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WHEN DID ARGENTINA LOSE ITS WAY?

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Abstract

This paper challenges the widely held view that Argentina's economy performed relatively well

until the early 1970s and that its fabled secular decline began only after 1975. Instead, it advances

the alternative hypothesis that the roots of such decline were planted much earlier, and that its pace

accelerated in the mid 1940s with the adoption of a corporatist import substitution industrialization

(ISI) regime. The resulting distortions in relative prices and misallocation of capital resources

generated significant inefficiencies that constrained the economy's growth potential. Although

successive modifications after the mid 1950s improved its performance, by the early 1970s the

corporatist ISI regime had exhausted its capacity to sustain growth. The absolute stagnation that

followed the 1975 crisis can be explained by the failure of successive governments to overcome

the resistance of entrenched interest groups and complete the transition to an open market

economy. We support this hypothesis using a range of empirical methodologies -including

comparative GDP per capita ratios, convergence analysis, growth accounting and cyclical peak to

peak analysis—combined with historical interpretation. We conclude that abrupt regime reversals

fostered social conflict, political instability and macroeconomic uncertainty, all of which

undermined the sustained productivity gains required for long term growth.

JEL Codes: N16, O11, O43, P16

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# When did Argentina lose its way? Ariel Coremberg and Emilio Ocampo

#### 1. Introduction

The purpose of this paper is to challenge the hypothesis that during the second half of the 20<sup>th</sup> century, Argentina's economy performed relatively well until around 1974, which marked the beginning of its fabled economic decline. In the analysis that follows, we shall refer to this proposition as Hypothesis 1 (H1). From the left of the ideological spectrum, H1 has been articulated, among others, by Schvarzer (1987, 2001), Muller (1990, 2011), Basualdo (2005), Rapoport (2008) and others.

H1 is not only accepted in "progressive" academic and policy circles who brandish it as an argument against efforts to open and deregulate the economy, but also with "mainstream" economists who support the latter. Diaz Alejandro, an economist who best documented the hypothesis of Argentina's secular decline after the 1930s (see Diaz Alejandro, 1970), admitted in later years that "in light of political instability and the limited recovery of foreign trade, the 2.2 percent per annum growth in Argentine GDP between 1955 and 1973, …is respectable, and should dispel the myth of Argentine economic stagnation (Diaz Alejandro 1982, p.43)."

More recently, Kehoe (2007, p.376) observed that between 1932 and 1974, Argentina "grew on the 2 percent growth path, with relatively minor business cycle fluctuations." Hopenhayn and Neumeyer (2004) argued that during the period 1950–1975, Argentina "was on a balanced growth path. Income per capita was growing at approximately the same rates as in the United States and the rest of Latin America." Buera and Nicolini (2019) and Martinez González and Nicolini (2024)

reached a similar conclusion. GDP per capita growth rates during this period were among the highest in Argentina's history. Based on these statements, an unsuspecting reader could conclude that this period was Argentina's famed "golden age" as opposed to the half-century ended in 1929.

Supporters of H1 differ in the identification of the causes that led to Argentina's decline after 1974. The first "progressive" group of economists and historians considers that it was caused by several attempts to open and deregulate the economy, while the second "mainstream" group finds the main culprit in persistent fiscal imbalances and macro instability.

Several economic historians place the beginning of Argentina's secular economic decline much earlier than 1974. Sanz Villaroya (2009) argues that it started at the end of the 19<sup>th</sup> century, Taylor (1994) suggests 1913 as the inflection point, Díaz Alejandro locates it in 1929, Alston and Gallo (2010) in the 1930s, and Waisman (1987), Llach (1987), Cortés Conde (2009), Nogués (2011) and Cavallo and Cavallo Runde (2017) during the 1940s (for a review of the literature see Taylor, 1994; Sanz Villaroya, 2009; and Ocampo, 2015).

Two clarifications are in order. First, accepting that there was no absolute stagnation in the postwar era up to the early 1970s is not equivalent to admitting that there was no relative decline. Second, the proposition that relative decline started in the 1930s (or earlier) is not necessarily inconsistent with the proposition that there was no stagnation in the postwar era.

This paper proposes a hypothesis that can be summarized as follows. The year 1913 was a major turning point in the evolution of the Argentine economy that marked the beginning of its relative secular decline. Initially, such decline was gradual and barely perceptive. It became evident after the Great Depression, as the global economic order in which Argentina played a key role as an

agricultural exporter collapsed. However, it had slowed down by the end of the 1930s and even reversed slightly during WWII, to again resume uninterruptedly after 1945. The rate of decline increased markedly after the crisis of 1975, which indicated that the corporatist ISI regime –like the socialist system in the Soviet Union at the end of the 1980s– had exhausted its ability to deliver growth. What explains absolute stagnation from 1975 until 1990 is the inability of successive governments to complete the transition from a failed corporatist ISI regime to an open market economy regime. This failure led to a succession of crisis that generated massive redistributions of income and contributed to political instability, social conflict, recurrent fiscal imbalances, high, persistent and volatile inflation and low growth. Politics was at the root of the problem since regime change implied changes in the distribution of income and wealth resisted by a large portion of the electorate.

Since 1975 Argentina's decline was interrupted briefly in two occasions. First with the structural reforms during the 1990s which led to rapid growth in productivity. Second, during the first decade of the 21<sup>st</sup> century when a serendipitous improvement in the terms of trade led to a cyclical rebound. We will refer to this proposition as Hypothesis 2 (H2). The table below summarizes the positions in the debate:

Determining which of these hypotheses is better supported by the facts is not simply an academic exercise. Argentina's main political party continues to advocate protectionist policies and state intervention in the economy and its justification for these policies is in part derived by an acceptance of H1. This in turn can lead to the (erroneous) conclusion that Argentina would have

<sup>&</sup>lt;sup>1</sup> For definitions of corporatism see Schmitter (1974), O'Donnell (1975) and Gerber (1995).

been better off if such efforts had not been pursued. Or, as the saying goes, from a policy standpoint, "if it ain't broke, don't fix it." In contrast, according to H2, the main obstacle to sustained economic growth is the resistance to change of the corporatist ISI regime implanted in the 1940s.

Table 1: Alternative Hypotheses to Explain Argentina's Postwar Macroeconomic Performance

Hypothesis 1 (H1)	Part A (H1a)	Part B (H1b)	
	Argentina's economy performed relatively well until 1974	Argentina's relative economic decline started after 1974 due to:	
		1) attempts to open and deregulate economy in 1976 and 1991	
		large recurrent fiscal imbalances and macro instability	
Hypothesis 2 (H2)			

In the next section, we provide a basic historical context to evaluate the competing hypotheses. In the two sections that follow, we review the evidence in support of H1 and H2. We conclude the paper with some tentative conclusions. In the analysis that follows we have used the following databases. 1) International comparisons for the 1870-2023 period, the GDP per capita series of the Maddison Project Database (MPD), 2) Argentina historical comparisons: GDP per capita Tornquist Series 1872-2023 from of ARKLEMS+LAND Center of Studies of Productivity (ARKLEMS), by Tornquist chain index adjusting composition of GDP by annual change of relative prices by sector (see annex); 3) Source of Growth and Total Factor Productivity 1950-2023, ARKLEMS+LAND Center of Studies of Productivity (ARKLEMS); 4) International TFP Comparisons: 1950-2023: Total Economy Database by The Conference Board (TCB) which includes ARKLEMS for Argentina.

#### 2. Historical Context

Before going further, we think it is important to highlight a distinction not sufficiently emphasized in the literature. Import substitution industrialization (ISI) strategies were common throughout Latin America since the thirties and in the decades following WWII. In the aftermath of the Great Depression, they were externally imposed by the rise of protectionism and the collapse of world trade. However, in the postwar era when, under US leadership, global trade and output expanded rapidly ISI was a domestic policy choice. In the case of Argentina, the intensity of protectionism increased dramatically between the 1930s and 1940s.<sup>2</sup> In fact, during the period 1946-1955 the country stood out as an extreme example of the combination of an ISI strategy under a corporatist regime inspired in Mussolini's *Carta del Lavoro* (adapted to local circumstances) with a populist

<sup>&</sup>lt;sup>2</sup> According to Nogués (2015, p.15), the effective rate of protection introduced by trade and foreign exchange policies more than tripled between 1935-1939 and 1945-1949 and then tripled again between the latter period and 1950-1954.

rhetoric of class exploitation.<sup>3</sup> Waisman (1987, 1989), described the economic regime imposed by Perón in Argentina in 1946 as "radical protectionism of manufacturing geared to the domestic market and the establishment of a corporatist relationship between labor and the state." In this paper we define this regime as a corporatist populist ISI regime.

World War II and its aftermath created an extraordinary opportunity for Argentina to transition into a developed industrialized economy, following the path of Australia and Canada, which by that time had already achieved a higher degree of development. This opportunity was squandered by the Peronist regime, which launched an inward-looking development strategy when global output and trade expanded at exceptionally high rates and a foreign policy that openly confronted the US. As a result of both, Argentina was left out of Bretton Woods, as a supplier of the Marshall Plan, GATT, the three American led initiatives that jumpstarted global growth in the postwar era.<sup>4</sup> Peron's gamble turned out to be costly for Argentina (see Dorn, 2005, and Ocampo, 2020). The country's isolation was not only costly in economic and diplomatic terms but also had the unwanted side effect of benefiting Brazil, Argentina's regional rival. The fall of Peron in 1955 did not lead to the end of the corporatist ISI regime.

Promoters of the corporatist regime view it as a system in which the economy is like a chariot pulled by two horses—labor and capital—reined in and guided by a supposedly impartial, farsighted

<sup>&</sup>lt;sup>3</sup> Promulgated in 1927, the *Carta del Lavoro* was the foundational institutional framework of fascist labor policy that outlined the principles of corporatism, aiming to regulate labor relations and integrate workers and employers into state-controlled labor unions.

<sup>&</sup>lt;sup>4</sup> A clear instance of squandering an opportunity to participate in the postwar boom was Argentina's decision to offering wheat to Europe at a price higher than Chicago FOB prices, which contributed to its exclusion as a supplier to the Marshall Plan (see Lewis, 1990).

and skilled coachman (see Shaw, 1934). Following this analogy, we could say that under Perón, in Argentina the chariot was pulled by a powerful and spirited draught horse (labor unions) and a donkey (opportunistic and rent seeking industrialists) and guided by a shortsighted driver. As a result, and despite Peron's best efforts, the chariot could only ride in circles. Ironically, it was Perón's successors, many of whom were determined to eradicate Peronism, who perfected the regime by replacing the donkey by another powerful draught horse (the local business establishment and multinational corporations). From 1955 onwards until 1976, the ISI corporatist regime alternated between its consumption-populist and investment driven variants.

Ironically, in the early 1970s the idea that Argentina's economy had performed relatively well since 1945 (H1) would have seem ludicrous to contemporary observers. Already in the mid-sixties, Harvard economist Arthur Smithies (1965) argued that the period 1949-1964 had been one of the "most disastrous" in Argentine economic history (p.23) and that Argentina's decline in relation to Australia had started in 1945. A few years later Simon Kuznets came up with his famous taxonomy of countries which divided them into four categories: developed, underdeveloped, Japan and Argentina. By the late sixties and early seventies, the term "Argentine malaise" was widely used by social scientists (see for example Herring and Herring, 1968, p. 783; Zuvekas, 1969, p.104; and Mander, 1971, pp.224, 245). According to British historian H.S. Ferns (1969), since the 1950s "Argentine economic performance has fallen well behind the world as a whole." (p.17). His American colleague Robert J. Alexander agreed: "for almost four decades, the country has been going through an economic, political, social, cultural, and, most of all, a moral crisis... A major element of Argentina's continuing crisis it its ailing economy" (1969, pp.3, 55). O'Donnell (1973a) highlighted the "exhaustion" of the ISI strategy pursued in the postwar period due to foreign

exchange bottlenecks (pp.57-67) and described Argentina as a case of "arrested development" (p.133). Even Marxist economists admitted that "secular stagnation" was a good description of the performance of the Argentine economy (Braun, 1973, p.25).

This negative perception was not limited to academics. After a long sojourn in the country in 1973, V.S. Naipaul, winner of the 2001 Nobel prize in Literature, wrote "Argentina is in a state of crisis that no Argentine can fully explain... Everyone is disaffected. (1974, p.102)." Indicative of the *zeitgeist* is an editorial published in September 1971, by *The Review of the River Plate*, one of the most influential business publications in the country, commenting an article by Paul A. Samuelson that mentioned Argentina:

The present mood, in Argentine business circles, of frustration and near despair. The puzzlement is not, of course, confined to the domestic sector. The outside world—especially firms that have invested heavily in local enterprise, to say nothing of the great international loan and credit agencies, which latter also provide regularly with all the official statistical data bearing on contemporary Argentine economy trends, are also perplexed... We have been besieged of late for information on a situation that appears to be one of steady and relentless deterioration, affording no early prospect of alleviation, let alone of improvement. Whether things are as bad as they are said to be or only seem to be worse that they really are, is hard to say without the guidance of a mass of further information. The fact is that it is rare these days to find anybody who is frankly, and realistically, optimistic, and the saddest feature of all is that the country's national economic image abroad is becoming progressively distorted and diminished... on any careful analysis, Argentina is still crippled by the economic, social and political consequences of the Peron regime. (1971, p.508).

In the article cited by this editorial, Samuelson (1971) had argued that the worst scenario that the advanced Western economies faced was to follow in Argentina's path since 1945: misguided

policies that had led to economic stagnation and persistent inflation, which in turn had engendered collective frustration and political instability.

Notable exceptions to this pessimistic consensus were Diéguez (1969), who offered a refutation of Smithies' thesis, and Brodersohn (1973a), who argued that the notion of Argentina's economic stagnation in the postwar era was based on erroneous statistics and noted that with the most recently published data the rate of growth in real GDP for the period 1960-1970 was one of the highest in Latin America.<sup>5</sup> This was indeed true, but as we will show below, although high in absolute and historical levels, such rate was below the level required for convergence. It was also significantly below the rates of growth of Western Offshoots, the average of Brazil and Mexico and the average of Spain and Italy and similar to the average of Chile and Uruguay, another two underperformers.

Two factors have since contributed to the plausibility of H1. First, according to Gerchunoff and Llach (2019), between 1963 and 1973 Argentina "grew like it had never grown before" (p.359). Second, Argentina's dismal economic performance afterwards. With respect to the first point, the GDP growth rate for the decade ended in 1973 was not the highest ever. From 1873 until 1944, it was surpassed on twenty-six instances (last one on the decade ended 1929) since 1973 only once in 2012. Also, what mattes for this analysis is relative growth rates. As can be seen in Figure 1 below, even in the best decade of the 1944-74 period, Argentina's relative performance with

<sup>&</sup>lt;sup>5</sup> In line with Brodersohn (1973a), Gerchunoff and Llach (2018, pp.359-360) maintain that the "erroneous perception" of Argentina's stagnation in the postwar era up to early seventies was a statistical mirage. Although the economy clearly did not stagnate in the postwar era, it declined in relation to the rest of the world. Due to the change in the base year from 1960 to 1960, the rates of growth in real GDP turned out to be higher than previously thought but they were still low by international standards and in relation to the observed investment.

respect to the rest of the world was barely positive (and negative with respect to a group of comparable countries). Moreover, at the time, most contemporary observers expected Argentina's relative decline would continue due to the "stop-go" cycle that had limited growth in the postwar period (see Diaz Alejandro, 1970, pp.351-365). According to calculations by Brodersohn (1973b), the so called "external bottleneck" had imposed a ceiling of 3.8% on the annual rate of growth in real GDP.

By the end of 1971 the Argentine economy seemed to be headed to another typical external crisis. "The crisis did not occur due to the improvement in Argentina's terms of trade, which reached 20% in 1972 compared to 1970 and 40% in June 1973" (Canitrot, 1978, p. 13). At the end of 1973, Brodersohn (1973b) optimistically argued that due to the unexpected export boom, the Argentine economy faced an ideal opportunity to escape the "stop-go" pattern that had characterized the economy since 1945.8

The growth in industrial exports in the early 1970s indicated that the adjustments introduced to the corporatist regime had injected some dynamism into the economy but offered no hope of escaping the stop-go cycle. The income elasticity of the demand for imports increased markedly under the investment-oriented ISI regime (1967-1974). As Felix (1976) pointed out, under an ISI regime the

<sup>&</sup>lt;sup>6</sup> This group, which throughout the paper we label as "Selected comps", includes Australia, Brazil, Canada, Chile, Italy, Mexico, Spain and Uruguay. For the calculations we use the median growth rate for this group. These are the countries that at different times over the last century Argentina has been usually compared to in the context of relative macroeconomic performance.

<sup>&</sup>lt;sup>7</sup> The inability to generate the dollars needed for growth led to recurrent external crisis which increased macroeconomic volatility.

<sup>&</sup>lt;sup>8</sup> Since 1945 the upward phase of the global commodity price cycle has contributed to mask or hide the inefficiencies of the corporatist ISI regime and to create the illusion that sustained growth is possible under such regime. This illusion is shattered when the cycle reverses. Something similar happened in the first decade of the 21<sup>st</sup> century.

growth of manufactured exports puts the industrial sector "in a chronic state of dynamic disadvantage in terms of exports, and its continuation, rather than leading to exports, is likely to perpetuate this disadvantage." (1976, p.71). Also worth mentioning is that the industrial export boom of 1973-1975, was not only mostly reliant on subsidies (at a high fiscal cost) but also on politically arranged deals with socialist countries.<sup>9</sup>

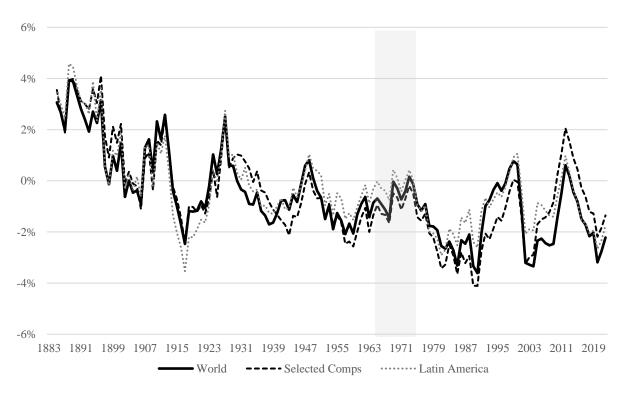


Figure 1. GDP per capita growth rate differential over rolling 10-year periods

Source: Authors based on ARKLEMS and MPD. Selected Comps include Australia, Canada, Brazil, Chile, Italy, Mexico, Spain, and Uruguay. Median growth rates were used for all groups.

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<sup>&</sup>lt;sup>9</sup> Total exports to socialist countries, which stood at US\$60 million in 1972, jumped to \$475 million in 1975 (from 3% of the total to nearly 12% (Di Tella, 1983, p.98). In 1974, exports of capital goods to Cuba accounted for almost 50% of total exports of manufactured products of industrial origin (BCRA 1975 and Bisang and Kosacoff, 1992, p.64). Ironically, Fidel Castro was able to acquire equipment from the Argentine subsidiaries of U.S. multinationals, which were forced to accept, at a handsome profit, a sale arranged by the two governments (Canitrot, 1978, p.50). Cuba defaulted on its trade debt to Argentina. According to some estimates it ranges between 8 and 11 billion dollars.

If there was an opportunity to escape the stop-go cycle in the early seventies, it was quickly squandered. As pointed out by Canitrot (1978), the unsustainability of the policy of stimulating aggregate demand while keeping wage and price frozen became evident at the end of March 1974, when labor unions demanded a renegotiation of nominal wages. As it had happened in 1947 and would again happen in 2012, the reversal of the commodity price cycle marked the beginning of the last phase of the populist experiment. Peron's death in July 1974, accelerated the unravelling of the economic situation, which eventually led a full-fledged external crisis (Sturzenegger, 1991). This crisis in turn, prompted a radical change in economic policy. The "Rodrigazo" plan announced in June 1975, which included a 100% devaluation of the peso, provoked the first hyperstagflationary bout in Argentine history and shattered Brodersohn's illusion.

The ensuing crisis made it clear that no version of the corporatist ISI regime would allow Argentina to reach a political or a macroeconomic equilibrium. The investment-oriented variant (1967-1970) could deliver faster growth but was not politically viable as it required a redistribution of income that was not acceptable to labor unions and a majority of the electorate. On the other the populist version based on stimulating urban consumption garnered popular support but was not macroeconomically viable. Transitioning to an open market economy was the only viable option to achieve sustainable long-term growth.<sup>10</sup>

With several failed attempts at reform, the Argentine economy continued to alternate between different variants of the corporatist ISI regime until 1990. In the decade that followed it transitioned

<sup>&</sup>lt;sup>10</sup> None of these facts dented the defenders of protectionism. Canitrot (1981) argued that the 1977 economic recovery "could have been extended and converted into a process of rapid growth, an Argentine miracle." (p.150).

relatively successfully into an open market economy regime. But the crisis of 2001-2002 led to a reversion to the corporatist ISI regime, particularly after 2007.

In Table 2 below we present a summary of Argentina's relative macroeconomic performance measured against the median growth in real GDP per capita for the world, a group of selected comparable countries and Latin America. As can be seen, the country only outperformed during the periods 1870-1929 and 1991-2000. It is worth noting that the compounded annual growth rate for the period 1975-2023 was 0.3% whereas the world median was 2.1%. Basically, during the last half a century the Argentine economy stagnated.

Table 2. Compounded Annual Rates of Growth in Real GDP per capita since 1870

Period	World	<b>Selected Comps</b>	Latin America	Argentina
1870-1929	1.3%	1.1%	1.2%	2.1%
1930-1944	0.9%	1.1%	0.6%	0.1%
1945-1974	2.8%	3.0%	2.4%	1.9%
1976-1990	1.5%	2.2%	0.9%	-1.8%
1991-2000	2.4%	3.1%	2.0%	3.1%
2003-2023	2.5%	1.3%	2.1%	1.5%

Source: Authors based on ARKLEMS and MPD.

To conclude, Argentina's relative economic decline since 1945 was the consequence of embracing a corporatist ISI regime that in all its variants was incapable of delivering sustainable long-term growth. The inability of the Argentine polity to transition to an open economy regime when this fact became glaringly evident accelerated the decline. Periods of reform were short-lived and reversed, often abruptly. The main elements of Perón's regime survive, making it one of the most

resilient adaptations of fascist-inspired corporatism in the modern world.<sup>11</sup> As a result, in 2023, after more than a decade of zero growth in GDP, TFP was below the levels of the 1950s. Argentina's stagnation is not only the result of external shocks or lack of investment alone, but also of entrenched institutional arrangements that make this regime intractable, thus hindering growth in productivity, fiscal discipline, and sustained reform.

#### 3. The Case for Hypothesis 1

Proponents of H1 have relied mostly on three methodologies. The first employs a univariate statistical analysis of the evolution of Argentina's real GDP per capita over the period 1872-2023 by the series of ARKLEMS adjusted by Tornquist Chained Index. A second methodology involves identifying break points in the evolution of the ratio of GDP per capita of Argentina and one or more comparable countries (individually or combined) relying on MPD. The typical comparisons include: 1) resource rich countries settled by Europeans during the 19<sup>th</sup> century such as the United States, Australia, Canada and New Zealand (known as "Western Offshoots" in the literature), 2) Chile and Uruguay, two countries with which Argentina shares extensive borders and strong historical and cultural ties. Finally, a more sophisticated methodology involves estimating a Solow growth model to replicate the behavior of the Argentine economy during the period under analysis.

<sup>&</sup>lt;sup>11</sup> The debate about whether Peronism was a variant of fascism or essentially different from it is irrelevant for this analysis. As Peron pointed out, in politics and botany, grafting had to adapt to local conditions (see Chavez, 1975, p.307). There is no question that he drew his inspiration from European fascism.

Although useful for certain purposes, we believe all these methodologies have serious limitations and, when employed to support H1, can lead to erroneous conclusions. Below we analyze each methodology and identify its limitations.

# Simple Univariate Analysis

As seen in Table 2 above, the compounded annual growth rates of GDP per capita for six periods that are broadly representative of alternative policy regimes since 1870, suggest that during the period 1945-1974 experienced rates of growth that were historically high. In fact, they were comparable to those of the period 1870-1929, usually considered the "golden age" of Argentina. Moreover, at 2.4% per annum, the rate of growth achieved between 1959 and 1974 was among the highest in Argentine history. However, this simple univariate approach does not allow us to verify or reject H1, as it doesn't consider cyclical peaks or structural breaks or the international context. While Argentina's GDP grew at historically high rates during the period 1945-1974, the rest of the world did so at even higher rates. As can be seen in Figure 2 below, the differential in compounded annual growth rates was negative for all 30-year periods ended between those years. However, this methodology does not allow us to verify or reject H1, as it doesn't consider cyclical peaks or structural breaks and ignores the international context. While Argentina's GDP grew at high rates during the period 1945-1974, so did the rest of the world (which experienced one of the highest rates of growth in real GDP ever recorded). As can be seen in Figure 2 below, the gap between

<sup>&</sup>lt;sup>12</sup> The highest rate of growth for any 30-year period since 1870 was 5.77% in the period ended in 1976.

Argentina and the rest of the world and a subset of comparable countries reached its widest level during this mid to late seventies.

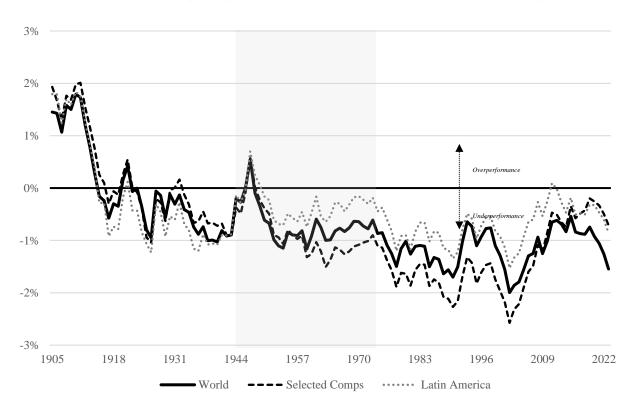


Figure 2: Real GDP per capita growth rate differentials over rolling 30-year periods

Source: Authors based on ARKLEMS and MPD. Selected comps is the median for Australia, Brazil, Canada, Chile, Italy, Mexico, Spain and Uruguay.

#### Comparative GDP per capita Ratios

This methodology consists of dividing Argentina's GDP per capita by that of a comparable country. A typical comparison is with Australia and the United States. The chart below shows the ratio of Argentina's GDP per capita to that of both countries. A simple observation of the graph seems to support the conclusion that Argentina did not experience an economic decline between

1944 and 1974. However, employing sophisticated time series analysis Gallo (2006) concluded Argentina started to diverge after 1947. According to Sanz Villaroya (2009) it started at the end of the 19<sup>th</sup> century.

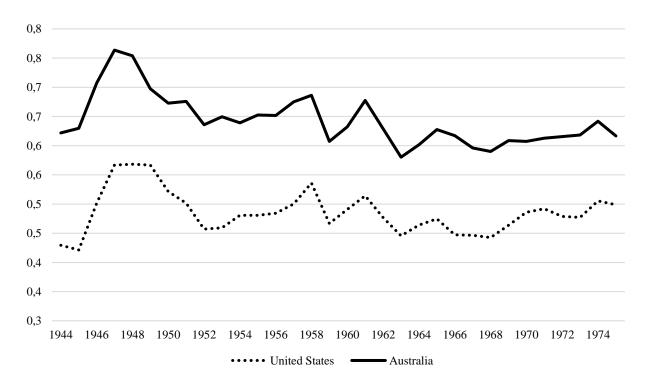


Figure 3: GDP per capita ratios: Argentina vs. United States and Australia

Source: Authors based on MPD.

The comparison of Argentina with Chile and Uruguay, supports the conclusion of absence of economic decline. However, if we compared Argentina with Brazil and Mexico or Spain and Italy, we would reach the opposite conclusion.

One limitation of this methodology in its simplest form is that it doesn't consider the effect of convergence. The rate of real GDP per capita growth of countries with a lower GDP per capita at the beginning of the period should be higher. Therefore, Argentina should have grown faster than either Australia or the United States. However, a more sophisticated approach yields different

results. Gallo (2006) tests for the existence of unit root in the GDP per capita ratio series of Argentina and Australia between 1900 and 2000 and concludes divergence occurred after 1947.

In the case, Brazil, Mexico, Italy and Spain, which in 1945 had a lower GDP per capita than Argentina, outperformed Argentina, Australia and the United States between 1945 and 1975. But even these four countries do not constitute the full sample of countries Argentina should be compared against.

Series Replication with Neoclassical Growth Model

This methodology requires calibrating a Solow growth model with data from 1930 to 1949 and initial parameters for 1950 to generate an out-of-sample of trend GDP for the period 1950-2010. A comparison of the model's forecast with the observed values can provide a measure of Argentina's underperformance during this period. This is the approach taken by Kydland and Zarázaga (2002, 2007), Hopenhayn and Neumeyer (2004), Kehoe (2007), Buera, Navarro and Nicolini (2011) and Martinez and Nicolini (2024).

Buera and Nicolini (2019) assert that "the economy did reasonably well until 1974, keeping pace with the 2 percent trend, the long-run growth rate of per capita output in the United States." Martinez González and Nicolini (2024) calibrate a neoclassical growth model for Argentina that replicates the data "quite well until the mid-1970's, and it diverges substantially thereafter. One could conclude, of course, that something is wrong with the model. We believe the opposite: something went wrong with Argentina by the mid-1970's." Also, As pointed out by Easterly and Levine (2001) models of steady-state growth may fit the experience of the U.S. relatively well, but they are not necessarily appropriate to understand the performance of developing countries in

which growth is uneven and is not closely tracked by capital accumulation, as is the case of Argentina.

## 4. The Case for Hypothesis 2

The empirical validation of H2 also serves as a refutation of H1a (that Argentina did not experience a relative decline from 1945 to 1974). We rely on several methodologies to accomplish this. As in the previous section the first relies on GDP per capita ratios but with a different set of comparable countries. The second traces Argentina's position in global GDP per capita rankings throughout the period 1945-1974. The third employs a cross-country regression of GDP per capita to account for convergence. The fourth is a univariate analysis that incorporates cyclical peaks. The final methodology incorporates growth accounting to estimate the gains of productivity gained under each regime with proper measurements of the net investment rate and TFP.

#### Relative GDP per capita Ratios

A simple comparison of Argentina with Mexico and Brazil or Spain and Italy, supports the conclusion that, contrary to H1a, it experienced a significant and sustained relative after 1945.

Table 3: Argentina's GDP per capita ratio vs. Selected Countries

Comparable Country	1945-47	1973-75	
Italy	245.2%	75.4%	
Spain	207.1%	109.7%	
Brazil	387.4%	212.6%	
Mexico	230.7%	168.4%	

Source: Authors based on MPD.

Although this simple approach supports H2, it fails to capture the full dimension of Argentina's relative economic decline. In Figure 4 below we show the ratio of Argentina's GDP per capita to

counterfactual GDP per capitas growing like the median of the rest of the world, a group of comparable countries and Latin America.

440%
400%
360%
280%
240%
240%
160%
120%
40%
40%
40%
World
40%
5elected Comps
408 1980 1987 1994 2001 2008 2015 2022

Figure 4. Ratio of Argentina's GDP per capita vs. counterfactual since 1870

Source: Authors based on MPD.

#### Global GDP per capita Rankings

This methodology compares Argentina's GDP per capita with that for all countries for which data is available. This shown in Figure 5 below for the period 1944-1974. The solid line includes the full sample included in MPD, while the dotted one, a smaller sample of countries for which a complete series of real GDP per capita data exists. It is worth noting that with the smaller sample between 1875 and 1929 Argentina's position in global GDP per capita rankings oscillated with no

discernible trend between six in 1896 and eleven in 1929. During the 1930s it declined to 13-14 but by the end of World War II, Argentina was again in the "top ten."

Figure 5: Position of Argentina in Global GDP per capita rankings (1944-1974)

Source: Authors based on MPD.

Some critics of this methodology have argued that it is improper to employ a ranking without adjusting for the number of countries included the sample. Thanks to decolonization, after 1946 the number of countries with credible national accounts statistics increased significantly. The MPD includes only 46 countries with GDP per capita in 1946 and an additional hundred by 1975. Most of the increase occurred between 1946 and 1950. In our view this criticism is invalid because for most of countries added to the database during this period GDP per capita was lower than Argentina's. For example, in 1950 only four countries that did not report data in 1946 had a GDP per capita higher than Argentina: Kuwait, Luxembourg, Qatar and United Araba Emirates. The broad conclusions of this exercise are invariant to the sample size. With the full sample,

Argentina's position in the global GDP per capita rankings fell from 11 in 1944 to 28 in 1974. Two facts stand out: 1) no other comparable country experienced such a decline during this period, 2) no country in the top ten in 1946 had fallen by eleven positions in that 30-year period.

This methodology can be adapted to compare Argentina to its neighbors and/or to countries at which at some point objective observers considered it comparable in terms of economic structure and/or growth prospects. For example, during the 1920s and 1930s Argentina was comparable to Canada and Australia. By 1950 that no longer seemed the case and in the decades that followed, it tended to be compared to Italy and Spain, and by the early seventies, the comparable countries were Brazil, Mexico, Chile and Uruguay. Figure 6 below shows the evolution of the position of each of these countries in the global GDP per capita rankings since 1946. The chart was constructed with data for 52 countries with complete series for the period 1944-2022.

The chart shows that almost all of Argentina's relative economic decline in the postwar era took place between the late 1940s and the early 1960s validating the observation made by Brodersohn (1973a) regarding high growth between the mid-sixties and early seventies. Also, worth mentioning is that only comparable countries that performed as poorly as Argentina during the period 1946-1974 were Chile and Uruguay, which also adopted an ISI strategy with high state intervention but had a significantly smaller domestic market.

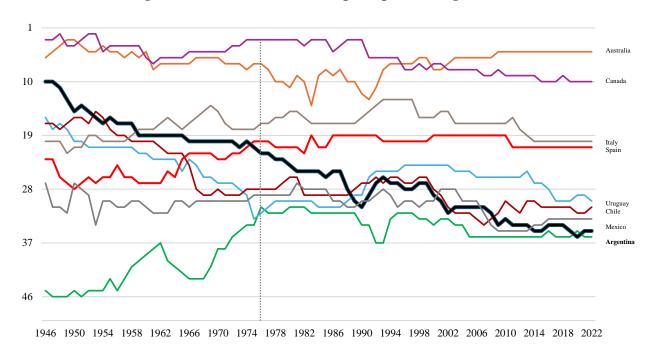


Figure 6: Position in Global GDP per capita rankings 1946-2022

Source: Authors based on MPD adjusted for Argentina with ARKLEMS data. Only countries with complete series included.

Chile is a good counterfactual for what could have happened in Argentina after 1974 if the transition to an open economy regime had been completed. To some extent influenced by Perón, during the 1950s the country adopted, although to a lesser degree, a similar corporatist-populist ISI regime (Bray, 1967). As already mentioned, during this period, the Chilean economy significantly underperformed Argentina's. Two factors explain this underperformance. First, Chile was relatively poorer at the beginning of the period. Second, it had a much smaller economy. *Ceteris paribus*, an ISI strategy can deliver higher and more lasting GDP growth in countries with a larger domestic market. <sup>13</sup>

<sup>13</sup> This fact was recognized by one of its most enthusiastic proponents (see Prebisch, 1963, p.71).

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Also, we shall discuss below, during the period 1946-1975 Argentina had two periods in which the corporatist ISI regime was "revitalized": 1959-1961 and 1967-1970. The impact on investment and productivity were significant in both periods. Nothing similar occurred in Chile. However, between 1975 and 1990, the military government led by Pinochet was able to complete the transition to an open market economy regime. In Argentina, a military government took over in 1976 with a broad agenda that included as an objective opening and deregulating the economy and reducing the role of government. However, the policies implemented between 1976 and 1980 were inconsistent with that objective and key elements of the corporatist regime survived intact, such as the military-industrial complex (for an analysis of this period see Canitrot, 1981; Calvo, 1986 and Nogués, 1986).

Even a progressive economist such as Canitrot (1985) admitted that there have been "few experiences as vigorously statist, where the state played such a central and effective role as in the experience following 1978." State-owned enterprises became "the pivot of the capital accumulation process" by borrowing abroad, taking the investment ratio to its highest level in Argentine history.

Although both countries suffered a deep crisis in the early 1980s, Chile recovered rapidly while Argentina stagnated. The democratic government elected in Argentina in December 1983 maintained the main features of the corporatist ISI regime with high government intervention and expenditures. This policy-mix eventually led to a hyperinflation, which eventually opened the door to liberalization with the reforms of 1990s. The diverging behavior of both economies can be clearly seen in the Table 4 below:

Table 4: Average GDP per capita growth rate

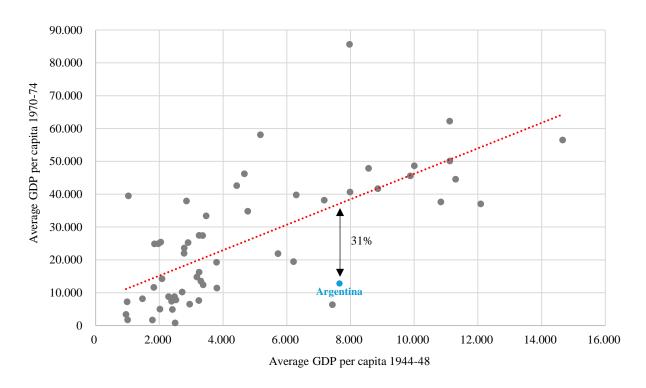
Period	Argentina	Chile	
1946-1975	1.9%	0.6%	
1976-1990	-1.7%	3.0%	

Source: Authors based on MPD.

## Convergence Analysis

To capture the effect of unconditional convergence we ran two simple regressions: 1) GDP per capita in 1974 against 1944, and 2) as proposed by Barro (1996), compounded rates of growth for 1944-1974 against initial GDP per capita.

Figure 7: Convergence Analysis 1944 - 1974



Source: Authors based on MPD. The sample includes 52 countries for which complete GDP per capita series exist for the entire period, including the largest Latin American economies.

The regression predicts Argentina's average GDP per capita for the period 1970-1974 should have been 31% higher. Applying the same methodology to the period 1870-1929, Argentina outperformed the sample. With the second methodology the model predicts a rate of real GDP per capita growth of 3.0% for Argentina compared to an observed rate of 1.9%. This differential in growth rates would have resulted in a GDP per capita 34% higher than observed in 1974.

We performed a conditional convergence analysis for the period 1945-1974 adding a human capital stock measure estimated by Lee and Lee (2016) as an explanatory variable in the regression. The results indicate that Argentina's GDP per capita should have been 15% higher in 1974.

Although they rely on a different methodology, these results are broadly consistent with those of Mundlak, Cavallo and Domenech (1989), who estimated an econometric model for the Argentine economy for the period 1913-1984 and simulated its behavior under policies of trade liberalization and market incentives. According to their model, if Argentina after the 1930s had followed such policies, its GDP per capita in 1974 should have been 28% higher (p.119). Although they do not provide data for the period 1944-1974, the results for the period 1946-1955 suggest the economy could have attained a level of real income 20% higher with trade liberalization (p.107). In other words, Argentina would have converged to Australia and Canada.

#### Cyclical Peak Trend Analysis

In this section we extend this univariate analysis with a simple comparison with Australia that shows how Argentina disappointed the expectations of the immigrants it attracted at the end of the nineteenth century. We first estimate Argentina's GDP per capita from 1875 to 2023 linking

cyclical peaks in GDP.<sup>14</sup> As can be seen in Figure 8 below, Argentina was never able to replicate the dynamism of the six decades that started in 1870 and ended in 1929. Moreover, since the latter year until 2023, GDP per capita grew 0.9% annually. The lack of steady growth is striking. The performance in the last decades has been dismal. Since peaking in 2011 GDP per capita has declined steadily since and was 10% in 2023.

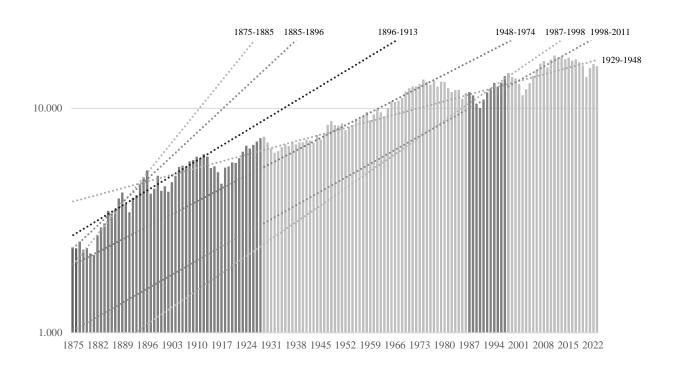


Figure 8. GDP per capita and Cyclical Peak to Peak Trends

Source: Authors based on ARKLEMS. Vertical axis shown in logarithmic scale.

The following table shows GDP per capita growth rates for both countries between cyclical GDP peaks for Argentina and the number of years it would take each country to double the initial GDP

<sup>&</sup>lt;sup>14</sup> More sophisticated filters as Hodrick-Prescott or Kalman yield similar results but linking cyclical peaks allows to analyze change in the trend for every period. See Mitchell (1947) and Burns (1969) for NBER methodology and Coremberg (2025).

per capita. As can be seen at each peak, Argentina needed more years than Australia to double the initial GDP per capita. Moreover, between 1875 and 2023 Argentina had only four periods of continued growth extending over five or more years and the longest lasted eight years (1967-1974), with GDP per capita growth slightly below Australia's. In contrast, Australia had seven such period, with two lasting fifteen years or more (1962-1976 and 1984-2019). This lack of sustained and continuous growth is one of the factors that explains Argentina's relative decline.

Table 5: GDP per capita Argentina vs. Australia

	GDP per capita		Years needed to dou	ıble GDP per capita
Period	Argentina	Australia	Argentina	Australia
1877-2023	1,2%	1,4%	56	48
1913-2023	0,8%	1,7%	83	41
1877-1896	3,9%	-0,5%	18	n.a.
1896-1913	0,8%	2,0%	84	35
1913-1948	1,0%	0,9%	67	81
1913-1929	1,3%	0,1%	55	550
1929-1948	0,8%	1,5%	83	47
1948-1974	1,7%	2,4%	42	29
1948-1958	1,0%	1,8%	73	39
1958-1965	1,6%	2,9%	44	24
1965-1974	2,5%	2,8%	28	25
1974-1980	-0,4%	1,8%	n.a.	40
1980-1987	-1,5%	1,8%	n.a.	40
1987-1998	1,8%	2,6%	39	27
1998-2011	1,4%	2,3%	51	30
2011-2023	-0,9%	1,1%	n.a.	66

Source: Authors based on the ARKLEMS database, except 1875-1900 from Cortés Conde (1997). Australia data from MPD.

At 3.9% per year, the trend in GDP per capita growth during the period 1877-1896 was the strongest in Argentine history. After the 1913 crisis and the start of WWI, growth decelerated to 1% a year until 1948 and then increased to 1.7% during 1948-1974. During the latter period growth was mostly attained after 1965, reflecting both higher investment levels and an improvement in

the terms of trade. From 1974 until 1990 the trend in GDP per capita growth again declined, but during the 19902 it grew to 1.8% annually.

The periods during which Argentina grew as fast as Australia were 1877-1896, 1913-1929 and 1965-1974. While in the first two periods Argentina's rate of growth far exceeded Australia's (3.9% vs. -0.5% and 1.3% vs. 0.1%, respectively), and therefore there was convergence toward Australia's standard of living. During the 1965–1974 period, GDP per capita growth rates were similar, and thus no convergence occurred.

In Table 6 below we estimate the GDP per capita in 2023 that would result from extrapolating the trend in each cyclical peak in relation to the observed value. This also gives us an indication of Argentina's decline since the beginning of the 20<sup>th</sup> century. In the 20<sup>th</sup> century, Argentina was never able to replicate the growth rates obtained between 1877 and 1896. At such rates GDP per capital levels in 2023 would have been 46 times higher than observed.

Table 6: Projected vs. Observed GDP per capita

Period trend	Projected GDP per capita 2023 / GDP per capita Observed 2023	
1877-1896	46.1	_
1896-1913	1.0	
-0, 0 -, -0		
1913-1929	1.6	
1929-1948	1.1	
1948-1974	1.9	
1974-1987	0.5	
1987-1998	1.5	
1998-2011	1.3	
2011-2023	1.0	
1974-2023	1.0	

Source: Authors based on data from ARKLEMS. GDP per capita at the beginning of the period is projected at the growth rate of such period and then divided by the observed data point for 2023.

The extrapolation of potential GDP from the trends generated between cyclical peaks highlight two issues. First, the growing difficulty of integrating the Argentine economy into global trade patterns during each successive period, particularly after 1930. Second, assessing whether the growth pattern under the corporatist ISI regime could have allowed Argentina's GDP to ever reach its maximum potential. If the answer is yes, the economy should have generated productivity gains consistent with steady growth, independently of fluctuations in the terms of trade. However, as shown in Table 7 below, TFP growth was meager under all variants of the ISI regime.

#### Growth Accounting

The shortcomings of GDP statistics are well known. Distortions increase when prices do not reflect market forces due to government intervention or absence of property rights and/or when high tariffs, restrictions over capital movements and control of the foreign exchange rate divorce domestic and international prices. Below, we perform a growth accounting exercise that incorporates the impact of these factors. We basically decompose Argentine GDP growth into the trend between cyclical peaks for the period 1950-2023 according using the latest ARKLEMS series (see Coremberg, 2025). <sup>15</sup> In Table 7 below we identify the contribution to GDP growth of factor accumulation and TFP for each subperiod.

From 1944 until 1974, Argentina's policymakers followed an inward-looking development strategy, generally described in the literature as import substitution industrialization (ISI). As explained by Canitrot (1978), during the period under study, this strategy went through several

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<sup>&</sup>lt;sup>15</sup> There are no available series for TFP before 1950.

variants under different political regimes. The first phase took place under Peron's first government (1946-1955) and focused on the development of "light" industry to satisfy the increased consumption of urban classes. We define this variant as corporatist populist consumption-oriented ISI regime. In the second phase, that took place between 1959 and 1970, first under the democratic government of Arturo Frondizi (1957-1962) and the military government of Juan C. Onganía (1966-1970), the focus was on the development of heavy industry and high investment levels, which we define as a corporatist investment-oriented ISI regime. 17

Table 7: Sources of Long-Run GDP Growth - Peak to Peak Analysis

	Contribution of				
GDP growth	Capital	Labor	TFP		
3.6%	2.4%	0.8%	0.4%		
3.2%	2.4%	0.1%	0.7%		
4.2%	2.6%	1.0%	0.5%		
3.6%	2.4%	0.6%	0.6%		
1.4%	3.0%	0.1%	-1.6%		
-0.1%	0.2%	0.3%	-0.6%		
3.0%	1.2%	0.7%	1.1%		
2.5%	2.0%	0.7%	-0.2%		
0.2%	1.1%	0.7%	-1.6%		
2.0%	1.6%	0.5%	-0.1%		
1.5%	1.4%	0.5%	-0.4%		
2.3%	1.8%	0.6%	-0.1%		
	3.6% 3.2% 4.2% 3.6% 1.4% -0.1% 3.0% 2.5% 0.2% 2.0% 1.5%	3.6%       2.4%         3.2%       2.4%         4.2%       2.6%         3.6%       2.4%         1.4%       3.0%         -0.1%       0.2%         3.0%       1.2%         2.5%       2.0%         0.2%       1.1%         2.0%       1.6%         1.5%       1.4%	3.6%       2.4%       0.8%         3.2%       2.4%       0.1%         4.2%       2.6%       1.0%         3.6%       2.4%       0.6%         1.4%       3.0%       0.1%         -0.1%       0.2%       0.3%         3.0%       1.2%       0.7%         2.5%       2.0%       0.7%         0.2%       1.1%       0.7%         2.0%       1.6%       0.5%         1.5%       1.4%       0.5%	GDP growth         Capital         Labor         TFP           3.6%         2.4%         0.8%         0.4%           3.2%         2.4%         0.1%         0.7%           4.2%         2.6%         1.0%         0.5%           3.6%         2.4%         0.6%         0.6%           1.4%         3.0%         0.1%         -1.6%           -0.1%         0.2%         0.3%         -0.6%           3.0%         1.2%         0.7%         1.1%           2.5%         2.0%         0.7%         -0.2%           0.2%         1.1%         0.7%         -1.6%           2.0%         1.6%         0.5%         -0.1%           1.5%         1.4%         0.5%         -0.4%	

Source: Authors based on ARKLEMS.

<sup>&</sup>lt;sup>16</sup> It can be argued that under the first Peronism. the economic policy regime changed slightly after 1951 with more emphasis was placed on productivity and foreign investment.

<sup>&</sup>lt;sup>17</sup> The distinction we propose in the corporatist ISI regime in some sense overlaps with the one proposed by O'Donnell (1975) between the populist and bureaucratic-authoritarian variants.

The dynamics of wages, investment and productivity were different under the different variants of the corporatist ISI regime. Common to both was the so-called "stop-go" cycle (Diaz Alejandro, 1970, pp.351-365), during which when domestic economic activity picked up, the export sector was not able to deliver the foreign exchange needed to import the intermediate and capital goods necessary to sustain GDP growth (unless there was a significant improvement of the terms of trade).

From 1950 to 1974, GDP grew at a 3.6% annual rate based mostly on factor accumulation, more specifically capital services (which accounted for 2.4%). In contrast, TFP grew 0.6% annually, contributing to a meager 16.7% of total growth. Subperiods show a similar profile, except during the 1960s, when there was a transitory acceleration to 1.4% per year.

After the corporatist-populist ISI regime imploded in mid-1975, Argentina's economic decline accelerated. Low or negative growth, recurring fiscal imbalances and high, persistent and volatile inflation rates became a permanent feature of the Argentine economy. GDP stagnated while TFP declined by -0,6% every year during the "lost" eighties. Only during the 1990s thanks to the stability, deregulation and trade liberalization brought about by the Convertibility regime there was a significant contribution of TFP to GDP growth. In the last decade of the 20<sup>th</sup> century, the trend in TFP grew at 1.5% per annum, a rate that is higher than that achieved under any of the variants of the corporatist ISI regime.

However, the traumatic end of Convertibility in 2001 and the subsequent sovereign debt default brought about the worst crisis since the 1930s. The recover was swift thanks to the upward phase of the commodity price "super cycle" that started in 2003. However, between the peaks of 1998 and 2011, GDP growth decelerated to a 2.5% annual rate, compared to 3.0% in the 1987-1998

cycle. This slowdown is remarkable given that global agricultural commodity prices increased 140% between 2002 and 2011. GDP growth during this last cycle reflected not only factor accumulation but also short-term effects of capacity utilization. TFP declined at -0.2% annually.

Since peaking in mid 2012, global agricultural commodity prices started to decline rapidly. The decade that followed was also lost for Argentina. Between 2011 and 2023, GDP decreased at a -0.9% annual rate, while TFP declined even faster, at -1.4% rate per annum. To conclude, and paraphrasing Krugman (1994), Argentina's GDP growth from 1950 to 1974 can be described as "perspiration" (factor accumulation) rather than "inspiration" (growth in productivity). Only during the late sixties and the nineties there was some degree of inspiration. The eighties and the second decade of the 21<sup>st</sup> century can be better described as a "vale of tears."

Table 8. Terms of Trade and Exports as a % of GDP (1987-2023)

	Index of			Exports as	% of GDP
Period	<b>Export Prices</b>	<b>Import Prices</b>	Terms of Trade	<b>Constant Prices</b>	<b>Current Prices</b>
1987-1998	1.0%	0.6%	0.5%	14.2%	9.2%
1998-2011	6.3%	2.4%	3.8%	22.9%	19.9%
2011-2024	0.2%	0.3%	-0.1%	20.7%	14.7%

Source: Authors based on INDEC.

GDP growth under the different variants of the corporatist ISI regime that prevailed during the period 1950-1974 was largely based on capital accumulation and was unsustainable without lasting productivity gains. In contrast, in the period of market liberalization and structural reforms during the 1990s, TFP growth doubled.

One may ask if between 1944 and 1974 other development strategies could have delivered better results than a corporatist ISI regime. A cross-country comparison of the evolution of real GDP per

capita provides a first approximation to this question. In the first half of the 20<sup>th</sup> century, Argentina, a country rich in natural resources, with a population composed mostly of European immigrants, temperate climate and relative abundance of land suggested a bright future shared with other Western Offshoots such as Australia, New Zealand, Canada and even the United States.

The comparison with Australia is the one that has attracted most interest from macroeconomists and economic historians (see, for example, Smithies, 1965; Dieguez, 1969; Dyster, 1979; Duncan and Fogarty, 1984; Dingle and Merrett, 1985; Gerardi, 1985; Fogarty, 1985; Baldinelli, 2001; Gerchunoff and Fajgelbaum, 2005; Gallo, 2006; etc.). During the last 120 years Argentina's GDP per capita grew at an 0.8% annual rate, almost half the rate of Australia (1.7% per annum). Figure 9 below, which shows the ratio of Argentina's GDP per capita to Australia's, shows only three periods of convergence between the two countries: 1881-96, 1917-31 and 1943-1948.

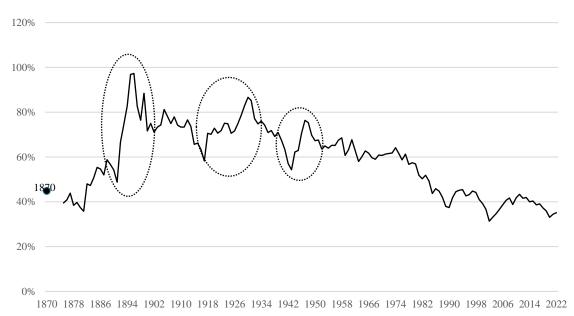


Figure 9. GDP per capita ratio Argentina / Australia

Source: Authors based on MPD.

According to Gerchunoff and Fajgelbaum (2005), from 1947 until 1974, started a period of slow divergence, followed by a period of accelerated divergence. Gallo (2006) confirmed the divergence in GDP per capita between the two countries after 1947 while Sanz Villaroya (2009) claimed it had started by the end of the 19<sup>th</sup> century. Had the convergence trends persisted, by the end of the 20th century, Argentina's GDP per capita would have been equivalent to 60% of Australia's instead of the observed 25%.

As already noted above, during the postwar period up to 1975, Argentina had an annual growth rate that at first glance seemed relatively high, 3.5% per annum, and relatively high gross fixed investment rate that averaged 20% of GDP. However, Ferrer (2004) pointed out that with a productivity of capital similar to that of developed economies—that is, a capital-output ratio between 3 and 4—Argentina's GDP should have grown between 5% and 7% per annum (pp. 274–276). He attributed this relatively poor performance to the high relative price of capital goods, distortions in the investment process, and high levels of idle capacity. All these factors combined reduced the purchasing power of savings and the actual contribution of capital accumulation to economic growth.

We partially agree with this conclusion, which was also highlighted by Díaz Alejandro (1970, pp.309-350) and Taylor (1994 and 2018), and echoes Gerschenkron's (1962) observations regarding investment inefficiency in the Soviet Union. In addition to the underlying structural issues pointed out by these authors, two further distortions contributed to inefficient investment patterns. First, the combination of inflationary macroeconomic policies, the nationalization of the banking system and financial repression severely impaired the efficient allocation of capital. The discretionary allocation of bank credit fostered rent-seeking behavior, channeling funds into

projects that would not have been viable under market-determined interest rates. Second, exchange controls—particularly the use of multiple exchange rates—widened the gap between the official and parallel exchange rates. This encouraged export under-invoicing and import over-invoicing. The resulting overvaluation of the official exchange rate acted as an implicit subsidy for capital goods imports, further distorting investment incentives. The elimination of rent controls in 1955 in a context of financial repression contributed to overinvestment in residential real estate. Given the relatively low productivity of this sector, the contribution of such investment to GDP growth was minimal.

In Table 9 below, we present the scenarios proposed by Ferrer, along with alternative ones based on more consistent series for the 1950–1975 period, for which we have TFP data. To estimate the potential growth in GDP associated with different capital-output ratios we followed the Harrod-Domar approach, also used by Chenery and Strout (1966). With this methodology, the potential rate of growth in GDP results from dividing the net investment rate by average capital productivity (i.e., the inverse of the capital-output ratio).

Table 9. Gross versus Net Investment

Author	Capital Output Ratio (V)	Real GDP Growth Rate (G)	Gross Investment	Net Investment
ARKLEMS 1950-1974	1.9	4.3%	17.5%	8.0%
Ferrer (2004)	3.0	6.7%	20.0%	20.0%
	4.0	5.0%	20.0%	20.0%
Coremberg (2023)	3.0	2.8%	20.0%	8.3%
	4.0	2.4%	23.6%	9.7%

Source: Authors based on Ferrer (2004) and ARKLEMS.

Although we agree conceptually with Ferrer's observation, by using gross instead of net investment rates, he overestimated Argentina's GDP growth potential. Our estimate based on the updated ARKLEMS series suggests that the potential GDP growth rate would have been 4.3% per year—well below the 5 to 6.7% range proposed by Ferrer—which is consistent with an average net investment rate of 8% and a capital-output ratio of 1.9 (lower than the average for developed economies). In conclusion, the relatively modest growth observed during this period is primarily explained by low TFP growth, despite investment rates that, by international standards, were not low.

## Limitations of Steady State Growth Models

Simplistic approaches that focus exclusively on the investment rate and capital accumulation tend to overlook the efficiency with which capital is allocated and used. That is, they fail to reflect the dynamics of TFP. As pointed out by Hall and Jones (1999) and Easterly and Levine (2001), in economies that develop successfully, innovation efficiency, and technological progress—whether endogenous or exogenous—neutralize diminishing returns to capital and increase the contribution of TFP to growth. Or, as summarized by Krugman, sustained long term growth is more a matter of "inspiration" than of "perspiration" (Krugman, 1994).

The available data from ARKLEMS suggests that the contribution of TFP to Argentina's economic growth was very limited between 1950 and 2023, except during the 1990s, when the government pursued pro-market policies and structural reforms. If Argentina's growth trajectory reveals an "extensive" growth profile based primarily on factor accumulation, the minimal—or even nonexistent—contribution of efficiency or productivity to such growth is clear evidence of economic decline.

The ARKLEMS GDP per capita series indicate that between 1950 and 1975, Argentina maintained relatively reasonable investment rates, but that TFP growth made a very low or even null contribution to growth, which helps explain the disappointing performance. In our view, the main proximate cause of Argentina's long-term relative economic decline lies in the low efficiency of its economy. Even with relatively high investment rates, GDP growth was well below its potential.

In our view, the distortions introduced by government intervention and controls in key markets had a negative impact on the level, variety and quality of investments and of the capital stock itself. Mises (1912, 1928) and Hayek (1939) introduced the term "malinvestment" in the context of business cycle theory to refer to the allocation of capital to long dated projects due to the manipulation of interest rates by the monetary authority. Hicks (1939, p.133) used the same term to describe the misallocation of resources that occurs when firms overestimate future demand or misinterpret market signals, leading to investment errors that eventually need to be corrected. Although neither Mises nor Hayek specifically use the term "malinvestment" in the socialist calculation debate, it is implicit in their analysis. A misallocation of capital resources can also occur when the investment process is socialized and/or when government sets and controls key prices in the economy such as interest and exchange rates or the allocation of credit is politicized. In this case, malinvestments will tend to be systemic and to contribute to low growth in productivity. In our view, this latter definition of malinvestment aptly describes what happened, in varying degrees, in Argentina during 1945-1975.<sup>18</sup>

<sup>&</sup>lt;sup>18</sup> Harberger (1959), Balassa (1970), Diaz Alejandro (1970), Cavallo and Mundlak (1982), Nougués (1985) highlighted the problem suboptimal resource allocation in Argentina and Latin America due to distortions in relative prices introduced by government policies and controls.

Under the corporatist ISI regime, the most important distortion was introduced by tariffs, which introduced a wedge between domestic and foreign prices and fundamentally altered the relative price between tradables and non-tradables and between agriculture and manufacturing. The impact on growth was significant as such distortions tended to overestimate the value of manufacturing output and thus the rate of GDP growth. This issue was addressed in the literature. Balassa (1970) pointed out that the inefficiencies in resource allocation resulting from discrimination among and within sectors, and from distortions in the relative prices of outputs and inputs, entail a static cost for the national economies of the countries following an inward-looking strategy" (p.32). In the case of Argentina, Balassa estimated "that valuing output at world market prices would reduce the annual rate of growth of GDP from 2.6 to 2.2 per cent in the period 1953-63" (p.44).

Financial repression led to negative real interest rates and credit rationing. As pointed out by Balassa (1970) this led to "malinvestment" in the Austrian sense, i.e., it "contributed to the employment of capital-intensive methods and to the expansion of capital-intensive industries" (p.33). At the same time, the artificial appreciation of the peso and the imposition of strict controls on capital movements introduced another distortion, since most capital goods had to be imported. This combination led to discretionary allocations of scarce credit and foreign exchange, which in turn led to corruption and rent seeking behavior. As result, privileged private sector entities invested in projects which would have been unprofitable in an open market economy without government intervention. At the same time, the average price of capital goods for the rest of the economy were artificially inflated by tariffs. Consequently, the aggregate investment rate for the economy was not only overstated but also capital resource allocation was overweighted in projects with relatively low productivity. During the period 1950-1975, the investment rate at current prices

averaged 20,3% (see Coremberg et al., 2007, p.129). Some of these distortions are picked up by TFP data.

To illustrate the impact of different paths of TFP growth on GDP, in Table 10 we present a simulation comparing Argentina with Latin America and the Western Offshoots. The table below shows the rates of growth TFP, GDP and GDP per capita for Argentina and Latin America during the period 1950-1974 and the number of years needed to double GDP per capita using the "70 rule."

Table 10. Compounded Rates of growth in TFP, GDP and GDP per capita (1950-1974)

	TFP	GDP	GDP per capita	70 Rule
Argentina (ARKLEMS)	0.6%	3.7%	2.0%	35
Argentina (TCB)	0.6%	4.0%	2.2%	32
Latin America	1.2%	5.7%	2.9%	24
Western Offshoots	1.2%	4.3%	2.4%	29

Source: Authors based on data from TCB, MPD and ARKLEMS. The average for Latin America includes Argentina.

According to ARKLEMS' estimates, Argentina's GDP per capita grew at a 2.0% annual rate between 1950 and 1974, with TFP contributing only 0.6%. Had Argentina matched the average TFP growth rate of Latin America, by 1974 its GDP per capita would have more than doubled. Instead, it only did do so in 2011.

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<sup>&</sup>lt;sup>19</sup> This investment rate as a percentage of GDP is calculated with GDP at factor costs. When GDP is estimated at market prices, the investment rate for the period 1950-1974 falls to 17%. Coremberg et al (2007) estimated that during this period the depreciation rate averaged between 12% and 14% of GDP at market prices. Therefore, the net investment rate fluctuated between 4 and 6% of GDP.

It is difficult to quantify the impact of government introduced distortions in asset and factor markets on GDP growth rates. As Taylor (2018) pointed out, low investment quality, investment misallocation and limited investment variety are some of the factors that distort steady state growth accounting exercises using standardized assumptions. Argentina's post-1950 growth has been characterized by relatively high investment rates but minimal productivity gains, largely due to systemic distortions caused by state intervention, financial repression, and inefficient capital allocation. These distortions degraded the quality and efficiency of investment, limiting TFP growth and hindering convergence with more dynamic economies such as Australia. It can be argued that the comparison of Argentina's GDP growth rates with those of advanced economies are equivalent "to comparing apples and oranges." The "quality" of a 2% GDP per capita growth in Argentina is not comparable to an identical rate in the United States. Ultimately, Argentina's long-term economic stagnation stems less from a shortage of capital than from a persistent failure to achieve efficient use of its factors of production.

Digression: ¿Capital Shallowing in the nineties?

Contrary to our findings, Kydland and Zarázaga (2002a, 2002b, 2004 and 2007) find a significant contribution of TFP to GDP growth not only during the 1990s but also during the period 1950-1974. This conclusion is counterintuitive and based on a misspecification of capital stock and productivity data for Argentina. In the Solow model, TFP is measured as the residual between GDP growth and the combined contribution of labor and capital. These authors analyze Argentina's economic growth from 1950 onwards by segmenting the period into decades, which eliminates the decomposition of the business cycle into short- and long-term trends. For example, for the period 1979–1990 they compare "peak" activity levels with the cyclical trough and for the

period 1990–1997 they do the opposite. This implies that any growth accounting exercise for these periods misidentifies as productivity gains the short-term transitory effects of installed capacity utilization. If TFP is interpreted as an outward shift in the production possibilities frontier, transitory cost savings from increased capacity utilization should be reflected as a factor contribution not as gain in productivity.

Coremberg (2009, 2017, 2025) solves this problem by decomposing the Solow residual into short-term transitory capacity utilization effects and long-term dynamism in productivity. A simple way to isolate the latter is to perform a growth accounting exercise between cyclical peaks, as shown in Figure 8. Using this methodology, the contribution of TFP to GDP growth is only 15% for the period under the corporatist ISI regime for which there is data (1950–1974), then doubles to 30% during the 1990s, and turns negative (-8%) during the upward phase of the global commodity super-cycle of the 21<sup>st</sup> century. According to Coremberg (2025), transitory factor utilization effects are negligible between cyclical peaks but were highly significant but transitory from through (2002) to peak (2011) in the most recent cycle and accounted for nearly 40% of the Solow residual.

Additionally, Kydland and Zarázaga (2007) argue that between 1989 and 1997, Argentina's capital stock was virtually unchanged, while their neoclassical growth model predicts that it should have increased by at least 20%. Based on these results, they conclude that, during this period, the Argentine economy experienced a process of "capital shallowing," In their view, Argentina's low capital-output ratio was not due to high productivity levels but to underinvestment in physical

capital. In their view, this "capital shallowing" process undermined the positive effect of the structural reforms of the 1990s and may have contributed to the 2001-2002 crisis.<sup>20</sup>

In our view, the observed decline in the capital-output ratio during the 1990s resulted from the normal increase in the average productivity of capital during the expansion phase of the business cycle and by the fall in capital goods prices due to greater financial and trade openness and a lower real exchange rate. In other words, contrary to Kydland and Zarázaga's conclusion, we argue that no such capital shallowing occurred during the 1990s, but, instead, and in marked contrast to the corporatist ISI regime under any of its variants, by more efficient investments and higher productivity gains.<sup>21</sup> Our disagreement partly reflects misspecification of capital stock data. The ARKLEMS series contemplates various relevant metric and methodological considerations that impact growth accounting exercises and are missing from the works of Kydland and Zarazaga and other (for example Kehoe, 2007 and Buera and Nicolini, 2017).<sup>22</sup>

<sup>&</sup>lt;sup>20</sup> The validity of the capital shallowing hypothesis has also been accepted by Taylor (2018), an author who has extensively studied Argentina's economic decline.

<sup>&</sup>lt;sup>21</sup> In Coremberg (2004b), an initial estimate of TFP using a preliminary series of growth sources for the period 1993–2000, found negative growth. The results obtained here through growth accounting for 1950–2023 allow for the decomposition of GDP trends between cyclical peaks into its sources, discounting the effects of transitory installed capacity utilization, which are null at peaks, a methodology consistent with the canonical NBER business cycle approach (see Mitchell 1947, Heymann 1974). To estimate TFP dynamics during the nineties, the most accurate approach is to compare cyclical peaks (1987 vs. 1998), as shown in Table 7, which results in 1.1% annual growth. The new long-term series also yield a null TFP (-0.3) for the period 1993–2000, which is consistent with Coremberg (2004b). But this result is inconsistent with NBER methodology since it does not consider the cyclical boom of1990–1993 and includes the negative phase of the cycle (1998–2000).

<sup>&</sup>lt;sup>22</sup> See methodological note in the Appendix.

## 5. Conclusion

This paper challenges the widely held notion that Argentina grew strongly in the postwar era and its much-debated relative economic decline began after 1974. By systematically evaluating a broad set of empirical methodologies, including cross-country comparisons, convergence regressions, productivity analysis, and growth accounting, we have shown that Argentina's relative decline accelerated after World War II although rooted in an earlier period.

Argentina's postwar development model—a mix of import-substitution industrialization (ISI), corporatism, and populism—created a political economy that delivered short-term growth spurts but failed to sustain productivity gains. Favorable terms of trade and high investment occasionally masked inefficiencies, but weak total factor productivity (TFP) growth led to stagnation.

From Frondizi to Macri, efforts to transition out of this regime were undermined by institutional weaknesses, opposition from special interest groups, political volatility, and inconsistent implementation. Institutional anomie (Nino, 1999), a legacy of endemic populism, undermined efforts to impose fiscal and monetary discipline on the Executive via central bank independence or other commitment devices. As a result, policy time inconsistency has become entrenched.

Over the last eight decades Argentina has struggled to transition from a corporatist ISI to an open market economy regime. Reforms have been short-lived, often reversed abruptly, preserving key elements of Perón's regime—one of the most enduring forms of fascist-inspired corporatism. Relative underperformance stems not only from external shocks or low investment but from suboptimal institutional arrangements that stifle growth in productivity and inhibit convergence. Opposition from labor and industrial lobbies has consistently thwarted reform.

Even the 1990s reforms, the most successful, gave way to a corporatist-populist revival. Regime uncertainty has contributed to macroeconomic instability, which in turn has fueled political conflict that led to recurrent fiscal imbalances financed with an unsustainable combination of external debt and domestic monetization. The predictable result of this policy mix has been high, persistent and volatile inflation and low growth.

Argentina's repeated failure to embrace an open, competitive economy highlights the need for institutional reform to achieve sustained growth. Policy debates that ignore the roots of its secular decline risk misdiagnosing current challenges. Recovery requires acknowledging that low productivity, driven by a dysfunctional institutional infrastructure is fundamental problem. Without dismantling the corporatist legacy, Argentina risks remaining trapped in a cycle of crisis and stagnation.

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## **APPENDIX**

Methodological Note: Measurement Errors and Data Misspecification in Growth Accounting

The data used in some of the studies cited in this article is distorted by measurement problems. ARKLEMS series used in this paper addresses these problems by taking into consideration the following: 1) composition effects due to the chaining of series using Tornquist indices allows adjustment for changes in the composition of growth sources; 2) changes in the functional distribution of income over time, 3) adjustment for differences in the current values of series with different base years in overlapping years, a problem particularly significant during the period 1986-1993 due to high inflation (which avoids attributing such differences to price volatility); 4) adjustments in the quality, intensity, and occupational category for the labor input in the series for 1990–2023; 5) hedonic valuation of capital stock using direct data from comprehensive and detailed censuses and registries, avoiding the assumptions of the Perpetual Inventory Method (PIM).

The methodology consists of accumulating past investment series into the present, assuming a common service life and depreciation method, often without accounting for the pattern of asset retirements due to technological and economic obsolescence. The PIM typically relies on aggregate investment series frequently disregarding available statistical sources for specific asset categories. This introduces a high degree of discretion that can lead to errors in the estimation of the "true" capital stock, at least for the base or reference year. This problem has been highlighted by Hulten and Wycoff (1981), Miller (1983 and 1990), OECD (2001 and 2008), Coremberg (2004 and 2009).

In contrast, the capital stock estimates used in the ARKLEMS database rely on a detailed valuation of more than 100 types of capital goods through a hedonic valuation method published by INDEC (see Coremberg, 2004), that takes into account characteristics such as age, brand, and model, which are based on physical stock data from censuses (covering housing, non-residential buildings, motor vehicles and aircraft, tractors, agricultural machinery, fences, silos, sheds, livestock, and permanent plantations), and take into account hedonic prices from the used markets by capital type (representing over 70% of the total capital stock), depreciation, retirement patterns and age from statistics instead of being based on standard assumptions of PIM applied to aggregate series. As noted by Taylor (1994), based on Coremberg (2004a) estimates later expanded by ARKLEMS, a proper accounting of Argentina's capital stock leads to an estimated capital-output ratio that is significantly below the average for advanced economies.