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# **Shedding light on Argentina's macroeconomic trap: Macroeconomic Policy Regimes and Demand and Growth Regimes**

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# Shedding light on Argentina's macroeconomic trap: Macroeconomic Policy Regimes and Demand and Growth Regimes

Juan Martín Ianni

**Abstract:** Demand and Growth Regimes (DGR) and Macroeconomic Policy Regimes (MPR) frameworks have taken prominence within the post-Keynesian literature. However, the majority of studies based on these conceptual frameworks have focused on developed economies. The main contribution of this paper is to provide a post-Keynesian analysis of the DGR and MPR of an emerging capitalist economy, Argentina, in the period between 2002 and 2019. Challenging previous periodization of the Argentine macroeconomy, the results show a more precise characterization of the latter, thus allowing a better understanding of economic policy and its results in terms of aggregate demand and growth. In particular, it is possible to observe the MPR and DGR transition between 2002 and 2015, as well as an abrupt change after 2016.

**Keywords:** growth, post-Keynesian macroeconomics, macroeconomic policy mix, peripheral economies, developing countries.

**JEL-code:** O11, E12, E60, O54.

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## 1. Introduction

Demand and Growth Regimes (DGR) (Hein, 2012; Hein et al., 2021) and Macroeconomic Policy Regimes (MPR) (Hein and Martschin, 2021; Herr and Priewe, 2005) frameworks have taken prominence within the post-Keynesian literature. While the former is useful to understand the main demand and financing sources and the dynamics of a country's macroeconomic performance, the latter allows us to map the influence of the macroeconomic policy-mix on the prevailing demand and growth regime. However, the majority of studies based on these conceptual frameworks have focused on developed economies.

Therefore, the main contribution of this paper is to provide a post-Keynesian analysis of the DGR and MPR of an emerging capitalist economy, Argentina, in the period between 2002 and 2019. For its part, Argentina has just experienced a “lost decade” in economic terms (Valdecantos, 2020). After its good performance in the 2000s, Argentina's GDP growth has lagged behind (compared to world's growth) and its per capita GDP has stagnated since 2010. In this sense, both the DGR and MPR framework can shed light on this phenomenon. However, in order to do so, the latter has to take into account certain particularities related to peripheral and emerging economies (Kazandziska, 2015).

Some scholars have already analysed the DGR for Argentina (Ackay, et al., 2021). However, this work provides a novel periodization that contests the results of the previous literature. Furthermore, although several scholars have already studied Argentina's recent macroeconomic policies (Amico, 2020; Damill et al., 2015; Valdecantos, 2020), this work will adopt the (adapted) post-Keynesian MPRs framework for the Argentinian case and relate to the prevailing DGR.

The remainder of this paper is structured as follows. In Section 2 I present the theoretical framework building mainly on post-Keynesian theory. This provides the conceptual toolkit to characterize Argentina's DGR and MPR, the key topic of Section 3. Section 3 is divided into two subsections, one focusing on the long-term view and the second on a more detailed periodization. Finally, in Section 4 I provide some concluding remarks.

## 2. Theoretical Framework

The theoretical framework of this work is based on two post-Keynesian conceptual devices. Subsection 2.1 presents the DGR theoretical framework, while in subsection 2.2 I describe

the MPR concept, both its core elements as well as its adaptation to study peripheral economies.

## 2.1 Demand and Growth Regimes

The DGR analysis builds on post-Kaleckian demand-driven models, developed by Bhaduri and Marglin (1990) and Blecker (1989), among several others. In the context of finance-dominated capitalism (Hein, 2012), that is, the increasing role of financial motives, markets, actors and institutions in the operation of the economy (Epstein, 2005), different DGR have emerged. In particular, financialization has affected distribution (rising gross profit shares and the inequality between wage earners), decreased real investment in capital stock (due to short-termism on management and the reduction of internal means of finance for real investment), enhanced wealth- and debt-financed consumption (by changing financial norms and creating new financial instruments) and raised current account imbalances (by liberalising capital markets and accounts) (Hein et al., 2021). These channels have affected each economy differently.

Consequently, in the context of a general trend (financialization) with “variegated” results (Karwowski et al., 2020), specific macroeconomic configurations emerged. The latter can be grasped by analysing a given economy DGR, either in developed (Hein, 2012; Hein and Martschin, 2021; Dünhaupt, et al., 2007) or developing countries (Akçay et al., 2021; Jungmann, 2021). These DGRs are analysed through two complementary empirical processes. Firstly, I analyse growth contributions of the main demand components. This means the growth contributions of private and public consumption and investment (domestic demand) and exports and imports (net exports), which sum up to real GDP growth of a given economy. Secondly, I study financial balances of the private, government and external sectors, as a means of understanding how demand is financed and if it entails potential instabilities and fragilities (Hein et al., 2021). In sum, these two methods shed light on *i*) a country’s main demand and growth sources; and *ii*) how demand is financed (Hein et al., 2021). These indicators define an economy’s DGR, which can be export-led mercantilist, weakly export-led, domestic demand-led, or a debt-led private demand (boom) regime (Hein, 2012). Table 1 summarizes how they are operationalised in this paper.

*Table 1: Classification of Demand and Growth regimes under financialization.*

Export-led mercantilist	<p>Positive financial balances of the private sector and the private household sector.</p> <p>Negative financial balances of the external sector.</p> <p>Positive balance of goods and services.</p> <p>Positive growth contributions of net exports (more than 5 per cent of GDP growth).</p>
Weakly export-led	<p><b>Either:</b></p> <p>Positive financial balances of the private sector, and the Private household sector in particular,</p> <p>Negative financial balances of the external sector,</p> <p>Positive balance of goods and services,</p> <p>Negative growth contributions of net exports.</p> <p><b>or</b></p> <p>Negative but improving financial balances of domestic sectors.</p> <p>Positive but declining financial balances of the external sector.</p> <p>Negative but improving net exports.</p> <p>Positive growth contributions of net exports (more than 5 per cent of GDP growth)</p>
Domestic demand-led	<p>Positive financial balances of the private household sector and positive or balanced financial balances of the private sector as a whole.</p> <p>Balanced or positive financial balances of the external sector.</p> <p>Growth is almost exclusively driven by domestic demand.</p> <p>Around zero growth contribution of net exports.</p>
Debt-led private demand boom	<p>Negative or balanced financial balances of the private sector.</p> <p>Positive financial balances of the external sector.</p> <p>Significant growth contributions of domestic demand, and private consumption demand in particular (more than 40 per cent of GDP growth).</p> <p>Negative growth contributions of net exports.</p>
<i>Source: Hein et al., (2021; p. 1204)</i>	

It should be highlighted that different analytical levels must not be confused when applying the DGR methodology. A given DGR (e.g., domestic demand-led) describes the composition of aggregate demand and how it is financed, but they do not imply a particular public policy. If the causes of such DGRs are to be studied, then public policy must be

addressed but at a different analytical level. For this purpose, the next sub-section develops the MPR framework.

## 2.2 Macroeconomic Policy regimes

### 2.2.1 Core elements

In the post-Keynesian literature, the concept of MPR has taken prominence as a theoretical device for evaluating differences in macroeconomic dynamics for different countries or regions (Hein and Martschin, 2021). Based on a comprehensive and coherent analysis on economic policy, post-Keynesians have developed a full macroeconomic policy mix (Arestis, 2013) as an alternative to orthodox proposals (in particular, New Consensus Macroeconomics<sup>1</sup> [Carlin and Soskice (2009)]). In this sense, a MPR describes a set of fiscal, monetary and wage/income policies, as well as their coordination, interaction and implications regarding open economy issues (mainly exchange rate regime and degree of economic openness).

The core of a post-Keynesian MPR is fiscal policy, as it is responsible for *i*) the stabilization of economic activity (at a non-inflationary level of full employment), and *ii*) a more equal disposable income distribution, both in the short and long run<sup>2</sup> (Hein and Martschin, 2021). Equation 1 illustrates the first objective of fiscal policy, where “D” represents the public deficit, “G” equals public expenditure, “T” is public “income” (in the form of taxes), “S” refers to saving, “I” is investment, “X” refers to exports and “M” to imports. Therefore, to sustain a specific level of economic activity (and thus employment), the public deficit (D) is in charge of taking-up potential excess of saving over investment (S-I) of the private sector. The level of public deficit needed would be higher if the current account is in deficit (and less if it records a surplus (Arestis, 2013; Hein and Martschin, 2021).

$$(1) D = G - T = S - I - (X - M)$$

To achieve output and employment targets, fiscal policy must counteract with aggregate demand shocks. For this purpose, post-Keynesians argue for counter-cyclical policies.

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<sup>1</sup> Contrary to the post-Keynesian (PK) approach, in the New Consensus Macroeconomics (NCM) paradigm inflation-targeting regimes are recommended as the main policy tool for stabilising an economy, while fiscal policy only plays a supporting role in the macroeconomic mix. Moreover, income policies should focus on flexible wages. See Hein and Martschin (2021) for a more comprehensive comparison of the PK and NCM approaches.

<sup>2</sup> Additional effects, such as increasing productivity growth, are also highlighted in the literature. See for example Kohler and Stockhammer (2021).

Following Hein and Martschin's (2021) notation, such requirement can be expressed as in equation 2:

$$(2) D = D_L + D_S(Y^T - Y)$$

where  $D_L$  represents the government position (either surplus or deficit) required for achieving the targeted level of (non-inflationary and full employment) economic activity in the long run ( $Y^T$ ). For its part,  $D_S$  symbolizes a fiscal policy reaction mechanism, which corrects for short-run aggregate demand shocks that deviate output ( $Y$ ) from the target level. Besides equation 2, fiscal policy can also rely on progressive taxation and redistributive social policies to decrease the excess of private saving over private investment and to improve automatic stabilisers (Hein and Martschin, 2021).

As argued by Domar (1944), sustained public deficits do not necessarily lead to unsustainable public debt-nominal GDP ratios. As also shown by several recent scholars (Freitas and Christianes, 2020; Hein and Woodgate, 2020), this is even less of a problem if fiscal and monetary policy are coordinated, such that the long-term interest rate is lower than the growth rate of government expenditures (Fullwiler, 2020).

Besides being the supporting pillar for long-run fiscal policy (Cassetti, 2017), monetary policy in the post-Keynesian policy mix plays additional roles. In principle, since the interest rate has real effects in economic activity and distribution, central banks should target a slightly positive long-term real interest rate (and at the same time not exceeding real GDP growth, as already argued) (Hein and Martschin, 2021). This allows financial wealth to be protected against inflation, while income distribution improves in favour of the productive sector, which would enhance investment, thus aggregate demand and hence employment. In addition, the central bank should contribute to the stability of the financial system and act as a "lender of last resort" during crises (Rochon and Rossi, 2007). In this sense, regulating and channelling credit, setting reserve requirements and other forms of monetary regulations are key tasks for monetary policy in the post-Keynesian view (Hein and Martschin, 2021).

Wage policies are in charge of nominal stability (i.e., stable inflation) and stable income distribution. For this purpose, as a guiding principle nominal wages should grow at a similar rate to the sum of the targeted inflation rate and labour productivity growth, which means that trend growth of unit labour costs is equal to target inflation (Hein and Martschin, 2021). If actual inflation is below the target, then the labour income share will increase and aggregate demand and employment will rise (if the economy is wage-led).

Post-Keynesians have also incorporated the international dimension to the MPR analysis. When studying current account imbalances, Thirlwall's law (1979) suggest that price elasticities might be less important than income elasticities of exports and imports. Consequently, post-Keynesians argue that the nominal exchange rate should be “parked” or stabilised instead of treating it as tool for short-run adjustments. However, this task is not simple, especially since there is an ongoing debate between scholars regarding the determinants of the nominal exchange rate (Lavoie 2022; Chapter 7).

On the one hand, Monetary Keynesians have presented a theory that relates long-term interest rates (domestic and international), currency risk and relative currency premium with the exchange rate (De Paula et al., 2017; Herr and Priewe, 2005). Currency premium indicates the asset-protecting property of a given currency, which determines its position in the international currency hierarchy. Therefore, countries with higher currency premium and lower currency risk have lower long-term equilibrium interest rates. Otherwise, the central bank is firmly constrained to control domestic interest rates.

On the other hand, even though Post-Keynesians such as Lavoie (2000; 2022, Chapter 7) and Arestis (2013) recognize that exchange rates may be related to international interest rate differentials, they argue that the causality runs from the latter to the former (through its effect on future and spot exchange rate differentials). Consequently, central banks can control the domestic interest rate, but they are limited by the effect of the latter on capital flows and thus on the exchange rate. Therefore capital controls are recommended to the stabilisation of exchange rates, as in the Monetary Keynesian approach (Harvey, 2019).

Both approaches highlight potential constraints for central banks to set domestic interest rates below nominal GDP growth, given potential instability in exchange rates. As means of overcoming these constraints, post-Keynesians recommend raising non-price competitiveness (Arestis, 2013). This would allow countries to increase the balance of payments constrained growth rate by improving income elasticity of exports and decreasing it for imports (Thirlwall, 1979). For this purpose, active industrial policies are recommended, as well as public investment in infrastructure and R&D (Arestis, 2013).

### *2.1.2 Adapting the framework to peripheral economies*

External or foreign policy is at the core of the MPR debate in peripheral economies. Herr and Priewe (2005) highlight the structural tendency of non-core countries to face current account deficits as the key factor for under-development, in line with the balance of



payments constrained growth literature (Médici and Panigo, 2015; Thirlwall 1979) and the centre-periphery framework (Pérez Caldentey and Vernengo, 2016). However, they slightly depart from this literature, focusing on how sustained current account deficits translate into increasing debt in foreign currency and the risks of debt and exchange rate crises, leading to capital flight, inflation, and banking crises. What is more, every round of external crisis leads to a systematic reduction of the quality of the domestic currency, and thus an increasing likelihood of dollarization (Herr and Priewe, 2005). Therefore, a successful MPR in peripheral economies must aim to reduce current account deficits, thus avoiding the “original sin” (Eichengreen and Hausmann, 1999).

As means of achieving this, Herr and Priewe (2005) argue for a stable but competitive exchange rate, which could enhance exports. As a result, the currency premium can increase allowing for the domestic interest rate to be lower, as well as reducing recurrent depreciations and their consequences (Herr and Priewe, 2005). For this strategy to succeed, the authors highlight the link between income and external policies (e.g., increasing non prices competitiveness), so wages should evolve in line with the inflation target and trend productivity growth (as argued in the core MPR framework). Consequently, they assess that an export-led DGR should be pursued, since it is more robust for developing countries. Once growth starts, gross capital inflows are likely to take place, which may deteriorate the external surplus through the appreciation of the exchange rate. To address this issue, Herr and Priewe (2005) argue for capital controls and the accumulation of international reserves.

Kazandziska (2015) agrees with Herr and Priewe (2005) regarding the avoidance of foreign debt, however she argues that the main tool to reduce current account deficits is industrial policy, by favouring high-value added industries, in line with Thirlwall’s (1979) recommendations (and as argued by other post-Keynesians previously mentioned). The latter aims at changing the production structure of the economy, i.e., developing the manufacturing sector, and improving non-price competitiveness (Thirlwall, 2011). Kazandziska (2015) thus also departs from the “new developmental” view (Bresser-Pereira, 2016), which relies on the positive relationship between competitive (depreciated) exchange rates and growth.

The main reason to reject this causal link is that a currency depreciation may improve the current account position of a peripheral economy, but it does so by contracting real wages, investment and GDP, thus slashing imports rather than enhancing exports (Amico and Fiorito, 2017; Medeiros, 2020). This is particularly the case for wage-led economies, in which a currency depreciation is associated with a rising profit share, thus contracting aggregated

demand, capacity utilization and employment (Hein, 2014; Chapter 7). For the specific case of Latin America (and particularly Argentina), due to the particularities of its export basket (commodity goods), several scholars have shown that export growth is rather related to its trade partners growth than to exchange rate variations (Prebisch, 2012 [1949]; Berrettoni and Castresana, 2009). For this reason, it is key to incorporate the international context in the analysis. In this sense, Medeiros (2008) argues that it was not the depreciation of the real exchange rate, but rather external forces (China's growth, more lax monetary policy of core economies) which allowed Latin American economies to achieve current account surpluses in the 2000s. In other words, even if a depreciation would have a small positive effect in exports, this channel is not sufficient to compensate for the depreciation's contractionary effects (Amico and Fiorito, 2017)<sup>3</sup>.

In sum, in line with the theoretical link of a depreciation in a wage-led economy<sup>4</sup>, and as shown by several studies (Díaz Alejandro 1963; Hirschman, 1949; Krugman and Taylor, 1978), depreciations have an overall contractionary effect on the economy. An appreciation of the exchange rate could have the opposite effect, allowing the increase in real wages, investment (by an increase in wages and by lowering the prices of imports for capital goods) and thus growth. However, with given income and price elasticities of exports and imports, a sustained growth process with domestic growth exceeding the growth rates of the trading partners will inevitably face a balance of payment constraint (Amico and Fiorito, 2017).

Since severe exchange rate fluctuations may hamper growth, the stability of the exchange rate in peripheral economies is key. As already argued, exchange rates are strongly influenced by capital flows (in particular short-term capital flows, as portfolio investment) (Andrade and Prates, 2013, Harvey 2019). This is particularly true for emerging economies because they are at the bottom of the currency hierarchy and have a low currency premium. Furthermore, the demand for their currency is rather speculative/short-term (Prates, 2020). In periods of low risk in international financial markets, massive short-term financial flows enter developing countries looking for speculative-profitable opportunities (Kaltenbrunner and Páinçeira, 2015). These flows are unrelated to an economy's fundamentals (Andrade and Prates, 2013; Ramos, 2019) and may appreciate the currency, enhance growth, and thus create

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<sup>3</sup> See Dvoskin and Feldman (2015) and Dvoskin, Feldman and Ianni (2020) for a theoretical critique on the usual channels relating depreciations and growth. See Amico and Fiorito (2017) for an empirical critique on this issue for the Argentinian case.

<sup>4</sup> While some literature find that Argentina is a wage-led economy (Amitrano, 2017; Bortz, 2019; Pérez, et al., 2013), others arrive to opposite results (López and Noguera, 2020; Onaran and Galanis, 2014). This work follows the first strand of literature, following Chena, Panigo, Wahren and Bona (2018) arguments regarding Argentina's low export elasticity and high dependence on imported capital goods.

their own “demand” in the form of higher current account deficits (Medeiros, 2008). Once capital flows reverse, this process often leads to strong depreciations<sup>5</sup>. Therefore, the increasing relevance of financial flows and their destabilising effects on the exchange rate requires the implementation of capital controls<sup>6</sup> (Bortz, 2018), with the focus not only on the magnitude, but also on the nature of these flows (Broner et al., 2013; Kaltenbrunner and Paineira, 2015).

Monetary policy may contribute to the stability of the exchange rate (Kazandziska, 2015) through the effect of interest rates differentials on capital flows (as argued in the core post-Keynesian MPR) (Amico and Fiorito, 2017; Lavoie, 2000). However, as Post-Keynesians argue, monetary policy is in charge of two other key tasks: the stability of the financial system and low long-term interest rate, which are already accounted for in the core MPR framework. These objectives might be contradictory, given the place of peripheral currencies in the international hierarchy: since higher domestic interest rates are necessary to compensate for lower liquidity preference and a lower bound on the policy interest rate might be an obstacle to “cheap money” policies<sup>7</sup> (Akca et al., 2021). This “dilemma” is an additional argument for the implementation of capital controls, since “independent monetary policies are possible if and only if the capital account is managed” (Rey, 2015, p. 3). Lastly, fiscal<sup>8</sup> and wage policies should be in line with the core post-Keynesian MPR, that is, stabilizing economic activity (and decreasing income inequality) and nominal stabilisation, respectively. Moreover, contrary to the “new developmental” theory, it is fiscal policy rather than exchange rate policy that should manage aggregate demand (Dvoskin, Feldman and Ianni, 2020).

### 3. Demand and Growth Regimes and Macroeconomic Policy Regimes: the Argentinian case

Argentina’s DGR and MPR are analysed for the period between 2002-2019, using the theoretical framework presented in the previous section. In the first part, the empirical analysis uses a periodization present in previous literature, which is based on trade cycles, which I call the “long term view”. In the second part a novel and more detailed periodization

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<sup>5</sup> Long run effects on the productive structure are also accounted in the literature, coined as the “financial Dutch Disease” (Botta, 2018).

<sup>6</sup> As means of avoiding strong appreciating pressures, developing countries can also transform the excess of foreign currency inflows into the accumulation of international reserves (Kaltenbrunner and Paineira, 2018).

<sup>7</sup> As Kaltenbrunner and Paineira (2018) argues, the volatility of exchange phenomenon is explained by the currency hierarchy but also reinforces it, as external vulnerability and volatile exchange rates decrease the currency of developing countries’ currencies. On this regard, even Herr’s and Priewe’s (2005) optimal MPR might not allow for climbing the currency ladder in the medium run.

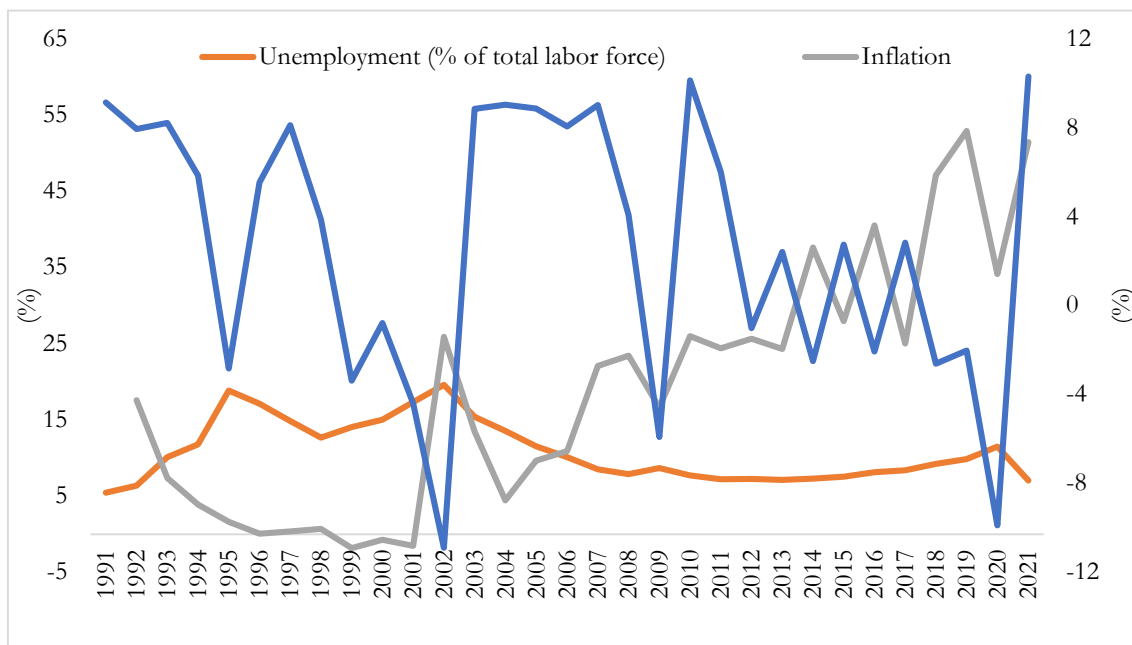
<sup>8</sup> Further limits have been identified in the literature regarding peripheral economies’ fiscal policy. Given they are beyond the scope of this work, they will not be covered. For a detailed description of the latter, see Abeles, Pérez Caldentey and Porcile (2020).

is proposed, which relies on regulation theory analysis and incorporates the structural relationship between policy and the economy (Boyer, 2014).

### 3.1 A long term view

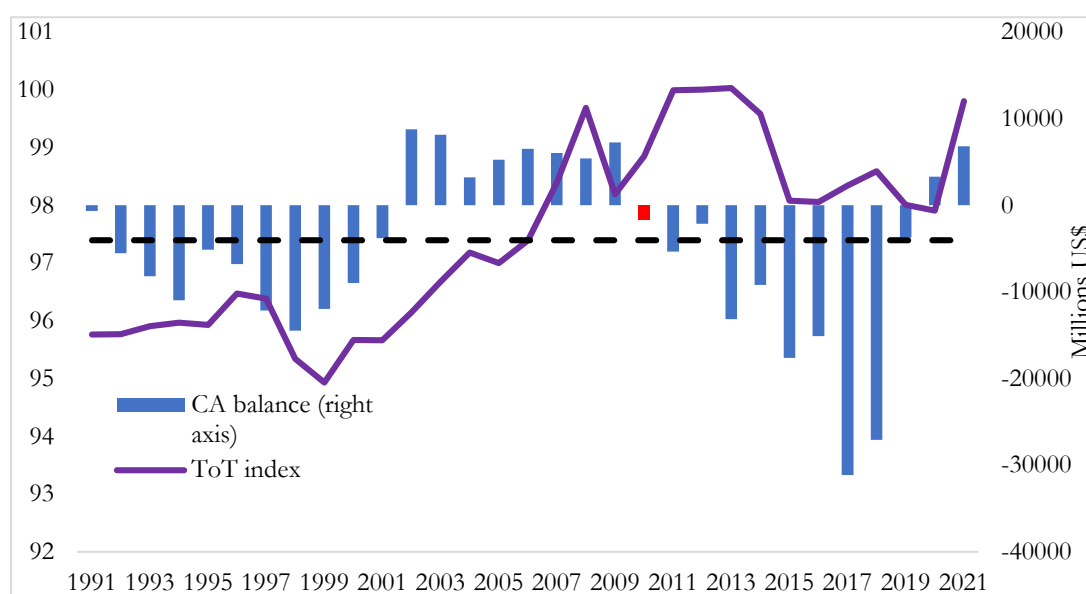
For the long-term view, I focus on the trade cycles in Argentina between 2002 and 2019. Based on the evolution of growth, unemployment, inflation and the current account balance (Figure 1 and 2), it is possible to clearly identify two cycles: 1993-2001 and 2002-2009, in line with the results by Pérez, Chena, and López (2013). Moreover, from 2010 onwards, even if the current account balance seems to indicate a clear-cut trade cycle until 2019, domestic variables (especially erratic real economic growth and increasing inflation) are less clear cut.

*Figure 1: Argentina's unemployment, inflation and growth: 1991-2021.*



*Source: author's own elaboration based on ECLAC.*

Figure 2: Argentina's current account and terms of trade index: 1991-2021



CA: Current Account; ToT: Terms of Trade. Source: author's own elaboration based on Argentina's Central Bank and Ministry of Economics.

Nonetheless, a long-term analysis would indicate two periods for the analysis of Argentina's macroeconomy between 2002 and 2019: 2002-2009 and 2010-2019. This is very similar to the periodization used in previous studies (Akçay et al, 2021). Following the procedure described in Section 2.1, the DGRs are summarized in Table 2, showing average values for the two trade cycles.

Table 2: Key macroeconomic variables, average values for periods 2002-9, 2010-19.

Time Periods	2002-2009	2010-2019
<b>Real GDP growth, in percent</b>	3.88	1.38
<b>Growth contribution in per cent of real GDP</b>		
<b>Domestic demand</b>	3.74	1.86
<b>Private consumption</b>	2.42	1.15
<b>Public consumption</b>	0.56	0.43
<b>Investment</b>	0.76	0.28
<b>Net exports</b>	0.29	-0.26
<b>Sectoral financial balance as per cent of nominal GDP</b>		
<b>External sector</b>	-1.90	2.78
<b>Public sector</b>	0.98	-4.38
<b>Private sector</b>	0.92	1.61
<b>Regime</b>	<b>ELM</b>	<b>DDL</b>
<i>ELM: Export-led mercantilist; DDL: domestic demand-led.</i>		
<i>Source: Argentinian Central Bank; International Monetary Fund and Economic Commission for Latin America and the Caribbean. Author's calculations.</i>		

Between 2002 and 2009, Argentina was characterized by an export-led mercantilist regime, in which negative financial balances of the external sector (thus, current account surpluses) and positive growth contributions of net exports prevail. The external sector deficit was mirrored by both private and public sector financial surpluses. This regime was associated with average of almost 4% annual GDP growth.

Between 2010 and 2019 Argentina experienced a domestic demand regime. Financial balances of the external sector were positive (i.e., a current account deficit). The counterpart of the latter was negative financial balances of the public sector (fiscal deficit) and surplus in the financial balance of the private sector. Growth strongly decelerated compared to the previous period, with negative growth contributions of net exports.

Following the framework presented in Section 2.2 and 2.3 on MPR is vital to understanding the change in the DGR. For monetary policy I assume that the Central Bank of Argentina controls the short-term nominal interest rate and targets a specific short-term real interest rate. For assessing wage/income policy effects, Argentina aggregate demand is considered as wage-led. For fiscal policy, I examine the evolution of the cyclically adjusted budget balance (as a percentage of potential GDP) and the output gap. If they move in the same direction, then fiscal policy can be considered as counter-cyclical (e.g., decreasing structural deficits or increasing structural surpluses in an economic upswing). On the contrary, if they move in opposite directions, then fiscal policy is pro-cyclical. Lastly, I consider the international context. This includes the multilateral real exchange rate and the Economic Complexity Index (a proxy for non-price competitiveness), the average annual growth rates of Argentina's top three trade partners, as well as the commodity price index of Argentina's main commodity exports.

Following the 2002-2009 and 2010-2019 periodization, two different MPRs are clearly visible (summarized in Table 3). In the first period, after the 2001 economic crisis in Argentina, the peso was hugely devaluated in 2002, remaining then stable for the rest of this period. Complementary to this increase in price competitiveness, Argentina's non-price competitiveness also grew. Additionally, the beginning of a new external cycle provided a favourable international context (slowly increasing terms of trade and high growth of Argentina's trade partners), which contributed to the increase in exports. The large devaluation in 2002 contributed to the sharp contraction of the wage share in that year. However, the wage share managed to recover and even overcome pre-crisis values. Monetary

policy followed a “cheap-money” strategy with negative real short-term interest rates. However, the proxy of the long-term interest rate was always higher than GDP growth thus hindering investment in capital stock. Moreover, capital controls were strengthened and sustained from 2003 onwards. Finally, fiscal policy was mainly pro-cyclical (five years out of eight), whereas only three years had an expansionary stance (2005, 2006 and 2007). Moreover, a low but increasing public investment-GDP ratio contributed to increasing aggregate demand and growth.

This MPR contributed to Argentina’s export-led mercantilist regime between 2002 and 2009. A first key factor is the real devaluation, which contributed to the correction of the previous current account deficit. However, rather than boosting exports (driven by a dynamic international context), the latter mostly slashed imports (mainly through decreasing the wage share). High growth in nominal unit labour costs then led to a recovery of the wage share<sup>9</sup>. Monetary policy accompanied this process with positive long-term real interest rate-GDP ratios. Lastly, pro-cyclical and expansionary fiscal policy helped to stabilize domestic demand after the crisis and increase public investment, as well as enhancing private investment through crowding-in effects.

The second period shows a radically different MPR, except for monetary policy, which moved towards an expansionary stance. Non-price competitiveness stagnated, while price competitiveness decreased (exchange rate appreciation). Nominal unit labour costs grew more rapidly than in the previous period, but so did inflation. Moreover, the wage share remained stable. Finally, fiscal policy was pro-cyclical in the whole period, being contractionary and expansionary for five years in each case. Public investment as a percentage of GDP did not grow.

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<sup>9</sup> This stimulated imports and thus made growth contributions of net exports negative. However, since we are accounting average values for time periods, net exports growth contributions are positive for 2002-2009, mainly due to its high value in 2002 (after the strong devaluation).

Table 3: Indicators for the Macroeconomic Policy Regimes in Argentina, average annual values for the periods 2002-09 and 2010-19.

Time Periods	2002-2009	2010-2019
<b>Exchange Policy</b>		
Change in MRER	111.35	-15.35
Economic Complexity Index	0.34	0.35
Real exports of goods and services, per cent of GDP	19.55	17.30
Real imports of goods and services, per cent of GDP	11.79	17.80
<b>Monetary Policy</b>		
Short-term real interest rate (%)	-6.07	-4.81
Long-term real interest rate minus real GDP growth	11.43	-18.22
Capital controls	-0.64	-0.85
<b>Wage Policy</b>		
Nominal unit labour costs (annual growth)	21.94	32.12
Inflation	15.79	33.13
Labour income share	36.56	49.64
Change in labour income share (average annual changes)	2.43	0.44
<b>Fiscal Policy</b>		
Cyclically adjusted budget balance (annual change)	-0.23	1.55
Output gap (annual change)	-0.82	-3.63
Number of years with pro-cyclical fiscal policy (co: contractionary, ex: expansionary)	5 (3 exp, 2 co)	10 (5 exp, 5 co)
Public investment in percent of GDP	2.56	2.65
<p>MRER: Multilateral Real Exchange Rate. Capital controls are measured through the Chinn-Ito index, which takes on higher values the more open the country is to cross-border capital transactions. Argentina's long term interest rate is calculated as the interest rate of US Treasury Bonds with 10 years maturity plus Argentina's risk premium measured by the EMBI_AR, taking into account Argentina's inflation.</p> <p>Source: author's own elaboration based on Argentinian Central Bank; International Monetary Fund; Economic Commission for Latin America and the Caribbean, Kennedy, Pacífico and Sánchez (2018), Baumann, Fonay and Coban (2018), JP Morgan, Observatory of Economic Complexity.</p>		

Exchange, monetary and fiscal policies had an important role in the transition to a domestic demand-led regime. However, this MPR did not manage to achieve the high growth rate of the previous period. A possible explanation is the combination of stagnant public investment as a percentage of GDP (which may have impacted in growth contributions of investment) and a stable income share (associated with lower contributions of private consumption). Moreover, this MPR contributed to a deterioration of the current account (Figure 2).



The analysis of the DGR and the MPR in both periods in Argentina does not consider changes within the periods. First, there are authors who point out the diversity of macroeconomic configurations in the 2002-2009 period (Damill et al., 2015; Kulfas, 2019). Second, the 2010-2019 period combines two governments with radically different political intentions and applied economic policies (Amico 2020, Chena et al, 2018; Panigo et al., 2019). Therefore, a broad periodization can be helpful, but it might hide more than it shows. I will thus provide a more short-run examination in the next sub-section.

### 3.2 Zooming-in

I will now replicate the DGR and MPR analysis but with an alternative periodization, based on the structural relationship between the economy and policy (Boyer, 2014). Thus, building on the regulation school literature for Argentina (Chena et al., 2018; Panigo et al., 2019) and on stylized facts of the political and economic field, the following periodization is proposed. The first period begins after the economic crisis of 2001 and ends with the resignation of Roberto Lavagna as Minister of Economy in 2005, which marked the end of a "mercantilist" economic model in Argentina (Chena et al., 2018). Then the second period begins, which culminates with two events. At the domestic level, the period is shaped by the conflict with the agricultural employers and the implications of the legislative elections of 2009; at the international level, with the impact of the Global Financial Crisis in Argentina. This crisis indicated the beginning of the third period, which culminates in the victory of Mauricio Macri in the presidential elections and the resounding change of economic policy in 2015. The last period includes Macri's administration, which lasted until 2019.

Following the procedure described in Section 2.1, the DGRs for Argentina between 2002 and 2019 are shown in Table 4.

Table 4: Key macroeconomic variables, average values for periods 2002-5, 2006-9, 2010-15 and 2016-19.

Time Periods	2002-2005	2006-2009	2010-2015	2016-2019
Real GDP growth, in percent	3.96	3.80	2.95	-0.98
<b>Growth contribution in per cent of real GDP</b>				
Domestic demand	3.03	4.45	4.37	-1.90
Private consumption	1.52	3.32	2.63	-1.08
Public consumption	0.33	0.79	0.75	-0.04
Investment	1.18	0.34	0.99	-0.78
Net exports	1.03	-0.45	-1.06	0.95
Net exports as a percentage of GDP	9.97	5.55	0.12	-1.43
<b>Sectoral financial balance as per cent of nominal GDP</b>				
External sector	-2.18	-1.63	1.80	4.24
Public sector	1.72	0.23	-3.44	-5.80
Private sector	0.45	1.40	1.64	1.55
<b>Regime</b>	<b>ELM</b>	<b>WEL</b>	<b>DDL</b>	<b>WEL</b>
<i>Source: Author's calculations based on Argentinian Central Bank; International Monetary Fund and Economic Commission for Latin America and the Caribbean.</i>				

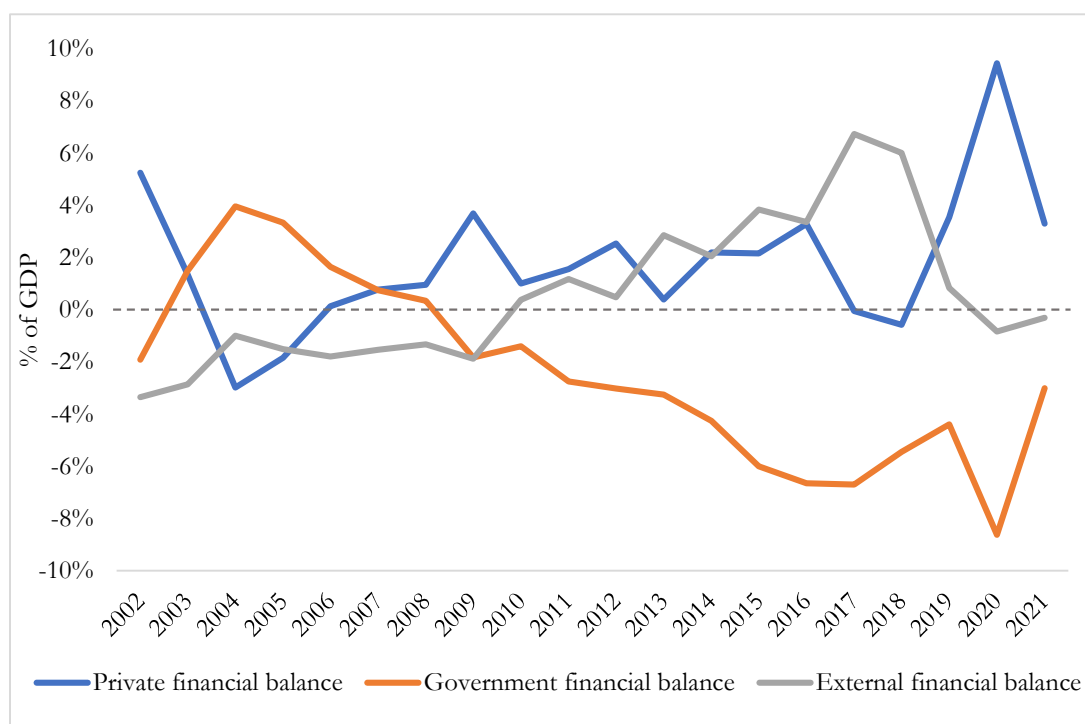
Between 2002 and 2005, Argentina was characterized by an export-led mercantilist regime, in which negative financial balances of the external sector (thus, current account surpluses) prevail (Figure 3). This deficit was the reverse of both private and public sector financial surpluses. This regime was associated with an average of almost 4% GDP annual growth, the highest of all periods.

In the 2006-2009 period, Argentina shifted towards a weakly export-led regime. Although negative financial balances of the external sector were still in place (i.e., the current account was in surplus), net exports ceased to contribute to growth. Growth remained high due to the contribution of domestic demand (Figure 4).

The culmination of this trend is the domestic demand-led regime between 2010-2015. In this period, domestic demand still boosted demand, but contrary to the previous period, financial balances of the external sector were for the first time since the 2001 crisis positive (i.e., the current account was in deficit). The counterpart of the latter is the negative financial balances of the public sector (fiscal deficit) and the surplus in the financial balances of the private

sector. Although not substantially, growth deaccelerated in this period compared to the previous ones.

*Figure 3: Argentina's financial balances: 2002-2021.*

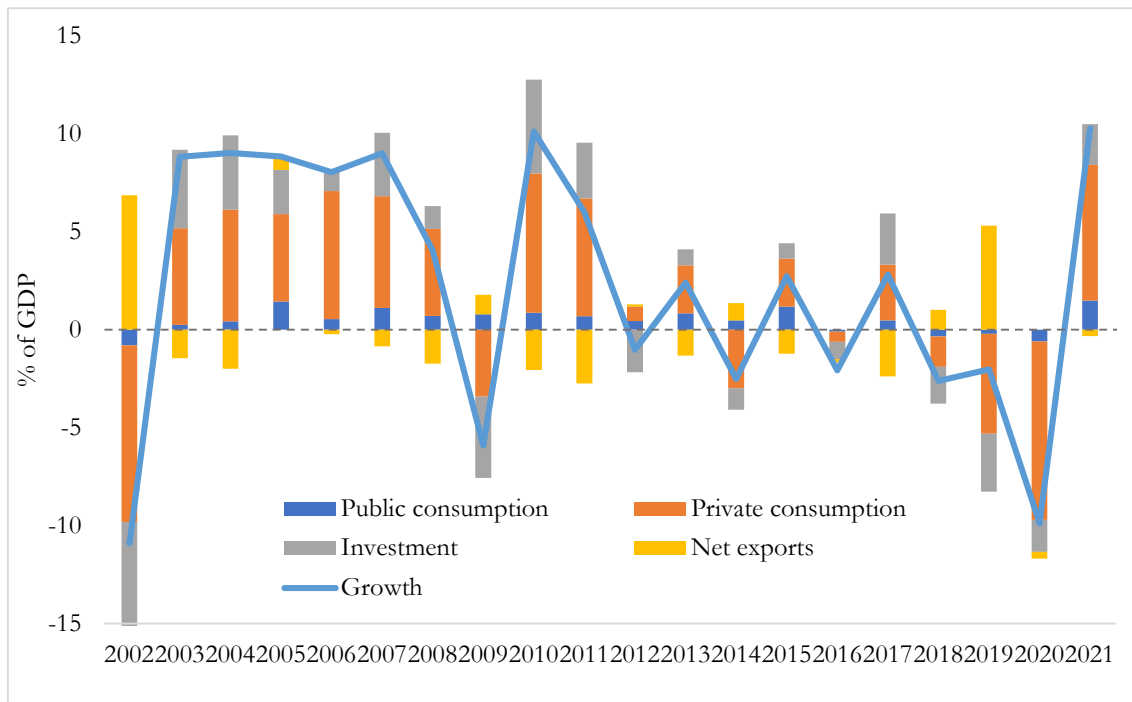


*Source: Argentinian Central Bank; International Monetary Fund and Economic Commission for Latin America and the Caribbean. Author's calculations.*

Between 2016 and 2019, a reversion of the previous process took place, returning the Argentinian DGR to a weakly export-led regime. It should be highlighted that this regime was consolidated after the strong devaluation of the Argentinian peso in 2018. Before this, negative growth contributions of net exports and decreasing net exports as percentage of GDP, as well as negative or close to zero financial balances of the private sector, suggest a debt-led private demand boom regime.

There are several differences of this DGR in comparison to the 2006-2009 regime, although they are both weakly export-led. Firstly, the dynamic of the 2016-2019 regime was associated with an improvement (after the 2018 devaluation) of the financial balances of the external sector, on the one hand, and net exports, on the other hand, the opposite of the 2006-2009 period. On average net exports were the only demand component contributing to growth of GDP.

Figure 4: Argentina's growth contributions: 2002-2021.



Source: Author's own elaboration based on Economic Commission for Latin America and the Caribbean.

This alternative periodization leads to a different characterization of Argentina's MPRs, as summarized in Table 5. The 2002-2005 MPR is characterized by the huge depreciation of the Argentinian peso in 2002, which then remained stable. While this provided a gain in price competitiveness, Argentina's non-price competitiveness was low. Nevertheless, the beginning of a new external cycle provided a favourable international context (slowly increasing terms of trade and Argentina's trade partners high growth), which contributed to the increase in exports.

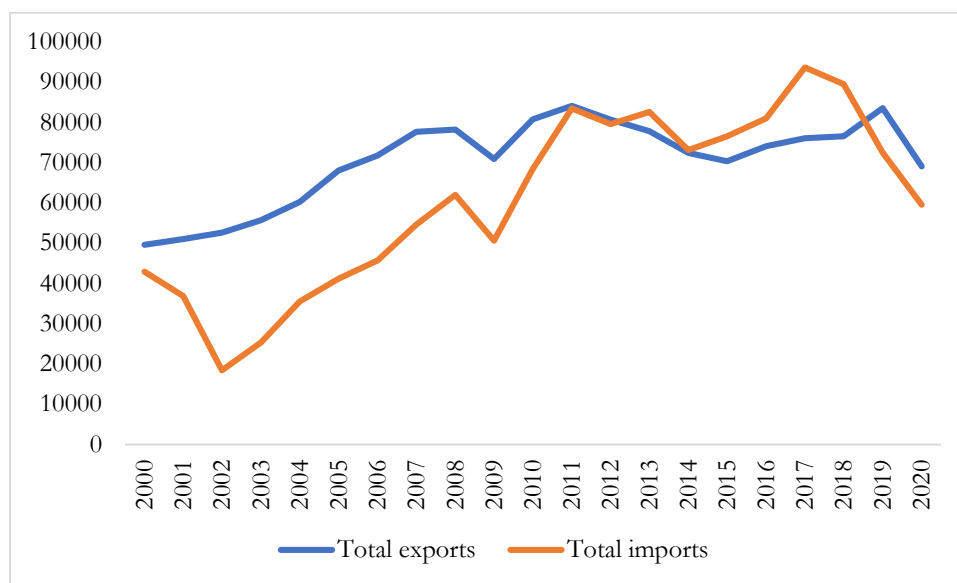
As already explained, the high depreciation in 2002 contributed to the sharp contraction of the wage share in 2002. Although it managed to slowly recover in 2004 and 2005 due to raising unit labour costs, it did not achieve its pre-devaluation values. Monetary policy achieved negative short-term real interest rates, although with a high long-term real interest rate-GDP differential. Moreover, capital controls were strengthened and sustained from 2003 onwards. Fiscal policy was balanced between counter- (2003 and 2004) and procyclical (2002 and 2005) stances, the latter being expansionary in 2002 and contractionary in 2005. Finally, a low but increasing public investment-GDP ratio was associated with higher growth.

Table 5: Indicators for the Macroeconomic Policy regimes in Argentina, average annual values for periods 2002-5, 2006-9, 2010-15, 2016-19.

Time Periods	2002-2005	2006-2009	2010-2015	2016-2019
<b>Exchange Policy</b>				
Change in MRER	136.26	-9.87	-41.82	28.94
Economic Complexity Index	0.29	0.39	0.42	0.25
Real exports of goods and services, per cent of GDP	19.92	19.18	17.35	17.23
Real imports of goods and services, per cent of GDP	9.94	13.63	17.23	18.66
<b>Monetary Policy</b>				
Short-term real interest rate (%)	-4.70	-6.48	-7.96	-0.09
Long-term real interest rate minus real GDP growth	32.54	-9.67	-16.13	-21.37
Capital controls	-0.42	-0.85	-1.57	0.23
<b>Wage Policy</b>				
Nominal unit labour costs (annual growth)	N/A	23.39	29.80	33.84
Inflation	13.34	18.23	27.63	41.38
Labour income share	32.53	40.60	48.92	50.72
Change in labour income share (average annual changes)	-2.52	7.39	2.19	-2.17
<b>Fiscal Policy</b>				
Cyclically adjusted budget balance (annual change)	6.74	-0.74	3.67	-0.44
Output gap (annual change)	-0.79	4.84	-0.45	0.18
Number of years with pro-cyclical fiscal policy (co: contractionary, ex: expansionary)	2 (1 exp, 1 co)	3 (2 exp, 1 co)	6 (4 exp, 2 co)	4 (1 exp, 3 co)
Public investment in percent of GDP	2.05	2.82	2.74	2.52
Source: author's own elaboration based on Argentinian Central Bank; International Monetary Fund; Economic Commission for Latin America and the Caribbean, Kennedy, Pacífico and Sánchez (2018), Baumann, Fonay and Coban (2018), JP Morgan, Observatory of Economic Complexity.				

Overall, Argentina's MPR between 2002 and 2005 contributed to its export-led mercantilist regime in this period. A first key factor in this process is the real devaluation, which corrected the current account deficit, mostly through slashing imports (Figure 5). This raised the growth contribution of net exports and net exports as percentage of GDP.

*Figure 5: Argentina's total exports and imports: 2000-2020.*



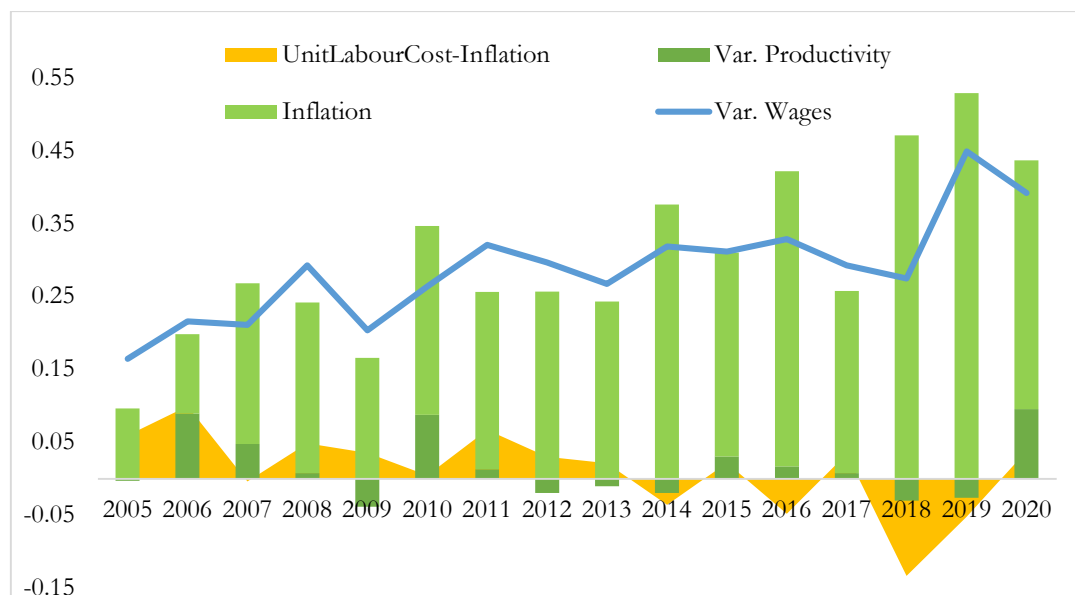
*Source: Author's own elaboration based on ECLAC.*

Monetary policy accompanied this process with a contractionary stance in the form of high long-term interest rate-GDP ratios. Complementarily, fiscal policy was balanced between pro- and countercyclical positions, which stabilized domestic demand and increased public investment, as well as enhancing private investment through crowding-in effects. This was associated with a quick recovery of the Argentinian economy in the aftermath of the debt crisis in 2001.

In the second period (2006-2009), the MPR radically changed. Real multilateral exchange rates appreciated and non-price competitiveness increased, contrary to the previous period. In addition, the long-term interest rate-GDP ratio strongly decreased, moving towards an expansionary stance, while capital controls were tightened. Wage policy did not manage to act as a nominal stabilizer, since nominal wages increased more than inflation and productivity growth (except in 2007). Therefore, unit labour costs grew more than inflation, fuelling the latter (Figure 6). This contributed to negative real interest rates and exchange rate

appreciation. Moreover, it was associated with a huge increase in the wage share, which reached its 2001 levels (i.e., pre-crisis). Finally, fiscal policy was procyclical and expansionary almost the whole period, except from the year of the GFC. Public investment as share of GDP increased, which contributed to enhancing aggregate demand and growth.

*Figure 6: Argentina's unit labour costs, inflation, variation in productivity and wages: 2005-2020.*



*Source: Argentina's National Institute of Statistics and Centre of Production Studies.*

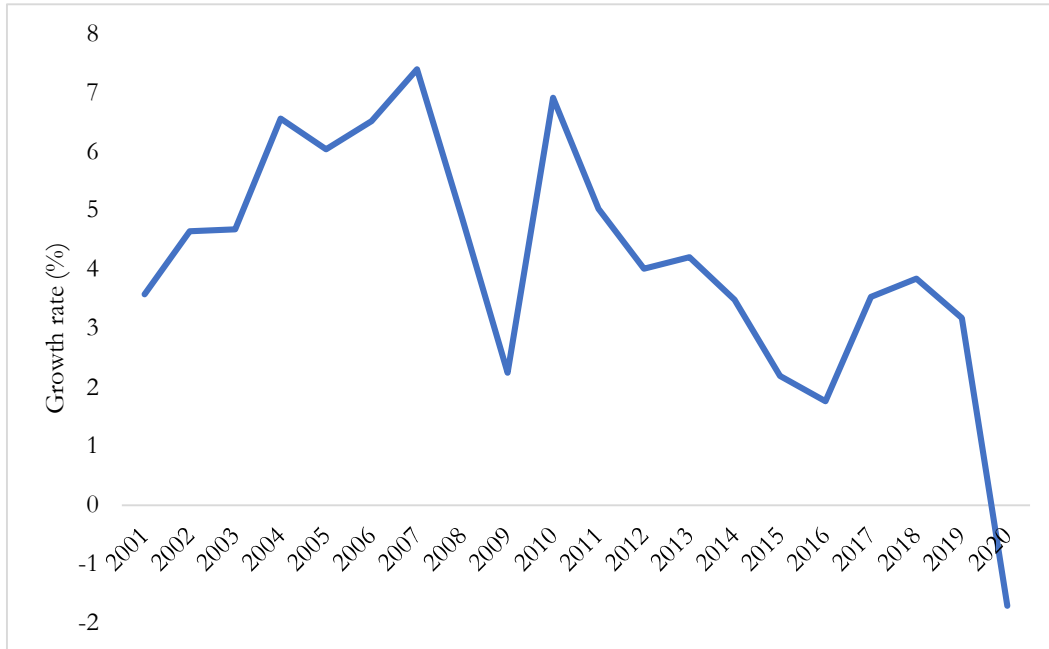
The change in Argentina's MPR is linked to the transition from an export-led mercantilist regime to a weakly export-led demand regime. Procyclical and expansionary fiscal policy was the largest contributor to the growth process through enhancing domestic demand. However, this caused a deterioration of the public financial balances, which became negative in 2009. The increase in the wage share also contributed to boosting domestic demand, which compensated the decrease of net exports as a source of aggregated demand and growth (Figure 4).

The decline of net exports is explained mainly by the constant increase of imports (associated with a growing economy), without a similar growth in exports, despite a relatively good international context (trade partners still growing at a fast pace and good terms of trade, at least until the GFC) (Figure 7). This reduced the current account surplus of Argentina in the period under analysis (increasing the external financial balance). Although not an immediate problem, this trend became problematic in the next period.

Despite this unstable trend, and in the context of the GFC, Argentina managed to sustain a stable exchange rate and avoid losing too much international reserves (Figure 8), which was

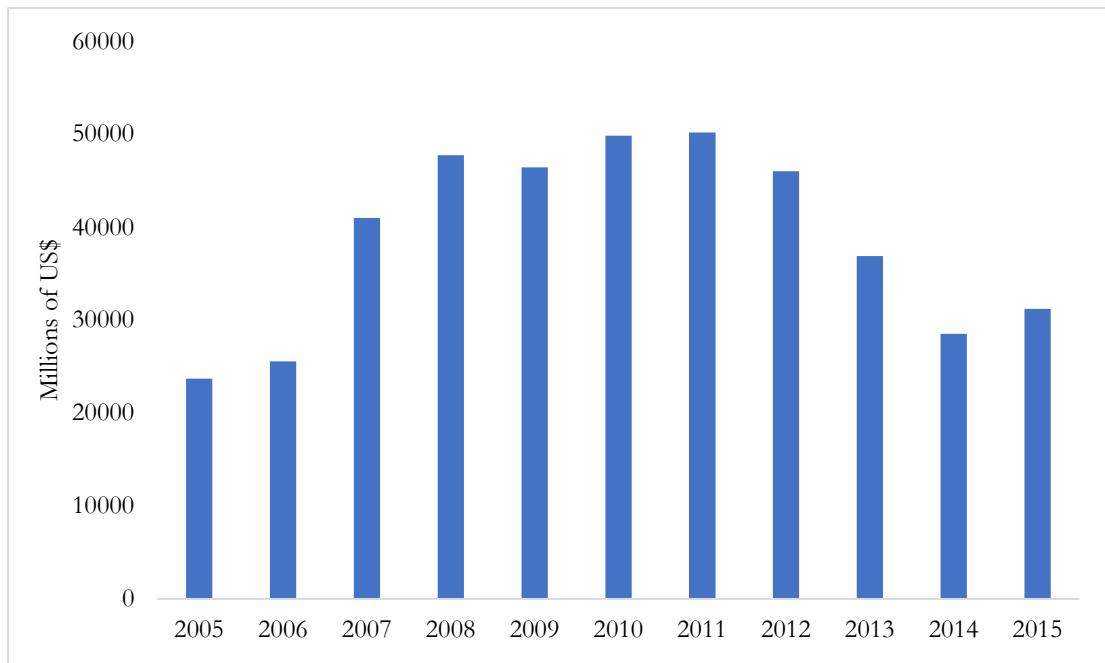
instrumental to sustaining economic growth. Capital controls played a vital role in stabilising the exchange rate and preserving international reserves during this period.

*Figure 7: Average growth rates of Argentina's top three trade partners*



*Source: author's own elaboration based on IMF.*

*Figure 8: Argentina's International Reserves: 2005-2015*



*Source: author's own elaboration based on Argentinian Central Bank.*



The 2010-2015 MPR did not significantly shift away from its predecessor. The Argentinian peso continued to appreciate and non-price competitiveness increased compared to the previous period. The short-term real interest rate and the long-term interest rate-GDP differential remained negative, and capital controls were tightened. Wage policy failed again to act as nominal stabilizer, leading at the same time to higher inflation and a growing wage share. Fiscal policy was pro-cyclical the whole period and almost every year expansionary (except in 2012 and 2014). However, public investment decreased after 2009 and never returned to pre-GFC levels.

This MPR culminated the transition started in 2006 from an export-led mercantilist to a domestic demand-led regime. Between 2010 and 2015, domestic demand continued to play a key role in fostering growth, although the latter deaccelerated. Expansionary fiscal policy and rising wage shares were key in this sense. For the latter, a stable and appreciating exchange rate was instrumental since depreciations are considered detrimental for real wages. Moreover, even if public investment was not able to sustain its pre-GFC values, growth contributions of investment were higher than in the 2006-2009 period.

On the contrary, and in line with the tendency of the previous period, net exports had a negative contribution to GDP, and net exports as percentage of GDP were virtually zero. The evolution of net exports undermined the sustainability of the process (which is reflected in the huge loss of international reserves -Figure 8-). For the first time since 2003, the current account was in deficit. Although trade partners grew less, the change to a surplus in the external position happened when Argentina's terms of trade were at their maximum (Figure 2). As already argued for the previous period, this could reflect insufficient industrial policy to increase non-price competitiveness. An additional threat to the MPR stability was the public sectoral financial balances. With negative net exports, the price to pay to sustain domestic demand (and thus growth) was the further deterioration of the fiscal balance.

The fourth period (2016-2019) was marked by the arrival of a new government into office, which instrumented a radical change in its MPR. On the external front, the exchange rate depreciated and non-price competitiveness deteriorated. Capital controls were lifted but the monetary policy stance remained expansionary (although real short-term interest rates were slightly positive).

Wage policy was based on real wages liquation through increasing inflation. Wages grew more than inflation and productivity gains only in 2017, the year of legislative elections [see Figure 6]). Therefore, unit labour costs increased less than inflation in the whole period and

the wage share decreased. Finally, fiscal policy continued to be mostly procyclical, but in contrast to previous periods, it was almost every year contractionary (except in 2017). Public investment followed this dynamic, decreasing steadily until 2018 and then sharply in 2019. This restrictive MPR shifted the Argentinian economy back to a weakly export-led regime. However, contrary to 2006-2009, the 2016-2019 regime was unable to achieve growth. Expansionary monetary policy, contractionary fiscal policy, a huge depreciation between 2018 and 2019 and the decrease in the wage share were associated with lower aggregate demand and growth. The only year in which aggregated demand and growth were positive was in 2017, when expansionary fiscal policies were in place. Given the GDP contraction in this period, the increase in net exports (on average, but especially from 2018 onwards) were mostly associated (as in 2002) with a decline in imports (see Figure 5). Contrary to the “new developmental” theory, the depreciation did not manage to boost exports and investment, but rather “solved” the external constraint through its contractionary effect on the economy (slashing imports).

On the financial level, procyclical contractionary fiscal policy failed to improve the fiscal deficit (it even increased in 2016 and 2017). Moreover, until the 2018 depreciation, given lower price and non-price competitiveness and less dynamic trade partners, the current account deficit rose. The latter was financed by a huge inflow of capital. For the first time since 2005, the private sector financial balances were negative in 2017 and 2018. However, the depreciation in 2018 corrected this trend, leading back external and private financial balances to positive values.

#### 4. Conclusions

To contribute to the debate on DGR and MPR in emerging economies, I have identified different regimes for Argentina between 2002 and 2019. Following the periodization proposed by the previous literature, DGR and MPR show a clear relationship during the period studied. However, the analysis of the DGR and the MPR in both periods in Argentina does not consider changes within the periods. Therefore, a broad periodization can be helpful, but it might hide more than it shows.

This leads us to challenge the previous periodization. Consequently, I identified Argentina’s DGR and MPR under a novel and alternative periodization, based on the structural relationship between the economy and policy (Boyer, 2014). Thus, building on the regulation school literature for Argentina (Chena et al., 2018; Panigo et al., 2019) and on stylized facts of the political and economic field, a new periodization was proposed. The results indicate a

more precise characterization of the Argentine macroeconomy, thus allowing a better understanding of economic policy and its results in terms of aggregate demand and growth. In particular, it is possible to observe the MPR and DGR transition between 2002 and 2015, as well as an abrupt change after 2016. These changes in both the MPR and the DGR during the period under analysis can be summarized in Table 6.

It should be highlighted that this work is not free of limitations. Firstly, the “adapted” MPR framework for peripheral economies should be considered as a theoretical starting point, future research will be necessary to refine its correct theoretical design. Secondly, this analysis could be enlarged by addressing the manifestation of subordinated financialization in Argentina, which is an important issue to consider when studying macroeconomic policy mixes in peripheral economies. Moreover, observing these variables could contribute to confirm the relevance of the novel periodization proposed in this work, showing both transitions and clear shifts between different periods. Finally, the post-Keynesian analysis deployed in this work can be more explicitly connected to Regulation Theory studies, combining both conceptual devices to portray a clear picture on Argentina’s shifts in its MPRs and DGRs.

Table 6: Macroeconomic Policy and Demand and Growth regimes in Argentina, for the periods 2002-5, 2006-9, 2010-5 and 2016-9.

Time periods	2002-2005	2006-2009	2010-2015	2016-2019
Monetary policy stance	-/+	+	+	+/-
External policy stance	-	+	+	-
Wage policy stance	N.A. / -	-/+	-/+	-
Fiscal policy stance	neutral/+	-/+	-/+	-
<b>Demand and growth regime</b>	<b>ELM</b>	<b>WEL</b>	<b>DDL</b>	<b>WEL</b>
<p>Notes: DLPD: Debt-led private demand boom, DDL: Domestic demand-led, ELM: Export-led mercantilist, WEL: Weakly export-led.  +: expansionary stance, -: contractionary stance, 0: neutral stance.  Monetary policy:  +: negative long-term interest rate-GDP ratio and strong capital controls.  -/+ : positive long-term interest rate-GDP ratio and strong capital controls.  +/- : positive long-term interest rate-GDP ratio and weak capital controls.  External policy:  +: real appreciation, with high non-price competitiveness (complexity index).  -: real depreciation, with low non-price competitiveness (complexity index).  -/+ : real depreciation, with high non-price competitiveness (complexity index).  +/- : real appreciation, with low non-price competitiveness (complexity index).  + /NA: real appreciation, with no data regarding non-price competitiveness (complexity index).  Wage policy:  - : nominal unit labour cost growth far away from inflation target and falling labour income share.  -/+ : nominal unit labour cost growth far away from inflation target and rising labour income share.  N.A./ -: No data on nominal unit labour cost and falling labour income share.  Fiscal policy:  +: counter-cyclical in many years, high public investment-GDP ratio (higher than 2002-2019 average).  -: pro-cyclical in many years, low public investment-GDP ratio (lower than 2002-2019 average).  +/- : counter-cyclical in many years, low public investment-GDP ratio (lower than 2002-2019 average).  -/+ : pro-cyclical in many years, high public investment-GDP ratio (higher than 2002-2019 average).  neutral/+ : same years with pro- and counter-cyclical policy, high public investment-GDP ratio (higher than 2002-2019 average).  Source: author's own elaboration based on Argentinian Central Bank; International Monetary Fund; Economic Commission for Latin America and the Caribbean, Kennedy, Pacifico and Sánchez (2018), Baumann, Fonay and Coban (2018), JP Morgan, Observatory of Economic Complexity.</p>				

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