key turning points in its growth path. In these nearly four decades, Mexico has experienced three major, albeit short lived, collapses in its economic activity. A fall of 6% in 1995, when the *Pacto de Solidaridad Económica* broke down in the so-called Tequila crisis, a contraction of similar magnitude in 2009 in the wake of the global financial crisis, and fall close to 7% in 2020 associated to the Sars-CoV-2 pandemic. The second of these episodes was the only one accompanied by a signification deterioration of the terms of trade.

From 1988 to 1994, the economy grew at a relatively fast pace around 4% annually, a small persistent deterioration of the terms of trade and a persistent appreciation of its real exchange rate. In 1994, the fragilities and macroeconomic imbalances of the stabilization strategy, combined with major political shocks, exploded into an international debt crisis.

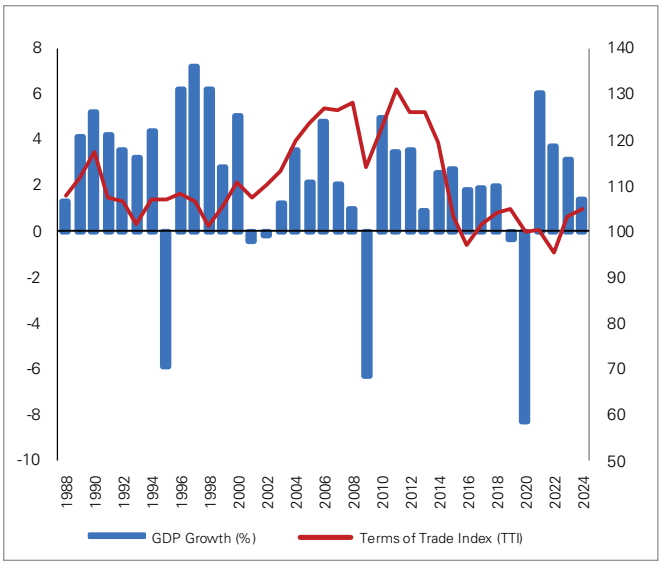
From 2008 the terms of trade terms steadily rose, but GDP's growth trajectory – with fluctuations – did not. It evidences a long-term slowdown. By 2011, the terms of trade recovered their pre-crisis level, then decline until 2016 – (falling 30%) – and remain rather stable at a level similar to the one they had at the end of the previous century. Again, the Mexican economy´s growth path does not show clear cut co-movements with such evolution of the terms of trade. In fact, during 2018-2025, the terms of trade have remained virtually constant while its GDP registered major fluctuations, revealing an economy stuck more and more in a trap of slow expansion.

Figure 2: Mexico: GDP and Manufacturing Growth and Share, 1980-2024 (Year-on-Year Percentage)



Source: Authors' elaboration based on official data.

Figure 3: Mexico: GDP growth and Terms of Trade, 1988-2024 Percentages and index (2020=100)



Source: Authors' elaboration based on official data.

Following Cárdenas and Levy-Yeyati (2011), Mexico's 2018-2025 real exchange appreciation follows a dynamic that is less about resource booms than about the interaction between, on the one hand, global financial forces (international liquidity, low US interest rates, massive and volatile international capital flows) with, on the other hand, domestic monetary cum fiscal policies of emerging markets in a context of financial liberalization. In other words, Mexico's real exchange rate appreciation those years was rooted in financial dynamics – interest-rate differentials, carry trade, portfolio positioning, and robust remittance inflows – that underpin the currency way beyond external trade fundamentals. As the Federal Reserve stated: "The peso's strength appears to operate less when building up any new productive capacity, but rather when a high policy rate and the portfolio approach therein provide a favorable environment"[15]. The nearshoring narrative is yet to become a reality, as greenfield investment remains weak as asset-light acquisition overshadows real productive capacity building. For much of the period, international remittances were larger than the sum of FDI and oil exports (BBVA Research, 2024). They boosted private consumption, but did not rewire investment or production structures.

Mexico risks being stuck in a "Strong peso, Weak dynamism" steady-state. An appreciated currency discourages diversification and investment in the tradable industries, dampens incentives to upgrade, and solidifies a dual structure of a dynamic core of exporters, successfully integrated in global value chains but uncapable of driving the overall economy into a path of robust and persistent development. In this context, manufacturing has been and continues to be an insufficient engine of economic expansion. But, as long as investment does not gain significant momentum – it actually collapsed 7% in 2025 – and a modern industrial policy is yet to be implemented with the support of a much stronger development banking system, Mexico´s structural transformation will remain wanting and the economy will remain stuck in a trap of low growth.

MEXICO'S UNORTHODOX DUTCH DISEASE IN THE LATIN AMERICAN MIRROR

The two episodes of Dutch disease in Mexico here analyzed have strikingly different origin, none accommodating to the canonical commodity-boom pattern identified by, *inter alia*, Corden and Neary. But, in any case, the Mexican case of Dutch disease is non-canonical at its heart. The syndrome doesn't show up with the typical symptoms of terms of trade and real exchange rate co-movements.

In the first one, 1988-1994, the real exchange appreciation was caused, not by any natural resource boom, but by macroeconomic mismanagement of monetary/exchange rate policies intrinsic to the *Pacto de Solidaridad Económica* (PSE). As similar heterodox initiatives implemented around that time in South America to combat inertial inflation, the PSE relied heavily on incomes policy, i.e. a commitment of the private sector, the government and the representatives of workers' organizations to eradicate price and wage spirals. In particular, it put in place a nominal depreciation of the *peso* vs the US dollar under a regime of controlled pegs, that turned out into a systematic real exchange appreciation. In the second, 2018-2025, the origin of the systematic real exchange rate appreciation – post-pandemic – is rooted in financially mediated dynamics. In fact this appreciation ran alongside a increasing trade deficit in oil and a surplus in non-oil manufactures. In the context of a, theoretically, freely floating exchange rate regime and the *peso* being the third most traded currency of a semi-industrialized economy in international capital markets, the conspicuous differential of the domestic interest rate vis-à-vis the one prevailing in fully financially developed economies translated into massive carry trade transactions.

In both episodes, Mexico's manufacturing output and employment suffered but, paradoxically, its exports have been resilient. In the first episode, trade liberalization cum the adoption of fiscal incentives to lower the cost of imported inputs for export purposes (mind you with neglect of domestic value added), and the search for foreign markets to compensate the, at the time weak, domestic market helped to boost

[15] Federal Reserve Bank of Dallas (2023, 2024).

manufacturing exports. In the second one, key factors in favor of their resilience include the position of key export-oriented manufacturers operating in Mexico in regional value chains embedded in dollar-invoiced North American production networks, revolving around a relatively small machinery and equipment nucleus, and perpetually supplied with imported intermediates and capital goods.

However, as mentioned above, Mexico's manufacturing domestic output has remained stagnant since mid-2023. The expansion of domestic value added related to the export sector is contained, the competitiveness of local producers against imports in the domestic market is undermined by the exchange rate appreciation, constraining the space where new tradable activities (and deeper supplier ecosystems) might otherwise emerge. The symptom is therefore not "Manufacturing exports collapse," but "Manufacturing export dynamism does not guarantee an expansion of its GDP", not to mention of the rest of the economy. This structural limitation, combined with the not-unrelated lack of impetus of fixed capital formation and weak FDI on greenfield ventures, make the external constraint on Mexico's economic growth dramatically tight.

The evidence here presented supports our main claim: real exchange rate appreciation pressures can remain potent and enduring even in the absence of commodity-like windfalls. In the modern context of liberalized capital markets, they are rapid and strongly transmitted through monetary financial channels via financial flows, portfolio realignments in which short-term returns, influence the exchange rate and with it the relative profitability of competing productive (tradable/non tradable) activities, put heavy stress on macroeconomic balances and growth trajectories.

There is a policy recommendation that we want to stress, fully consistent with structuralist and new-developmentalist tradition, this is to prevent persistent and significant exchange rate appreciations. Avoiding them seems an important step to prevent the, say, Dutch disease symptoms of undermining manufacturing and in general tradable activities that operate outside the by now traditional export nucleus embedded in global value chains. Mexico's course reminds us of the difficulty to modulate the impact of financial channels on the exchange rate in a context of open capital markets, and a trade agreement with the US that notwithstanding its merits, severely limits Mexico's economic policy space. There is a lengthy discussion in the economic literature on whether Dutch disease is susceptible to neutralization. In any case, the policies and mechanisms of such neutralization must be adapted to the structural aspects, strengths and constraints of the Mexican economy; in particular to the conditionalities imposed by the USMCA.

To what extent can Mexico implement a policy package that combines active industrial policy, a surge of public investment that crowds-in its private counterpart, macroprudential and capital – flow regulation cum international reserve management to prevent major exchange – rate appreciations in a context where interest differentials induce massive carry trade operations? This is an open question, whose response marks Mexican economy's future. In this regard, a key consideration is that by creating a macroeconomic environment conducive to development rooted in a competitive real exchange rate. it may possibly and more effectively propel an industrialization strategy anchored in innovation to ensure high and sustained economic growth (Bresser-Pereira, 2008, 2017, 2024).

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

DATA AVAILABILITY

The research data is available in public repositories. Real Exchange Rate data were obtained from the Bank for International Settlements (https://data.bis.org/topics/EER/data). Terms of Trade data were sourced from Banco de México (https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=1&idCuadro=CA739&accion=consultarCuadroAnalitico&locale=en). GDP and Manufacturing Growth and Share data were retrieved from the Instituto Nacional de Estadística y Geografía, INEGI (https://www.inegi.org.mx/app/indicadores/default.aspx?tm=3&ind=737153#D737153_603623). All datasets are publicly accessible.

AUTHORS' CONTRIBUTION

Edgar Pérez-Medina: Conceptualization, Investigation, Formal Analysis, Resources, Visualization, Writing – Review & Editing.

Monika Meireles: Conceptualization, Supervision, Writing – Review & Editing.

Juan Carlos Moreno-Brid: Conceptualization, Supervision, Validation, Project Administration, Writing – Original Draft, Writing – Review & Editing.