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CONFLICT INFLATION, POLITICAL EXCHANGE AND FAILED STABILIZATION IN POST-CONVERTIBILITY ARGENTINA

ABSTRACT

A widely held belief suggests that inflation disproportionately affects low-income individuals, creating a puzzle for some researchers. This puzzle arises because, despite the perceived negative impact on the lower-income demographic, they tend to support governments that actively promote inflation. However, this apparent contradiction can be resolved when considering scenarios where the government supports a progressive redistribution of the inflationary tax. This paper introduces a model grounded in the *political exchange hypothesis*, where three interest groups – businesspeople, *rentiers*, and workers – express their demand for inflation. Political parties engage in competition to attain governmental power. The model illustrates that the inflation rate in post-convertibility Argentina, even when excessively high, aligns with the preferences of a coalition in power comprising businesspeople and workers. This coalition derives a portion of its income from the inflationary tax imposed on financial rentiers. Although a stabilization attempt commenced in December 2015 following a shift in the political landscape (Macri's election), it encountered setbacks. The subsequent change in coalition and its failure are also analysed through the lens of the model. We employ, moreover, a wavelet coherence analysis to test the validity of the theoretical model.

Keywords: Inflation; Redistribution; Interest Groups; Political Economy; Stabilization; Wavelet

JEL Classification: E31; E63; E65

RIASSUNTO

Inflazione da conflitto, scambio politico e fallimento della stabilizzazione nell'Argentina post-piano di convertibilità

Una convinzione diffusa suggerisce che l'inflazione colpisca in modo sproporzionato gli individui a basso reddito, creando un enigma per alcuni ricercatori. Questo enigma sorge perché, nonostante l'effettivo impatto negativo sulla fascia di reddito più bassa, questa tende a sostenere governi che promuovono attivamente l'inflazione. Tuttavia, questa apparente contraddizione può essere risolta considerando scenari in cui il governo supporta una redistribuzione progressiva dell'imposta inflazionistica. Questo articolo introduce un modello basato sull'ipotesi dello scambio politico, in cui tre gruppi di interesse – imprenditori, rentiers e lavoratori – esprimono la loro domanda d'inflazione. I partiti politici si impegnano nella competizione per ottenere il potere governativo. Il modello illustra che il tasso di inflazione nell'Argentina post-piano di convertibilità, anche quando eccessivamente alto, si allinea alle preferenze di una coalizione al potere composta da imprenditori e lavoratori. Questa coalizione trae una parte del suo reddito dall'imposta inflazionistica imposta ai rentiers finanziari. Nonostante un tentativo di stabilizzazione iniziato nel dicembre 2015 a seguito di un cambiamento nel panorama politico (l'elezione di Macri), vi sono stati numerosi ostacoli. Il successivo cambiamento nella coalizione e il suo fallimento sono analizzati anche attraverso la lente del modello. Utilizziamo, inoltre, un'analisi di coerenza wavelet per testare la validità del modello teorico.

1. INTRODUCTION

Following the severe macroeconomic crisis of 2001-2002, Argentina moved from a currency board exchange rate system to a managed floating regime. Despite a decade of relative price stability, inflation reappeared in the 2000s, though at levels lower than those in the 1980s. Between 2002 and 2015, inflation saw an upward trajectory, and budget surpluses transformed into deficits in 2011, progressively worsening thereafter. Attempts to curb inflation during the Macri administration (December 2015-December 2019) failed, resulting in an acceleration of inflation.

Over the past two decades, various theories have sought to explain the causes of inflation. Existing theories, including fiscal dominance (Buera and Nicolini, 2019), monetary policy

strategy (Redrado *et al.*, 2006), and structuralist perspectives (Rapetti and Gerchunoff, 2016) and the distributive conflict between workers and businessmen have offered valuable insights into the drivers of inflation. However, these theories fall short of explaining the persistent and escalating inflation rate and the deliberate delay (and failure) in stabilization and the role of political conflict is not always properly emphasized.

In this line, one of the main contributions is the *war of attrition hypothesis* of Alesina and Drazen (1991). According to this hypothesis, countries may procrastinate inflation stabilization even when price dynamics reach sub-optimal levels. The delay would be explained by the political stalemate that arises when interest groups, even when aware of the need for stabilization, are not willing to bear its costs. Since asymmetric information regarding the ability of groups to bear inflation is assumed, stabilization takes place when the weaker group surrenders and is forced to pay for the costs. Fernandez and Rodrik (1991) affirm that the delay could obey the fact that it may be difficult to identify beforehand the gainers and losers of the reforms. Drazen and Grilli (1993), on their part, but also Labán and Sturzenegger (1994), stress that worsening economic conditions constitute a major driver of stabilizations, since in this context the interests of different groups tend to align because the costs of stabilizing become smaller than those of keeping the conflict.

Unlike conventional views that perceive inflation as an unintentional result of conflicts between interest groups, delays may obey not to the deadlock that arises from a *war of attrition* between interest groups, but to the *political exchange* that takes place between interest groups, some of them benefitting from inflation and enough political power to delay the stabilization.

Rentiers, holding financial wealth, play a crucial role in this exchange, since, as assumed by (Beetsma and Van der Ploeg, 1996) that in economies with a high degree of financial polarization and fixed-interest-rate financial portfolios, inflation is primarily a tax burden on the holders of financial wealth. The model is tested on European stabilization processes in the 1920s (Pittaluga and Seghezza, 2012) and developed countries in the 1980s (Seghezza and Morelli, 2014), emphasizing the role of coalitions involving rentiers and businesspeople.

The model, based on the political exchange hypothesis, sheds light on Argentina's inflation dynamics, the 2015 political coalition shift, and the unsuccessful stabilization attempt by the Macri administration. The inclusion of asymmetric information and workers' lobbying activities

enriches the model, offering a plausible explanation for the Macri program's failure and the subsequent re-emergence of a businessperson-worker coalition in 2019.

The paper is structured as follows: Section 2 outlines stylized facts for the Argentinian economy in the post-convertibility period, encompassing the unsuccessful attempt at stabilization initiated in 2015, and interprets them through the lens of the political exchange hypothesis; Section 3 introduces the model and expounds on how the *political exchange hypothesis* operates. Section 4 conducts a wavelet coherence analysis to test the political exchange using political and economic variables. Finally, Section 5 summarizes the conclusions.

2. POLITICAL EXCHANGE IN POST-CONVERTIBILITY ARGENTINA

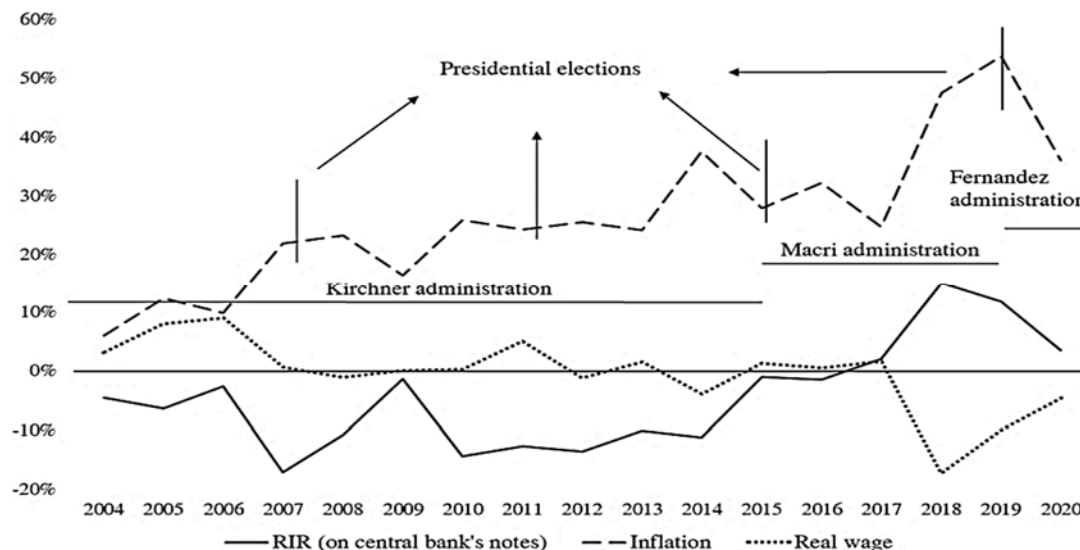
After the 2001-2002 crisis, Argentina experienced a decade of economic growth until 2011. However, inflation reemerged, ending the era of low inflation under the currency board exchange rate regime of the 1990s. The Kirchner administration, in power from 2003 to 2015, faced increasing inflation trends. In 2015, the Macri administration took office with the goal of reducing inflation, supported by a coalition representing businessperson-rentier interests. Despite efforts, Macri's government faced defeat in 2019, leading to the Fernandez administration supported by businessperson-worker coalitions aligned with Kirchnerism. The political landscape became polarized, intensified by conflicts over export taxes and economic crises. Kirchner's innovative "*export-oriented populism*" (Richardson, 2009) sought to balance taxation, promotion of exports, and populist programs, while political polarization intensified in subsequent years, shaping electoral outcomes and government shifts.

As observed by Vommaro (2019), political polarization has intensified in Argentina since 2008 and, more strongly, since 2011. The first date marks the conflict between agricultural producers and the recently initiated government of Cristina Fernández de Kirchner over the official proposal to increase export taxes on grain exports. As a direct consequence of the conflict and the side effects of the 2008-2009 crisis, the government was defeated in the legislative elections of 2009. It pulled itself together from the defeat by accentuating the most radicalized constituencies, with an anti-*establishment* discourse and winning the presidential elections of 2011. The erosion of its popularity led to the electoral defeat in 2013 and the emergence of the

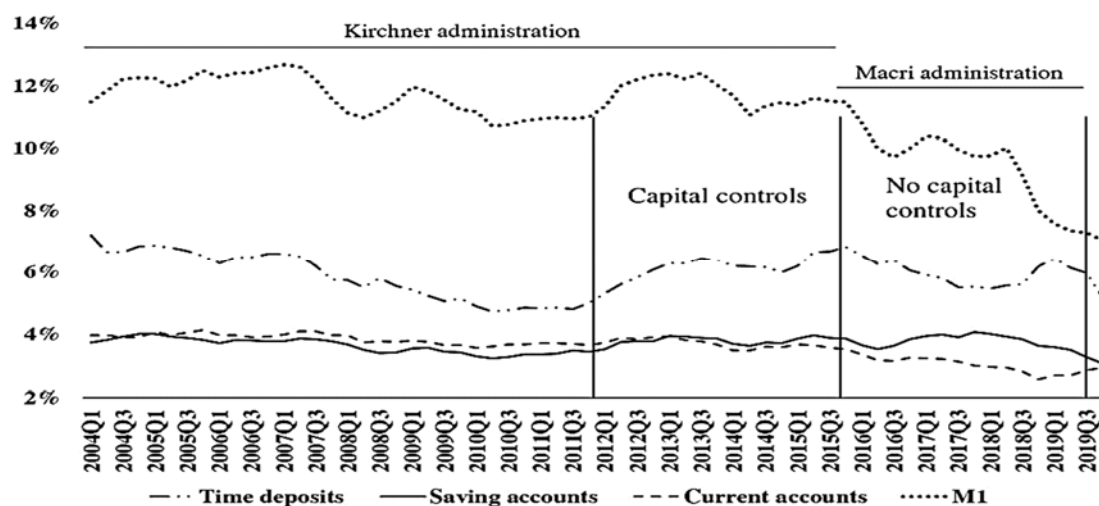
center-right coalition *Cambiamos* in 2015, led by the political party PRO (*Propuesta Republicana*).

In post-convertibility Argentina, a closer look reveals two distinct periods concerning the three interest groups. Figure 1 illustrates that between 2004 and 2015, real wages consistently increased, with occasional minor reductions in specific years like 2008, 2012, and 2014. In contrast, the real interest rate on central bank notes remained negative throughout this period, only turning positive between 2017 and 2020. Concurrently, inflation exhibited a rising trend with notable irregularities. These dynamics suggest that under the Kirchner administration, workers experienced gains while macroeconomic policies aimed at affecting rentiers negatively by affecting their financial wealth. The interplay of economic factors during this timeframe reflects the balancing act and trade-offs made in addressing the interests of different groups.

FIGURE 1¹ - *Inflation, Real Interest Rate and Real Wage*

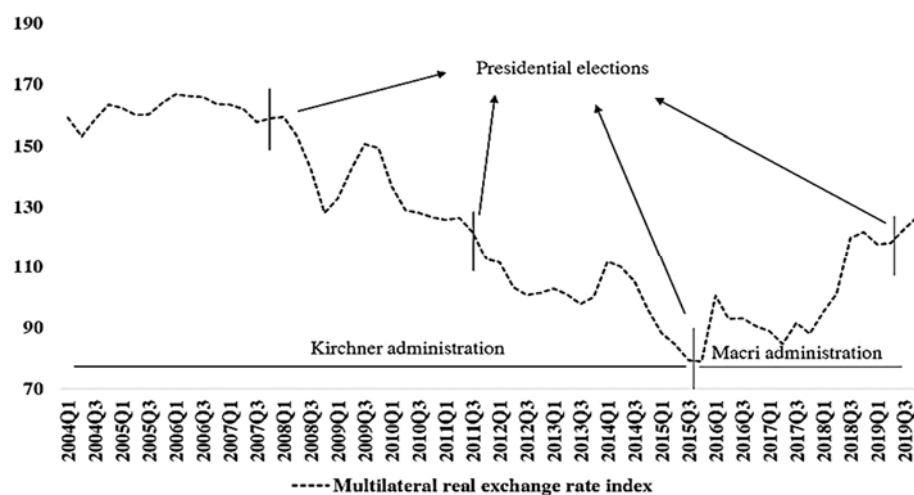


¹ The sources for figure 1 are the following: for inflation, Cavallo and Bertolotto (2016) for the period 2004-2016 and from the official statistics of the INDEC (<https://www.indec.gob.ar/>); RIR is calculated, until 2015, using the average interest rate of all LEBACS issued each year for the shortest maturities (less than 53 days) and reported by the Central Bank of Argentina (<http://www.bcra.gov.ar/>). After 2015, the monetary policy rate is used; real wage is calculated using the wage index from the INDEC and correcting this index for inflation.

FIGURE 2² - *Deposits in Domestic Currency and M1 (% of GDP)*

In Figure 2, the trend is evident as rentiers consistently withdrew from domestic currency deposits, safeguarding their financial wealth. This trend, particularly notable from 2004 to 2011, coincided with a decline in M1. Capital flight intensified during this period, culminating in the implementation of capital controls after the 2011 elections. Post-2011, measures curbing capital flows led to increased time deposits in domestic currency and M1. Figures 3 and 4 depict the success of the Kirchner administration in restraining capital flight after the introduction of controls, compelling rentiers to retain investments in domestic currency despite negative real interest rates. Moreover, as Gómez-Gonzalez (2019) shows, inflation-linked debt issuance decreased in Argentina. It is possible to affirm that rentiers were not able to fully protect from inflation during the period 2011-2015.

² Data for deposits in domestic currency and M1 is retrieved from the dataset provided by the Central Bank of Argentina (<http://www.bcra.gov.ar/>), then the average for each period was calculated and converted into percentage of the GDP by dividing for the current GDP series retrieved from the INDEC.

FIGURE 3³ - *Multilateral Real Exchange Rate*

After 2007, as in Figure 3, the real exchange rate tended to appreciate. The appreciation was similar in both periods, 2007-2011 and 2011-2015, with a reduction in the multilateral real exchange rate index of around 30%. However, in 2011 the Kirchner administration won the presidential elections again. After the 2001-2002 crisis, the real exchange rate initially depreciated but stabilized by 2007, favoring businesspeople with increased profit margins. Post-2011, an overvalued exchange rate prompted capital controls, impacting the coalition dynamics. The appreciation of the currency by 2015 shifted businesspeople's allegiance to rentiers, influencing the political landscape. The relative power dynamics within the businessperson-worker coalition led to a steady rise in real wages, but insufficient influence for workers to retain support from businesspeople after being ousted from the coalition. This nuanced interplay of economic factors contributed to the political shifts observed in 2015.

The Macri administration, commencing in December 2015, pursued policies aligned with its coalition's interests. Sturzenegger (2019) highlighted fiscal changes, including the elimination of export taxes and reductions in taxes for industries and small firms. Despite favoring rentiers by lifting capital controls and maintaining positive real interest rates after initial economic challenges, the government also implemented measures to benefit workers. Minimum income for income tax and VAT cuts for low-income households were enacted, contributing to an

³ Data for multilateral real exchange rate are retrieved from the dataset provided by the Central Bank of Argentina.

increased federal budget deficit. The fiscal cost associated with tax exemptions for workers, seen as a loss to the coalition, underscores the lobbying power of this interest group. Notably, workers' real wages remained stable or increased during the initial two years of the Macri administration, suggesting effective lobbying. Analyzing political equilibriums between 2003 and 2019 reveals challenges for the Macri administration in maintaining parliamentary majorities, facing conflicts within its coalition, and contending with a tight legislative landscape.

TABLE 1 - *Political Party Constituencies*

Political Party	Constituency (a)	Constituency (b)	Constituency (c)
PJ-FPV	Center/Center-Left	B-W	Kirchner Adm. (KA)
PRO	Center/Center-Right	B-R	Macri Adm. (MA)
UCR	Center	B-W/B-R	Macri Adm. (MA)
ARI-CC	Center/Center-Right	B-R	Macri Adm. (MA)
Others (Center/Center-Right)	Center/Center-Right	B-R	None
Others (Center/Center-Left)	Center/Center-Left	B-W	None
Others (Various)	Left/Center/Right	B-W/B-R	None, KA or MA

It was only after the midterm election success in 2017 that the coalition got the proper numbers in the Argentinian Parliament to put into practice the stabilization program, as shown in Table 2 and 3. The defeat in the elections led to a break in the compact block of the PJ-FPV and increased the center/center-right constituencies in both the Chamber of Deputies and the Senate.

TABLE 2 - *Political Party Constitution of the Chamber of Deputies*

Political Party	2004	2006	2008	2010	2012	2014	2016	2018
PJ-FPV	50%	46%	50%	34%	45%	46%	31%	25%
PRO	0%	4%	4%	4%	4%	7%	16%	21%
UCR	17%	14%	9%	17%	15%	14%	15%	16%
ARI-CC	4%	5%	11%	7%	2%	1%	2%	4%
Others (Center/Center-Right)	13%	22%	9%	18%	16%	14%	25%	23%
Others (Center/Center-Left)	8%	3%	14%	16%	14%	14%	9%	7%
Others (Various)	8%	5%	3%	4%	4%	3%	2%	4%

TABLE 3 - *Political Party Constitution of the Senate*

Political Party	2004	2006	2008	2010	2012	2014	2016	2018
PJ-FPV	58%	58%	58%	43%	43%	44%	51%	11%
PRO	0%	0%	0%	0%	0%	4%	8%	13%
UCR	20%	18%	11%	19%	19%	15%	11%	17%
ARI-CC	0%	0%	6%	1%	1%	0%	0%	0%
Others (Center/Center-Right)	10%	14%	15%	25%	22%	18%	14%	42%
Others (Center/Center-Left)	4%	3%	7%	7%	13%	14%	11%	11%
Others (Various)	8%	7%	3%	4%	1%	4%	4%	7%

In spite of achieving significant political advantage in the midterm elections, the initiative to curtail the federal budget deficit encountered several challenges. Notably, the pace of fiscal consolidation remained sluggish in 2018, a year marked by the implementation of pension system and tax reforms. While the former sought to curtail expenditures, the latter, which encompassed a reduction in the corporate tax, implied a prospective decline in tax revenues. This dual impact, coupled with the lackluster pace of fiscal consolidation, as asserted by Sturzenegger (2019), and the concurrent surge in the current account deficit, as highlighted by Weisbrot and Merling (2018), precipitated a sudden stop for Argentina in 2018. Faced with these economic headwinds, the country resorted to seeking assistance through an IMF Stand-By Arrangement (SBA). The primary objective of this agreement was twofold: to restore market confidence and create a conducive environment for expediting the fiscal adjustment process.

The program signed with the IMF was, in part, behind the breakdown in the governing coalition. As depicted in Figure 1, the period from 2018 to 2019 featured notably favourable interest rates (benefiting rentiers) alongside a significant decline in real wages. This decline was attributed to the sudden stop, leading to a rapid depreciation of the currency and a surge in inflation. In the

midst of this severe macroeconomic crisis, attempting to impose the entire fiscal adjustment burden on workers proved to be an unattainable objective. Consequently, the government implemented a series of taxes to heighten fiscal pressure on businesspeople. This included the reinstatement of export taxes, the postponement of tax reforms, an increase in the wealth tax, and further reductions in energy subsidies.

In summary, the required pace of fiscal consolidation was incongruent with the austerity measures imposed on workers by the government. Consequently, a portion of the coalition, specifically the business community, found itself compelled to shoulder a portion of the fiscal adjustment. However, with the exchange rate once again surpassing its long-term equilibrium, the prospect of altering the coalition partner became enticing for business stakeholders. This strategic shift would allow them to offload their share of the fiscal burden onto rentiers, settling the residual debt through elevated inflation. The noteworthy observation that rentiers continued to receive preferential treatment amid the 2018 financial crisis served as a clear indication that only a faction of the coalition was motivated to consider breaking away from the existing arrangement.

3. THE MODEL

Following the representation of Pittaluga and Seghezza (2012), let us assume that the political system is a democracy conformed by three interest groups, *businesspeople* (B), *workers* (W), and *rentiers* (R), with populations given by n^B , n^W , and n^R , respectively and which actions are based on a two-periods system. First, no group holds a majority in order to govern on its own. For simplicity, we assume that each group accounts for one-third of the total population. In each period, elections are held and a coalition of two out of the three interest groups is elected and that $y^B > y^R > y^- > y^W$, with y^- denoting the economy's average income and y^B , y^W and y^R that represent a non-storable income in each period for businesspeople, workers and rentiers respectively. This model draws its construct from the political conflict model of Acemoglu and Robinson (2006). Let us think that interest groups aim at winning political power in order to pursue their own interests. To do so, the government in office may use three types of taxes: an indirect tax (I), a proportional tax (τ), and an inflationary tax (τ_I). Tax collections are used to repay a debt equal to D, which must be fully repaid by the end of the second period. Given that each group has different taxation preferences, the underlying problem is to decide which taxes to

use to repay the debt, a decision that, of course, depends on the taxation preferences of the coalition in office. The net income (NI) after taxes of each group in periods $t = 1$ and $t = 2$ is given by:

$$NI_1^B = (1 - \tau_1)y_B - \tau_{I,1}y_B - f(\tau_{I,1}) - I_1 \quad (1)$$

$$NI_2^B = (1 - \tau_2)y^B - \tau_{I,2}\left(\frac{1}{\gamma^B}\right)y^B - f(\tau_{I,2}) - I_2\left(1 + \frac{1}{2n^R}n^wL^e\right) \quad (2)$$

$$NI_1^W = (1 - \tau_1)y^W - f(\tau_{I,1}) - I_1 \quad (3)$$

$$NI_2^W = (1 - \tau_2)y^W - f(\tau_{I,2}) - I_2(1 - L) \quad (4)$$

$$NI_2^R = (1 - \tau_1)y^R - \tau_{I,2}y^R - f(\tau_{I,1}) - I_1 \quad (5)$$

$$NI_2^R = (1 - \tau_2)y^R - \tau_{I,2}\left(\frac{1}{\gamma^R}\right)y^R - f(\tau_{I,2}) - I_2\left(1 + \frac{1}{2n^R}n^wL^e\right) \quad (6)$$

$$0 \leq \tau_t, \tau_{I,t}, L, L^e \leq 1; \gamma^B, \gamma^R > 0$$

where γ^R and γ^B capture the possibility that businesspeople and rentiers protect part of their income from inflation in $t = 2$, f suggests that inflation imposes a cost on society as a whole, affecting all groups. Here, L^e and L represent the expected and actual fraction of indirect taxes that workers recover due to their lobbying power. In the absence of workers in the governing coalition, businesspeople and rentiers divide this payment in $t = 2$. Consequently, businesspeople would oppose proportional taxes, while workers would resist indirect taxes. Additionally, the net income of rentiers and businesspeople differs from that of workers due to their exposure to the inflationary tax, τ_I . However, γ^R and γ^B enable these groups to shield a portion of their income in the second period. For workers, it is assumed that wages are indexed, providing protection against inflation and that inflation functions as a regressive tax.

An important difference respect to the classical political exchange hypothesis model is that workers are able to carry out lobbying activities in $t = 2$ and, as a result, they get a transfer equal to LI_2 , which means that they partially recover their payment in concept of indirect taxes. Let

us assume that $0 < L^e$, $L \leq 1$ only if workers are not part of the governing coalition in $t = 2$, otherwise $L^e = L = 0$.

The government faces a budget constraint in every period given by

$$BC: R_1 \geq \tau_I \sum n^i y^i + \tau_{I,1} n^B y^B + NI_1 \quad (7)$$

$$BC: R_2 \geq \tau_I \sum n^i y^i + \tau_{I,1} n^R y^R \left(\frac{1}{\gamma^R} \right) + \tau_{I,1} n^B y^B \left(\frac{1}{\gamma^B} \right) + NI_2 - n^w L^e I_2 \quad (8)$$

$$D = R_1 + R_2 \quad (9)$$

For simplicity, let us assume that $N = 3$ and that $n_B = n_R = n_w = 1$. Let us assume that in $t = 2^4$ a businessperson-rentier coalition is called to office. This coalition maximizes

$$\max \frac{1}{2} [NI_2^B + NI_2^R] \quad (10)$$

subject to

$$R_2 \geq \tau_2 \sum n^i y^i + \tau_{I,2} n^R y^R \left(\frac{1}{\gamma^R} \right) + \tau_{I,2} n^B y^B \left(\frac{1}{\gamma^B} \right) + 3I_2 - L^e I_2 \quad (11)$$

where Eq. (10) denotes the average income of the coalition and Eq. (11) the budget constraint. Similarly could be done for businessmen-workers (B-W) and rentiers-workers (R-W) coalitions. The first, in particular:

$$\max \frac{1}{2} [NI_2^B + NI_2^W] \quad (12)$$

subject to

$$R_2 \geq \tau_2 \sum n^i y^i + \tau_{I,2} n^R y^R \left(\frac{1}{\gamma^R} \right) + \tau_{I,2} n^B y^B \left(\frac{1}{\gamma^B} \right) + 3I_2 \quad (13)$$

where it is possible to observe that there are not any lobby expenditures to pay in the budget constraint ($L^e = 0$) and any income derived from lobbying inside NI^w ($L = 0$).

⁴ For simplicity, we consider the state for coalition only in $t=2$.

The preferences derived through the FOC and Kuhn-Tucker conditions about the repayment of R_2 for every coalition are described in Table 4:

TABLE 4 - *Preferences for the Financing of R_2 for Every Coalition in $t=2$*

	τ_2	$\tau_{I,2}$	I_2
B-W	>0	$>0^5$	0
B-R	0	0	R_2
R-W	R_2	0	0

Following the reduced model, rentiers may come to power, *ceteris paribus*, if the costs of inflation are higher ($f(\tau_{I,2}^*)$), if the ability to protect from inflation for rentiers (businesspeople) increases (decreases) and if the expected power of lobby of workers (L^e) decreases.

About the workers' lobbying, let us consider that in our economy the actual power of lobbying of workers that carry out *good lobby* and that the number of unions⁶ in this economy is given by μ , of which a fraction η carries out good lobbying activities while a fraction $(1 - \eta)$ carries out *bad lobby*. Additionally, let us normalize $n^w = 1$ and assume that all workers belong to a union, so that the average size of unions in this economy is given by $\bar{n} = n^w / \mu$. However, not all the unions have the same size and not all of them make good lobby. Hence, it is possible to define n^w the average number of workers belonging to a good union and $\bar{n}^w = n^w / (\eta\mu)$ as the average size of the unions that carry out good lobbying activities.

Using a simple mechanism *à la* Akerlof, we propose the case in which businesspeople know that there exists a fraction η of unions that carries out good lobby, but cannot identify exactly which ones.

⁵ This coalition repay any remaining debt that cannot be paid with inflation using proportional taxes such that

$$f'(\tau_{I,2}) = -\frac{y^B}{2\gamma^B} + \frac{y^B + y^w}{2 \sum n^i y^i} \left[\frac{y^B}{\gamma^B} + \frac{y^R}{\gamma^R} \right]$$

⁶ We assume that workers can apply lobbying on the ruling coalition through the action of trade unions. However, we can also assume that workers can do good or bad lobbying without necessarily going through the unions by positing that a fraction of them may be ideally represented as a *swing voter* who could support the policies of the businesspeople-rentiers coalition government while being part of the workers. For simplicity, we identify unions as the main lobbying medium in this model.

The lobbying functions are:

$$L^e = \sqrt{n_\mu^w}$$

$$L = \sqrt{n_{\mu,\eta}^w}$$

Eq. (23) establishes that the expected income businesspeople and rentiers expect to concede in $t = 2$ positively depends on the average size of unions. Instead, according to Eq. (24), the actual amount L depends on the average size of unions making good lobby. Moreover, the square root in the function implies that the bigger the average size of unions implies a larger expected and actual transfer, but the increment in both functions is decreasing, probably due to increasing collective action costs, such as in Fredriksson *et al.* (2005). There may exist a chance that businesspeople rationally decide to switch the coalition in favour of rentiers but, if $L^e < L$, the stabilization may fail. In the opposite case, as in the post SBA in 2018, a reduction in bargaining power of the trade unions (Bortz *et al.*, 2021) is describable as a lack of bad lobbying and could be ideally described as a $L^e > L$.

4 A WAVELET COHERENCE ANALYSIS OF THE POLITICAL EXCHANGE HYPOTHESIS

We can define Macri's election as a structural change both in terms of policy and in the parliamentary representation of the more conservative Argentine parties. These political parties witnessed a significant surge from 2016 to 2019, culminating in Fernandez's election in December 2019. The Kirchnerian coalition of FDT, stemming from the FPV, secured a decisive majority during this period.

We can thus define two distinct temporal phases before and after December 2015. This gap allows us to replicate a similar approach to the one undertaken by the aforementioned Polanco-Martínez *et al.* (2018), where the authors examined how wavelet correlations between the returns of PIIGS countries' securities changed between crisis periods and those preceding them. In our case, we are interested in evaluating how the relationship between variables involved in political exchange and the constituency of parties favouring stabilization has changed to verify the correctness of our hypothesis.

The study of electoral dynamics is a less-explored field compared to economics and finance, finding its roots in the numerous contributions of Aguiar-Conraria *et al.* (2010, 2012, 2013),

which laid the groundwork for the analysis of electoral cycles through wavelet analysis and the use of coherence⁷ to study lead-lag relationships on issues such as inflation and war severity.

This approach tends to recall an element used by proponents of the political exchange hypothesis. While in those works the dependent variable is a dummy variable expressing the political orientation of the government and the presence of a determined oriented party in the government/prime minister, in this case, we use as a variable to align with other variables of interest (all at the monthly level):

- the share of deputies (DEP) and senators (SEN) from center-right parties relative to the total parliamentary spectrum. The data are taken from Table 1⁸.
- Year-on-year inflation (INF) for the same period can pose a problem due to estimation biases by INDEC in the period 2014-2016. To address this, we will refer to data provided by Miranda-Zanetti *et al.* (2019), from February 2004 to December 2018, based on independent estimates from *inflacionverdadera.com*. For observations in 2019, we used INDEC via Tradingeconomics.
- As a proxy for financial openness (KON), we will use the index proposed by Chinn and Ito (2006, 2008). This index is used to determine, based on legal and institutional factors, the financial openness of an economy and thus the degree of capital movement liberalization. Compared to the use of foreign currency deposits mentioned earlier, not only does this index have a more direct interpretation through coherence, but it also allows us to avoid biased estimates due to the exchange rate.
- The real interest rate (RINT) uses the Argentina Policy Rate, namely the Argentina cash rate (Interest Rate on 30 days Deposits by CEIC), imposed by the Central Bank (BCRA) and adjusted for inflation.
- Fiscal condition (FIS) refers to the model by Pittaluga and Seghezza (2012), defined as “the ratio of the fiscal balance to the level of government expenditure”. Fiscal balances were obtained in pesos through CEIC data, while public spending in dollars was obtained from

⁷ For a theoretical explanation of wavelet coherence, see Aguiar-Conraria and Soares (2014).

⁸ The statistics in Figures 1 to 3 were not used because, although wavelet coherence is a very versatile tool that can be applied even with a limited number of observations, the cone of influence (COI) took up a large part of the stabilization period, making the estimates inaccurate. The sources of the variables used only for the wavelet analysis will be reported in the text.

Tradingeconomics. Balances were converted into dollars using the peso-dollar exchange rate from FRED⁹ and then the actual ratio between the two variables was calculated.

- The Real Broad Exchange Rate (REER) is represented as the percentage change from the previous year (as inflation) of the weighted averages of bilateral exchange rates adjusted by relative consumer prices. A positive change, in our case, is considered as indicative of depreciation, while conversely, an appreciation is denoted by a negative change. This calculation was performed using FRED data.

The Figures 9a and 9b contain the results of the wavelet coherence. Since it is not a direct element of political exchange and stabilization but rather a policy aimed at maintaining consensus within the interest group of workers, we have opted not to include wages in our wavelet analysis.

4.1 Kirchner Administration (2004-2015)

First of all, regarding the relationship between center-right deputies and inflation, in the period 2005-2007 concerning the short-medium term (8 months), we observe a coherent relationship with the model's expectations, where inflation tends to increase when parties inclined towards stabilization are weaker. However, we note that, from 2007 onwards in the medium-long term (16 months), the relationship inverts, and it seems that conservative parties drive an increase in prices. Nevertheless, this is consistent with the historical data of a thinning of center parties corresponding to an increase in both center-right and center-left parties, with the former remaining in the minority. This lead-lag relationship diminishes over time, and in the period up to 2012-2015, the relationship inverts again, leading to a phase-shift response of center-right parties to inflation variation. For the Senate, the relationship is less defined, and the anti-phase relationship is less pronounced than in the other chamber. In the period 2007-2012, the in-phase relationship is present at different scales. As with the Chamber, the Senate returns to a consistently anti-phase relationship driven by the composition of conservative parties towards the end of 2015.

⁹ The use of the official peso-dollar exchange rate potentially has biases as the 'blue' exchange rate (unofficial rate between the peso and the dollar on the black market) shows a substantial spread from the official one especially following the reintroduction of capital movement restrictions following Fernandez's victory in the 2019 presidential election (Olivera Doll and Squires, 2023). Moreover, to date, there is no traceable bluechip dataset other than the interactive pages of <https://bluedollar.net/informal-rate/>.

On the other hand, the in-phase relationship (although not easily determinable as a lead-lag relationship) between DEP and KON proves to be relevant. In the long term (32 months), conservative parties lead the choice of financial openness in Argentina, while in the short-run, KON anticipates the movements of center-right parties from 2012. The Senate, however, shows an anti-phase relationship until 2009, then transitioning to an in-phase relationship after 2011. Still, as in the previous case, the relationship is difficult to determine and highly variable. This suggests that the component of the Chamber plays a more significant role than that of the Senate in financial openness.

According to our model, the interplay between capitalists and rentiers in the political arena precipitates a reduction in tax demand. Consequently, this leads to an upswing in government deficit, contributing to a decline in fiscal condition. In Figure 9a, focusing on the Chamber, we discern a noteworthy relationship unfolding over the medium to long term, starting from mid-2007. This relationship underscores the structural emergence of conservative parties in an antiphase pattern, exerting a substantial influence on Argentina's fiscal condition. Notably, this antiphase relationship manifests as a short-term phenomenon from mid-2012 onwards.

The Senate, mirroring the dynamics observed in the Chamber, exhibits a pronounced antiphase relationship between senators (SEN) and fiscal condition (FIS). This relationship remains steadfast in both the short and medium to long term. Intriguingly, the Senate, akin to the DEP-INF relationship discussed earlier, maintains an in-phase relationship between 2005 and 2009. This in-phase dynamic coincides with a period marked by lower proportions of conservative parties. It manifests as alternating patterns at different scales and operates as lead-lag relationships while persisting in phase, showcasing the nuanced interplay between Senate dynamics and conservative party representation during this timeframe.

The real exchange rate, although not entirely under the control of policymakers, represents a potential subject of political exchange as it serves as a lever through which businessmen can boost exports and potentially shift the burden of price adjustments (due to, for example, a cost shock) to maintain competitiveness. Therefore, a coalition of businessmen and rentiers has an interest, with the possibility of protecting against the loss of purchasing power, in depreciating the exchange rate, as we saw in the previous paragraph. In the pre-2016 period, the relationship with political variables was quite diverse. Until 2007, the Chamber and the Senate shared a

positive relationship (i.e., an increase in the share of conservatives leads to a depreciation of the exchange rate). However, this phase is relatively short-lived because the policy that led to tighter capital controls resulted in the use of the exchange rate as a means to stabilize inflation, which began in late 2007, and this shift is captured by antiphase movements. In the Senate, such an inversion was already present as a long-term component.

As for the real interest rate, the model describes a social group interested in stabilization since it is limited in protecting its income from inflation. Therefore, in the case of a financially polarized economy, it would presuppose a coherent relationship between the real interest rate and the quantity of conservative groups. This relationship, while identifiable at certain moments, is not constant across scales. In fact, taking the case of the Chamber, while in the short to medium term (4-8 months) the relationship reflects the theory, at the short and medium to long term (2-4 and 16 months), this relationship is much cloudier, at least until 2012. From that year onwards, even in the long term, the relationship turns positive. The relationship is even more intricate based on the Senate component, where only from 2012 onwards and in the medium to long term does the relationship reflect the theory, while it appears to be antiphase or driven by the interest rate in the rest of the areas with higher correlation.

4.2 Macri Administration (2016-2019)

Regarding President Macri's term, the period from the beginning of 2016 to October 2019 represents attempts to implement the political exchange between capitalists and rentiers as described in the previous paragraph and in Sturzenegger's work (2019). It also marks a phase in which inflation, after the initial period, was partially stabilized, allowing for a positive real interest rate before rising again beyond the previous peak in 2014. December 2017 (and the legislative elections), in particular, represents the moment when both chambers share a majority. Figure 9b presents the results of coherence for this period. Notably, the midterm elections represent a crucial moment for the evolution of the political exchange in several graphs.

Concerning the relationship between the conservative constituency and inflation, except for the initial phase where currency devaluation led to a price increase coinciding with the rise of the center-right and the increase in the share of conservatives, the relationship is consistent with

our model. It maintains an antiphase relationship both in the medium-long term and the long term, and even in the very short term (2 months). The Senate maintains this relationship, although less visible than in the Chamber.

Regarding financial openness, in conjunction with the emergence of a conservative majority in both the Chamber and the Senate, coherence shows a strong phase relationship in the short-medium term and an amplitude relationship in the long term (although a definitive direction is lacking). Both chambers share a phase relationship where financial opening policies seem to drive coalition consolidation.

However, the year 2018 also represents the beginning of the end of the political exchange. In fact, in conjunction with the midterm elections, there is a slowdown in fiscal consolidation measures. This is framed by the presence of a phase relationship guided by the same constituency in both chambers (and an antiphase relationship in the medium-long term guided by the fiscal position). The Senate maintains the phase relationship even in the long term and exhibits an antiphase movement guided by the constituency, at least in the short term during the price increases at the end of 2019. Additionally, we can observe that the positive relationship predates the midterm elections, indicating that fiscal policies, concerning the political exchange hypothesis, had already begun before the actual mid-term election.

As for the exchange rate, we see that the relationship remains relatively stable and in phase, except for some antiphase movements in the medium-long term between mid-2017 and mid-2018. Attempts to maintain an accommodating exchange rate, as per the model, to support an alliance with businesspeople are noted. It is essential to note that these potential attempts were sustained even after the introduction of new capital controls in February 2019, while a significant and phase relationship in the very short term was observed around April of the same year.

The interest rate exhibits a phase relationship in the initial period of President Macri's term. The relationship is inverted despite the increase in the real interest rate because the increase occurred before the mid-term elections. The real interest rate became positive primarily due to inflation reduction, while interest rates slowed down (going from 37% in April 2016 to 26.25% in April 2017). Medium-long-term movements (especially in the Senate) show that the attempt to leverage the coalition with businesspeople to maintain a real interest rate advantageous to

rentiers did not yield the expected result. Despite consolidation and the initial advantage, interest rates began to decrease, especially around April 2019, before returning to pre-monthly levels, thanks in part to new increases in nominal rates. The relationship for the Chamber returns to phase around mid-2018, while for the Senate, this does not happen.

In conclusion, especially concerning fiscal position, financial openness, inflation, and the exchange rate, there exists a good empirical basis for the lead-lag relationship between political and economic variables, confirming what is outlined in the *political exchange hypothesis* (although not all temporal scales responded in the same way).

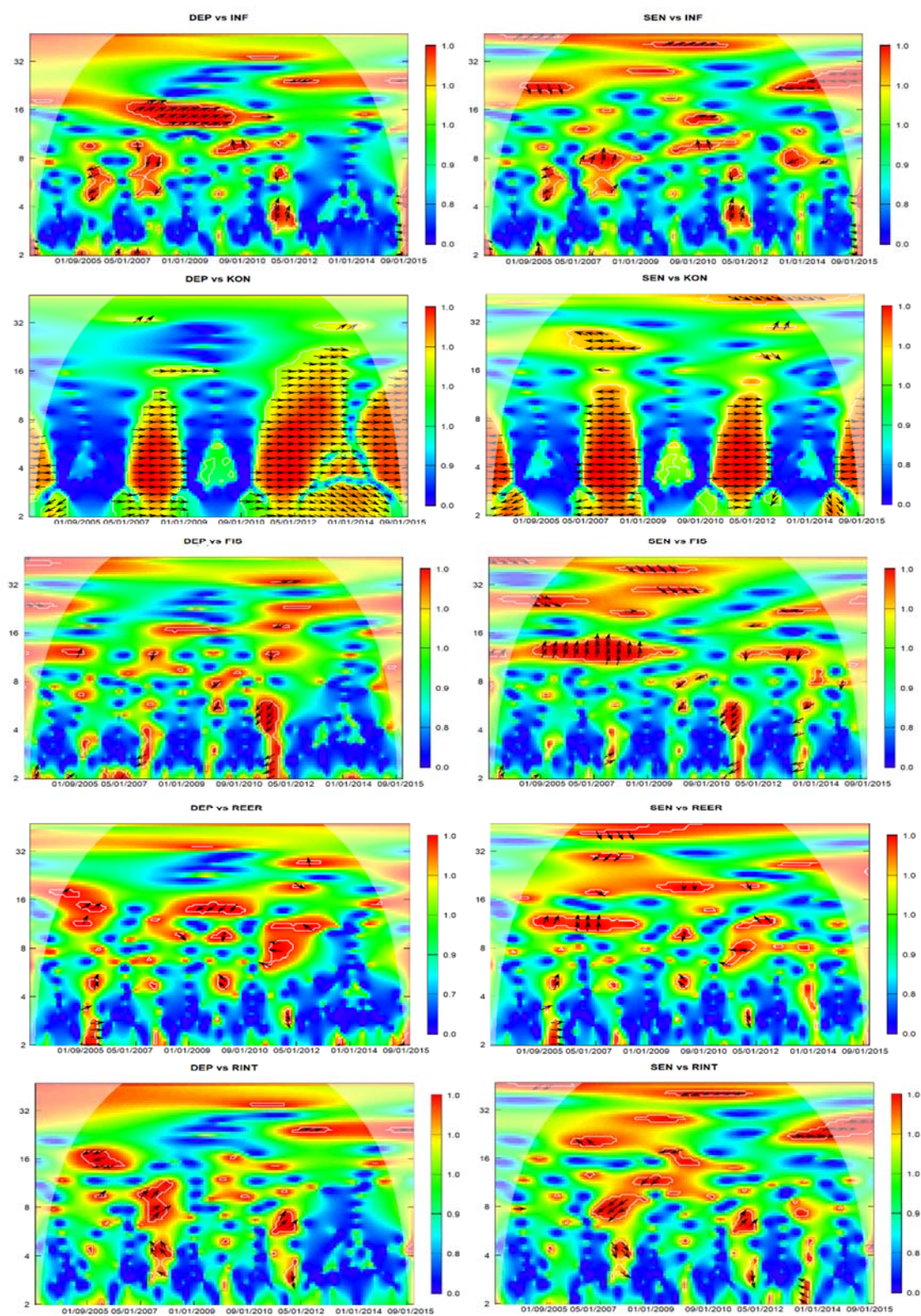
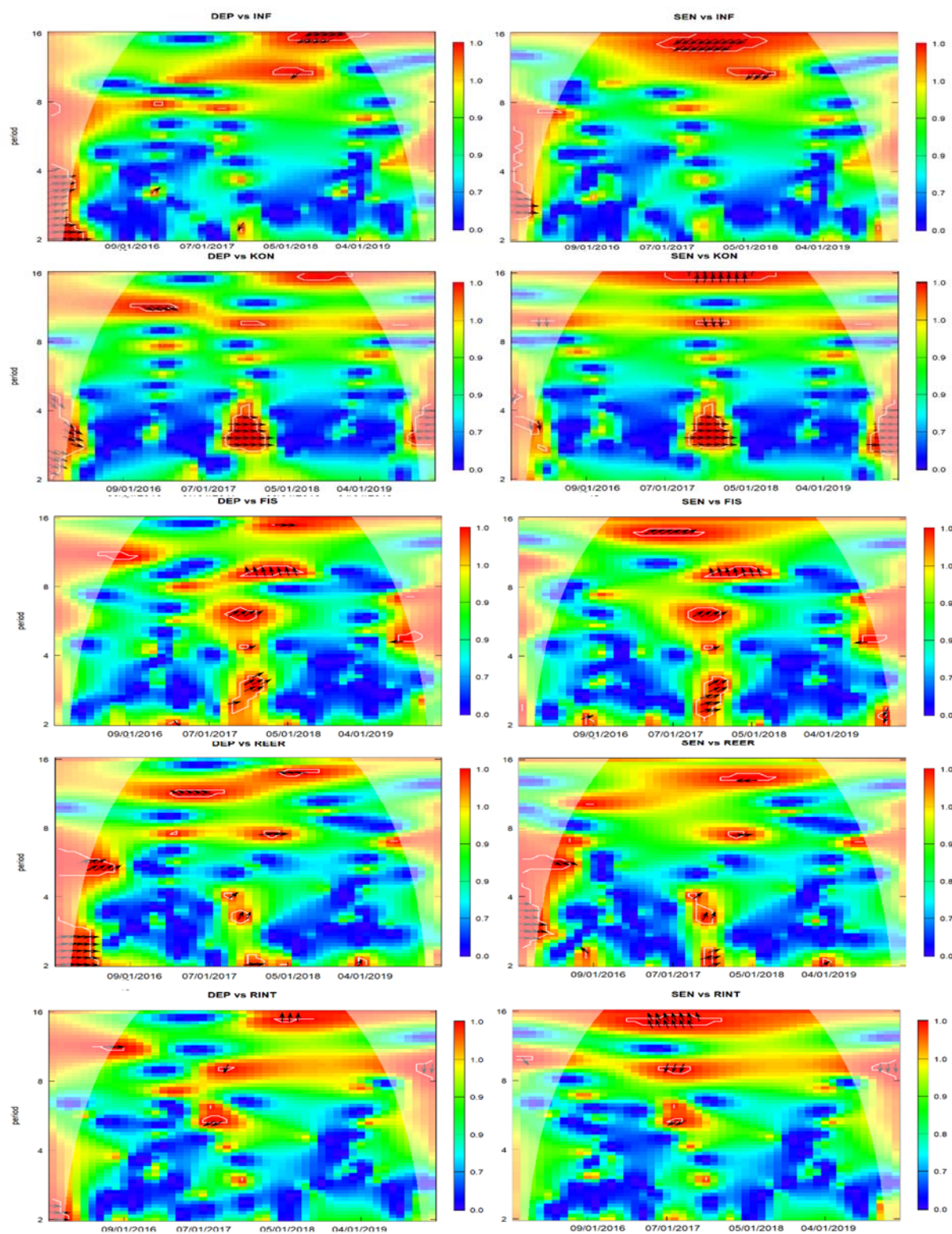
FIGURE 4A - *Wavelet Coherence pre Macri's Election*

FIGURE 4B - *Wavelet Coherence post Macri's Election*

5. CONCLUSIONS

This study extends the political exchange hypothesis to analyze inflation dynamics in post-convertibility Argentina, focusing on political equilibriums prevalent since the early 2000s. Employing a model akin to Pittaluga and Seghezza (2012), the research explores how three interest groups – businesspeople, rentiers, and workers – articulate their inflation preferences, shaping political party competition for governance. Two distinct political equilibriums emerged post the 2001-2002 crisis: a businessperson-worker coalition (2003-2015) favoring workers and businesspeople, and a subsequent businessperson-rentier coalition (2015-2019) attempting stabilization. The latter coalition favored rentiers with high real interest rates and businesspeople through tax cuts. Unexpectedly heightened worker lobbying power led businesspeople to bear costs, causing stabilization failure and reinstating a businessperson-worker coalition in 2019.

Wavelet coherence analysis, following Anguira-Conraria *et al.* (2012), validates model predictions, aiding identification of specific moments and temporal scales in political exchange dynamics. The study's novelty lies in connecting political equilibriums with inflation under the political exchange hypothesis, offering insights into causes, delays, and stabilization failures post-convertibility. Notably, the inclusion of rentiers enables a unique examination of financial wealth evolution during inflation.

Policy implications suggest that in polarized financial wealth scenarios, policymakers may use inflationary tax for redistribution, discouragable through rentiers' access to a developed financial system. Future stabilization programs should ensure equitable cost-benefit sharing among coalition interest groups, minimizing coalition break risks and guiding disinflation program speed.

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