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Regime Specific Fiscal Effects and the Conditional Role of Institutions: The Case of Mexico

Rejime Özgü Mali Etkiler ve Kurumların Koşula Bağlı Rolü: Meksika Örneği

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Regime Specific Fiscal Effects and the Conditional Role of Institutions: The Case of Mexico

Abstract

Institutional quality is a critical element in explaining the inflationary effects of fiscal deficits. Countries with strong institutions can limit the inflationary effects of fiscal deficits by implementing fiscal discipline more effectively. In contrast, in countries with weak institutional structures, deficiencies in transparency, accountability, government effectiveness, and policy consistency increase the inflationary pressures arising from fiscal imbalances. This study examines the impact of fiscal deficits on inflation in Mexico and the regime-dependent moderating role of institutional quality. To analyze the relationship dynamics that vary according to inflation regimes, a Markov Regime-Switching model was estimated using annual data for the period 2002–2022. The findings show that fiscal deficits are not directly effective on inflation under either regime. However, in the high-inflation regime, government effectiveness is statistically significant and creates a disinflationary effect. This result reveals that strong institutional structures play a critical role in reducing the inflationary effects of fiscal pressures under high-inflation conditions. In the low-inflation regime, the interaction term between fiscal deficits and government effectiveness is negative and significant. This indicates that institutional quality increases the effectiveness of fiscal discipline during periods when price pressures are limited. The findings reveal that institutional quality and regime type are critical factors in determining the inflationary effects of fiscal deficits. They also emphasize the importance of sustaining institutional reforms in countries aiming at price stability. In this context, the case of Mexico has shown that inflation regimes and institutional factors cannot be overlooked in evaluating the inflationary effects of fiscal deficits.

Keywords: Inflation, Fiscal deficit, Institutional Quality, Markov Regime-Switching Model, Mexico

Rejime Özgü Mali Etkiler ve Kurumların Koşula Bağlı Rolü: Meksika Örneği

Öz

Kurumsal kalite, mali açıkların enflasyonist etkilerini açıklamada kritik bir unsurdur. Güçlü kurumlara sahip ülkeler, mali disiplini daha etkin bir şekilde uygulayarak mali açıkların enflasyonist etkilerini sınırlayabilmektedir. Buna karşılık, zayıf kurumsal yapılara sahip ülkelerde şeffaflık, hesap verebilirlik, hükümet etkinliği ve politika tutarlılığı alanlarındaki eksiklikler, mali dengesizliklerden kaynaklanan enflasyonist baskıları artırmaktadır. Bu çalışma, Meksika'da mali açıkların enflasyon üzerindeki etkisini ve kurumsal kalitenin rejime bağlı düzenleyici rolünü incelemektedir. Enflasyon rejimlerine göre değişen ilişki dinamiklerini analiz etmek için 2002–2022 dönemine ait yıllık veriler kullanılarak Markov Rejim-Değiştirme modeli tahmin edilmiştir. Bulgular, mali açıkların her iki rejimde de enflasyon üzerinde doğrudan etkili olmadığını göstermektedir. Ancak, yüksek enflasyon rejiminde hükümet etkinliği istatistiksel olarak anlamlıdır ve dezenflasyonist bir etki yaratmaktadır. Bu sonuç, güçlü kurumsal yapıların yüksek enflasyon koşullarında mali baskıların enflasyonist etkilerini azaltmada kritik bir rol oynadığını ortaya koymaktadır. Düşük enflasyon rejiminde ise mali açık ile hükümet etkinliği arasındaki etkileşim terimi negatif ve anlamlıdır. Bu durum, fiyat baskılarının sınırlı olduğu dönemlerde kurumsal kalitenin mali disiplinin etkinliğini artırdığını göstermektedir. Elde edilen bulgular, kurumsal kalite ve rejim türünün, mali açıkların enflasyonist etkilerinin belirlenmesinde kritik unsurlar olduğunu ortaya koymaktadır. Ayrıca fiyat istikrarını hedefleyen ülkelerde kurumsal reformları sürdürmenin önemini vurgulamaktadır. Bu çerçevede, Meksika örneği mali açıkların enflasyonist etkilerinin değerlendirilmesinde enflasyon rejimi ve kurumsal faktörlerin göz ardı edilemeyeceğini göstermektedir.

Anahtar Kelimeler: Enflasyon, Mali açık, Kurumsal Kalite, Markov Rejim Değiştirme Modeli, Meksika

Introduction

The impact of fiscal deficits on inflation requires a dynamic framework that considers not only the magnitude of fiscal imbalances, but also the institutional structure in which such policies are implemented and the prevailing inflation regime. Although central banks exert direct control over the money supply, their capacity to contain inflation is often limited and imperfect (Bodea and Hicks, 2015). This limitation becomes more pronounced in economies where fiscal policy dominates monetary policy. In such regimes, where fiscal authorities

possess greater influence over present and future budget deficits, monetary authorities become increasingly dependent on demand for public debt. If adequate demand fails to materialize, fiscal deficits are often monetized, leading to increased money supply and, eventually, rising price levels and inflationary pressures (Sargent and Wallace, 1987). In fiscal dominance regimes, the inability of the government to generate the necessary primary surpluses to stabilize public debt renders the inflationary consequences of fiscal deficits more immediate and severe (Banerjee et al., 2023).

In this context, the financing mechanism of fiscal deficits plays a critical role. Governments typically rely on four primary options to cover their deficits: (i) borrowing from the central bank (monetization), (ii) borrowing from the commercial banking system, (iii) borrowing from the non-bank domestic sector, and (iv) external borrowing or the use of international reserves. Each method entails unique macroeconomic risks (Nguyen et al., 2023, p.203). Empirical studies likewise show that the inflationary impact of fiscal deficits is contingent and highly sensitive to institutional quality (Cukierman et al., 1992; Woo, 2003).

In closing fiscal deficits, the borrowing capacity of the Treasury is shaped by the willingness and financial capacity of the sector to be borrowed from (Neyapti, 2003). Nevertheless, the Treasury's resort to domestic and external borrowing creates various challenges for the economy. Domestic borrowing, particularly in developing countries, can lead to crowding-out effects, heightening inflationary pressure. When external financing is limited, this impact becomes more pronounced in both the banking system and non-bank financial markets (Harberger, 1996). As a result, both interest rates and budget deficits rise, dampening investment and, eventually, constraining production capacity, reducing output, and increasing the general price level (Helmy, 2022, p.3). This process undermines government revenue from taxes and other fiscal sources, potentially increasing long-term borrowing needs. The inflationary consequences of external debt are realized through its use in domestic markets and during debt servicing. The currency emissions associated with foreign borrowing and the resulting demand for foreign exchange place upward pressure on the price level (Sönmez, 1998, p.362). Alternatively, monetizing deficits triggers a rise in money supply, stimulating aggregate demand and thus elevating inflation (Ishaq and Mohsin, 2015).

Institutional quality is widely considered a key determinant in shaping the sustainability of fiscal deficits and their inflationary potential. Countries with high-quality governance exhibit greater transparency and accountability in public spending, which facilitates stronger fiscal discipline and more moderate deficit levels. In contrast, poor governance can exacerbate inflationary pressures. In particular, weak institutions may erode central bank independence, rendering monetary authorities vulnerable to political pressure to expand the money supply or lower interest rates in line with short-term fiscal goals (Ho et al., 2023, p.379). This study examines whether institutional quality—especially government effectiveness—significantly alters the inflationary impact of fiscal deficits in a regime-dependent manner. The hypotheses tested are as follows:

H_0: Institutional quality does not significantly affect the regime-dependent impact of fiscal deficits on inflation in Mexico.

H_1: Institutional quality significantly alters the regime-dependent impact of fiscal deficits on inflation in Mexico.

Historically, Mexico—like many Latin American countries—has frequently relied on inflationary finance to cover fiscal deficits. This approach has resulted in high inflation, fiscal imbalances, growing debt burdens, and culminated in the 1994 Tequila Crisis (Manuel et al., 2018). However, the comprehensive structural reforms introduced in the 1990s included exchange rate restructuring, debt management strategies, and a shift from fiscal to monetary dominance. Crucially, the establishment of central bank independence and the adoption of an inflation-targeting regime marked a major turning point in the country's approach to inflation control. These reforms laid the foundation for relative price stability and low inflation in the post-2000 era (Meza, 2018). However, during the 2002–2022 period on which the study focuses, high levels of fiscal deficits persisted in the Mexican economy. The main motivation of this study is to empirically reveal the potential effects of deficits that threaten fiscal discipline on price stability, and how these effects are shaped by institutional quality. In this respect, Mexico constitutes a highly suitable case for analyzing not only the existence of the effect of institutional quality on inflationary pressures, but also how it intersects with inflation regime conditions. The Markov Regime-Switching model used in the study is therefore of importance. This method makes it possible to test how institutional quality differentiates the direction and magnitude of the fiscal deficit–inflation relationship depending on the regime.

In the literature, two studies have been found that examine the relationship between fiscal deficits and inflation and take into account differences in institutional quality. Agoba (2019) examines the moderating role of central bank independence, financial development, and political institutions across 48 African countries using panel data methods. Similarly, Ho et al. (2023) analyze the impact of governance on the deficit-inflation relationship using a two-step system GMM estimator on a sample comprising both developed and developing economies. By contrast, the present study represents a notable departure from prior work by focusing on a single-country case - Mexico - and employing a regime-switching framework to evaluate the conditional role of institutional quality on both fiscal deficits and inflation. In doing so, it contributes a unique perspective to the empirical literature.

The remainder of the paper is structured as follows: Section 2 provides a review of the literature on the relationship between fiscal deficits and inflation. Section 3 describes the dataset and empirical methodology. Section 4 presents the estimation results. Section 5 discusses the main findings. Section 6 concludes with a summary of results and policy implications.

1. Literature Review

Institutional quality emerges as a fundamental determinant that cannot be overlooked when analyzing the inflationary effects of fiscal deficits. The inflationary effect of fiscal deficits cannot be explained only by the size of budget imbalances. At the same time, the institutional structure in which these policies are implemented plays a decisive role. Differences in the level of institutional quality across countries are essential for understanding why and how the effects of similar fiscal deficits may vary on inflation. In this regard, countries with stronger institutional capacity are generally able to implement fiscal discipline more effectively, thereby limiting the inflationary consequences of fiscal deficits. Conversely, in countries with weaker institutions, the lack of transparency and accountability in the budgeting process tends to amplify inflationary pressures stemming from fiscal imbalances.

This underscores the importance of incorporating institutional quality as an explanatory variable when evaluating the interactions between fiscal and monetary policy, particularly in developing economies. Table 1 provides a summary of selected studies examining the relationship between fiscal deficits, inflation, and institutional quality. The literature covering various countries and time periods demonstrates that the magnitude and direction of this relationship vary significantly depending on country-specific characteristics and institutional capacity. The table presents the samples, methodologies, and key findings of these studies in a systematic manner, enabling a clearer view of prevailing trends and gaps in the existing literature.

Despite the existence of a substantial empirical literature on the inflationary effects of fiscal deficits, studies that explicitly incorporate institutional quality remain scarce. Only the studies by Agoba (2019) and Ho et al. (2023) have explored this relationship in an institutional context. This highlights both the importance of the present study and its original contribution to the literature.

Table 1. Summary of the literature

Author(s)	Sample / Country	Findings
Fischer et al. (2002)	133 countries	A strong relationship has been found between fiscal balance and seigniorage in high-inflation countries.
Catão and Terrones (2005)	107 developing countries	A strong positive relationship has been found between fiscal deficits and inflation during high-inflation periods.
Agnello and Sousa (2009)	125 countries	A positive relationship has been found between high inflation and budget deficit-to-GDP ratio.
Lin and Chu (2013)	91 countries	The relationship between fiscal deficits and inflation has been found to be strong during high-inflation periods and weak during low-inflation periods.
De Haan and Zelhorst (1990)	Developing countries	A significant relationship was found between fiscal deficits and money supply growth only during high-inflation periods.
Ishaq and Mohsin (2015)	11 Asian countries	Stronger inflationary effect of deficits was found in weak financial markets and low central bank independence.
Loungani and Swagel (2001)	Countries with deficits >5 %	In countries where the fiscal balance exceeded 5% of GDP, fiscal deficits were found to be the main determinant of inflation.
Catão and Terrones (2001)	23 emerging markets	A 1% decrease in the fiscal deficit-to-GDP ratio was found to reduce inflation by 1.5–6 percentage points.
King and Plosser (1985)	USA	Budget deficits were found to have no effect on inflation.
Karras (1994)	32 countries	Budget deficits were found to have no effect on inflation.
Dabla-Norris et al. (2010)	70 low- and middle-income countries	It was concluded that strong budget institutions improve fiscal balances and external debt outcomes.
Alesina et al. (1999)	20 Latin American countries	It was found that the quality of budget processes has a significant effect on fiscal outcomes.
Von Hagen (2012)	EU countries	It was concluded that institutional reforms implemented in the budgeting process were effective in enhancing fiscal discipline.
Woo (2003)	57 countries	The divergences in public deficits across countries were concluded to result from differences in institutional structures.

Table 1. Summary of the literatüre (cont'd)

Author(s)	Sample / Country	Findings
Koluri and Giannaros (1987)	Mexico and Brazil	It has been observed that budget deficits led to inflation in Mexico, but no such effect was detected in Brazil.
Agoba (2019)	48 African countries	It was concluded that strong political institutions were effective in weakening the inflationary effect of fiscal deficits.
Ho et al. (2023)	120 countries	It was concluded that the fiscal deficit–inflation relationship varied depending on the governance environment.
Bleaney et al. (2016)	67 countries	It was concluded that the ratio of fiscal deficits to M1 led to a stronger inflationary effect in low-income countries with weak institutional structures.
Manuel et al. (2018)	Mexico	It was concluded that fiscal discipline was decisive in the stability of inflation expectations.
Lopez-Martin et al. (2018)	Mexico	It was concluded that inflation was determined by fiscal deficits financed through money creation and by unstable expectation dynamics.

2. Methodology, Data, and Empirical Models

Although numerous empirical studies have examined the relationship between fiscal deficits and inflation, evidence shows that fiscal deficits do not always lead to inflation in every country. In recent years, it has been increasingly argued that this relationship may be shaped by institutional quality. Therefore, this study aims to investigate whether institutional quality is a significant factor in the fiscal deficit–inflation relationship in the case of Mexico and to identify its role in that relationship. Furthermore, since the impact of fiscal deficits on inflation may vary across different inflation regimes, this analysis also accounts for regime differentiation.

To this end, the effect of fiscal deficits and government effectiveness (as a proxy for institutional quality) on inflation is analyzed using annual data from Mexico for the 2002–2022 period through a Markov regime-switching model. The combination of country-specific data and the selected methodology enables the analysis to capture variations across different policy regimes and offers a more comprehensive assessment of the influence of institutional quality. In this regard, no prior study in the literature has been identified that simultaneously focuses on the same country case and applies this particular method. To the best of our knowledge, the only comparable study employing a similar institutional quality indicator is Ho et al. (2023), which uses panel data analysis. By providing country-specific findings, the present study distinguishes itself from existing research and offers an original contribution to the literature.

In this study, the government effectiveness index is used as the institutional quality indicator. This index is the most commonly used measure in the relevant literature. Government effectiveness captures perceptions regarding the quality of public services, the degree of independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The index ranges from +2.5 to -2.5, with higher values indicating stronger government effectiveness and lower values suggesting weaker institutional performance (Kaufmann et al., 2010, pp.1–4).

Following the methodological approach of Agoba (2019) and Ho et al. (2023), the empirical model is specified in Equation (1).

$$\mathrm{ENF_t} = \beta_0 + \beta_1 \dot{\mathrm{Y}}_t + \beta_2 \mathrm{KB_t} + \beta_3 \mathrm{MLA_t} + \beta_4 \mathrm{HE_t} + \beta_5 \mathrm{HE1_t} + \beta_6 \mathrm{DIS_t} + \varepsilon_t \qquad (1)$$

In the model specified in Equation (1), where βj represents the slope coefficients, β0 the constant term, and εt the error terms, the variables are defined as follows: ENF denotes the first logarithmic difference of the Consumer Price Index (CPI); KB represents the ratio of public debt stock to GDP; MLA indicates the ratio of fiscal deficits to GDP; HE denotes government effectiveness; HE1 (HE × MLA) represents the interaction term between fiscal deficits and government effectiveness; Trade Openness (DIS) is the ratio of total imports and exports to GDP; and Economic Growth (Ẏ) is the first logarithmic difference of real GDP. The data for KB and MLA are sourced from the World Bank database, while inflation, government effectiveness, and trade openness data are derived from the IMF database.

The estimation of the model in Equation (1) employs the Markov Regime-Switching method, which allows model parameters to take on different values across a finite number of regimes. This class of models is particularly suitable for capturing the dynamic behavior of macroeconomic and financial time series. Regime-switching models are typically categorized into two types: threshold models and Markov regime-switching models. In threshold models, as developed by Tong (1983), regime changes are assumed to be triggered by the level of an observed variable in relation to an unobserved threshold. In contrast, Markov regime-switching models—introduced into econometrics by Goldfeld and Quandt (1973), Cosslett and Lee (1985), and Hamilton (1989)—assume that regime changes follow a Markov chain (Piger, 2013). Accordingly, the Markov regime-switching model proposed by Hamilton (1989) is represented in Equation (2) as follows:

$$\mathrm{y_t} = \alpha_{\mathrm{st}} + \mathrm{x_t'}\beta_{\mathrm{st}} + \varepsilon_t \qquad \varepsilon_t \sim \mathrm{i.i.d.}\, \mathrm{N}(0, \sigma^2_{\varepsilon.\mathrm{s_t}}) \qquad (2)$$

In Equation (2), $\mathrm{y_t}$ denotes the dependent variable, $\mathrm{x_t}$ represents the independent variables, and $\mathrm{s_t}$ refers to the regime variable. In this framework, the regime periods in the model are determined by the variable $\mathrm{s_t}$, which is treated as a stochastic (random) variable. Accordingly, the probability value of the regime variable $\mathrm{s_t}$ is calculated based on its value in the previous period using Equation (3).

$$P\{\{s_t = j | s_{t-1} = i\} = \{s_t = j | s_{t-1} = i.\ s_{t-2} = k \ldots .\} = p_{ij} \qquad (3)$$

Equation (3), estimated using the maximum likelihood method, represents the transition probabilities from regime i to regime j that conform to a first-order Markov process (Avcı et al., 2016, p.466).

In order to apply the Markov regime-switching analysis method, the time series of the variables used must be free of unit roots. Therefore, to determine whether the series of variables in Equation (4) contain unit roots, the study employs the Fourier LM (Fourier Lagrange Multiplier) unit root test. The reason for using the Fourier-based unit root tests developed by Becker et al. (2006) is that these tests eliminate the need to know the exact location of structural breaks within the series. Accordingly, the Fourier-based unit root test is expressed in Equation (4) as follows.

$$\alpha(t) = \alpha_0 + \sum_{k=1}^{n} \alpha_{sin}\left(\frac{2\pi kt}{T}\right) + \sum_{k=1}^{n} b_k cos\left(\frac{2\pi kt}{T}\right), \qquad n \leq T/2 \qquad (4)$$

In Equation (4), n denotes the number of frequencies, k represents a specific frequency, and T refers to the number of observations. Equation (4) is estimated under the condition that the number of frequencies satisfies ($1 \leq k \leq 5$). The model with the smallest residuals is selected, and based on this selected model, the existence of a stochastic trend in the series is tested. The Fourier approach was first applied to the KPSS unit root test by Becker et al. (2006). Subsequently, Enders and Lee (2012a) developed the Fourier ADF test, while Enders and Lee (2012b) concluded that the ADF test statistic produced weaker results compared to the LM-type test. In line with this finding, Fourier LM tests were developed (Arık, 2023, pp. 119–120). The Fourier LM unit root test is a methodological advancement designed to overcome the limitations of conventional unit root tests, particularly when structural breaks and nonlinear trends are present in time series. Unlike traditional approaches such as the ADF or PP tests, the Fourier LM test incorporates sine and cosine functions derived from Fourier series into the deterministic component of the model, thereby capturing smooth structural shifts without requiring prior knowledge of their number, size, or timing.

The testing procedure begins with the specification of hypotheses. The null hypothesis (H_0) states that the series contains a unit root, implying non-stationarity. The alternative hypothesis (H_1) assumes that the series is stationary but that potential structural breaks can be approximated through Fourier functions. Next, the frequency parameter (k) of the Fourier terms is selected. This parameter, which determines the wave length of the sine and cosine components, is typically chosen using information criteria such as AIC or SIC. Subsequently, the regression model including Fourier terms is estimated, and the residuals are employed in the Lagrange Multiplier (LM) test framework. The LM statistic is then computed and compared against critical values provided in benchmark studies such as Enders and Lee (2012). If the test statistic exceeds the tabulated critical values, the null hypothesis is rejected, leading to the conclusion that the series is stationary. Otherwise, the null cannot be rejected, and the presence of a unit root is inferred. In sum, the Fourier LM unit root test provides a more robust framework for stationarity analysis by accounting for smooth structural changes that may bias conventional tests. As such, it has proven particularly valuable in empirical macroeconomic applications where structural shifts and nonlinear dynamics are common. In light of these explanations, a unit root test was conducted on the series using the adopted Fourier LM methodology, and the results are presented in Table 2.

3. Main empirical results

In the study, the Fourier LM unit root test was applied to determine the stationarity properties of each series. The resulting test statistics, along with the corresponding frequency and lag values and their critical values, are presented in Table 2.

Based on the results shown in Table 2, the following section provides a detailed interpretation of the Fourier LM unit root test outcomes. When interpreting the results of the Fourier unit root test, the absolute value of the calculated test statistic is compared with the absolute values of the corresponding critical values. If the test statistic exceeds the absolute value of the relevant critical value, the null hypothesis of a unit root is rejected. According to the results presented in Table 2, the test statistics for ENF (–5.862), Ẏ (–16.408), and DIS (–5.423) are greater in absolute terms than their respective critical values. This indicates that these three series are stationary at levels.

Table 2. Results of the Fourier LM Unit Root Test for Mexico

Country	Variable	Test Statistic	Frequency	Lag Length	Critical Values		
					1%	5%	10%
Mexico	ENF	-5.862	1	2	-4.690	-4.100	-3.820
	Ẏ	-16.408	1	8	-4.690	-4.100	-3.820
	KB	-3.406	1	6	-4.690	-4.100	-3.820
	DKB	-4.035	3	1	-3.980	-3.310	-2.960
	MLA	-2.890	1	1	-4.690	-4.100	-3.820
	DMLA	-6.162	3	1	-3.980	-3.310	-2.960
	HE	-2.510	1	2	-4.690	-4.100	-3.820
	DHE	-4.238	4	1	-3.850	-3.180	-2.860
	HE1	-2.908	2	1	-4.250	-3.750	-3.230
	DHE1	-4.722	1	1	-4.690	-4.100	-3.820

Note: First differences of non-stationary variables are denoted by a "D" prefix indicating that the variable is first-differenced to achieve stationarity.

In contrast, the series KB, MLA, HE, and HE1 exhibit unit roots. Specifically, the test statistics for these variables (–3.406, –2.890, –2.510, and –2.908, respectively) are smaller in absolute value than the relevant critical values, indicating that these series are not stationary at levels. However, when these series are differenced (DKB, DMLA, DHE, and DHE1), they become stationary. The test statistic for DKB is –4.035; for DMLA, –6.162; and for DHE and DHE1, –4.238 and –4.722, respectively—all exceeding the corresponding critical values. These results confirm the stationarity of the first differences.

In summary, the ENF, Ẏ, and DIS series are stationary at levels, whereas the KB, MLA, HE, and HE1 series are stationary in first differences. This finding implies that differenced variables must be used in cointegration and causality analyses for the Mexican data, while level models can be applied for ENF, Ẏ, and DIS. Following the unit root test, the model specified in Equation (1) was estimated for Mexico. The obtained results are reported under subheadings. Table 3 presents the Markov Regime-Switching estimation results for Mexico, highlighting the regime-dependent relationship between fiscal deficits (MLA), institutional quality, and inflation dynamics.

Table 3. Markov Regime Switching Estimation Results for Mexico

Variables	Regime 1	Regime 2
Constant	-0.1365*	0.0866*
Trend	-0.0059**	0.0010**
Ẏ	-0.0938	-0.1594***
KB	0.0017***	-0.0015***
MLA	0.0015	-0.0001
HE	0.0079	-0.067***
HE1	-0.0391***	-0.0158
DIS	0.0038*	-0.0008**
Diagnostic Tests		
Davies Test p-value: 0.000		
Likelihood Ratio Linearity Test Chi-Square Statistic: 63.158 (0.000)		
Portmanteau Autocorrelation Test Chi-Square Statistic: 2.305 (0.679)		
Normality Test Chi-Square Statistic: 2.917 (0.237)		

Notes: *, **, and *** denote statistical significance at the 1%, 5%, and 10% levels, respectively. Values in parentheses indicate the p-values of the corresponding test statistics. The LR and Davies test results indicate a statistically significant non-linear relationship at the 1% level. There is no evidence of autocorrelation at the 1% significance level, and the error terms are consistent with a normal distribution. Regime states are identified based on the sign and magnitude of the constant term. The optimal number of regimes is determined using the Akaike Information Criterion (AIC).

The Markov regime-switching model estimated for Mexico reveals that the dynamics of inflation differ significantly across two distinct regimes. Based on the values of the intercept terms, Regime 1 characterized by a negative constant (−0.1365*) represents periods of low

inflation, while Regime 2 marked by a positive constant (0.0866*) corresponds to periods of relatively higher inflation.

Although the growth variable (Ẏ) is not statistically significant in Regime 1, it is negative and significant at the 10% level in Regime 2 (−0.1594***). This suggests that during high-inflation periods, economic growth may play a stabilizing role in dampening inflationary pressures.

The regime-dependent effects of public debt (KB) reflect the complex relationship between debt management and inflation dynamics in Mexico. According to the model results, public debt exerts a positive and statistically significant effect under Regime 1 (0.0017***) and a negative and significant effect under Regime 2 (−0.0015***). This finding highlights that the inflationary impact of public debt is not uniform but instead varies according to macroeconomic context and regime conditions. It implies that debt accumulation may have an upward effect on prices during low-inflation periods but could be associated with more efficient, non-inflationary spending in a high-inflation environment.

The fiscal deficit variable (MLA) is statistically insignificant in both regimes, indicating that fiscal imbalances alone do not directly generate inflationary pressures in Mexico. The inclusion of institutional variables reveals that the inflationary impact of fiscal deficits is conditional upon the level of governance quality. Government effectiveness (HE), representing institutional quality, is statistically significant and exerts a deflationary impact (−0.067***) during the high-inflation regime. This underscores the structural importance of governance quality in combating inflation, particularly during periods of heightened price pressures.

Specifically, the interaction variable HE1 (HE × MLA) is negative and significant (−0.0391*) only in Regime 1. This indicates that a strong institutional structure constrains the potential inflationary effects of fiscal deficits during low-inflation periods, but loses this effect when inflation accelerates. This finding suggests that a strong institutional structure can particularly enhance the impact of fiscal discipline during low-inflation periods.

Trade openness (DIS) has a mildly inflationary effect in Regime 1 (0.0038*) and a deflationary effect in Regime 2 (−0.0008**). This indicates that during low-inflation periods, external trade may exert upward pressure on prices, whereas under high inflation, foreign competition plays a more stabilizing role. In other words, external competitiveness contributes to price restraint only in high-inflation conditions.

In summary, the findings for Mexico demonstrate that institutional quality is a key factor in understanding the inflationary effects of fiscal deficits. However, the strength of this effect is contingent on the prevailing regime. Robust governance structures help limit inflationary pressures when price stability is maintained, while during high-inflation regimes, macro-fiscal and external factors tend to play a more dominant role in price formation.

4. Discussion of findings

The Markov Regime-Switching model estimated for Mexico reveals that inflation dynamics carry regime-specific asymmetries and that these differences are shaped by fiscal and institutional variables. The findings obtained through this method expand the predominantly panel-data analyses in the literature and provide a country-specific and regime-focused

contribution. The study also draws attention to the constraining effect of institutional quality on inflation in Mexico, which is the main focus of the research.

The fiscal deficit (MLA) variable was not found to be statistically significant in either regime. This result shows that budget deficits in Mexico do not directly create an inflationary effect. However, it is noteworthy that the government effectiveness (HE) variable, which is used to represent institutional quality, produces a significant and negative effect (−0.067***) only in the high-inflation regime. This finding shows that the quality of governance structurally contributes to price stability during periods when price pressures increase. In addition, the variable representing the interaction between HE and MLA was found significant only in the low-inflation regime. This reveals that strong institutional frameworks can balance fiscal pressures only under conditions where relative price stability is achieved. This result shows that inflationary pressures are not caused only by budget deficits. The institutional framework plays an important role in determining the degree of this effect.

These findings overlap with the literature that argues that the interaction between institutional quality and fiscal deficits is decisive in inflationary processes (for example, Woo, 2003; Alesina et al., 1999; Dabla-Norris et al., 2010). These studies emphasize that, especially in developing countries, the tendency of fiscal deficits to turn into inflation is closely related to the level of institutional capacity. They also emphasize that effective public governance, budget transparency, and accountability are of critical importance for price stability.

Conclusion

The empirical findings regarding Mexico present a highly layered view of how fiscal imbalances interact with inflation, shaped by institutional and inflation regimes. The fact that the fiscal deficit variable is statistically insignificant in both inflation regimes may at first glance suggest that budgetary imbalances do not play a decisive role in driving inflation in the Mexican context. However, this apparent situation points to a deeper reality. Indeed, when institutional quality is present, fiscal deficits can be effective on inflation. The significance of the interaction term (HE1) in the low-inflation regime clearly demonstrates this situation.

Inflation dynamics in Mexico exhibit pronounced structural differences under two distinct regimes. This asymmetric structure brings with it the following key inference. Fiscal policy is not inherently inflationary, it is shaped by the institutional ground on which it operates. During periods when price stability is relatively maintained, stronger governance mechanisms activate fiscal policy channels. Thus, institutions either limit or reinforce the inflationary effects of budget deficits. In contrast, during periods when institutional capacity is weak or fragmented, which is frequently observed in Mexico's decentralized fiscal fragmented fiscal signals weaken or are distorted. This undermines the stabilizing function of fiscal policy in the macroeconomy.

From a policy perspective, the findings emphasize the importance of fiscal and monetary frameworks that are sensitive to the institutional context. Since government effectiveness is a fundamental factor supporting price stability, especially during high-inflation periods, transparency, accountability, and policy consistency should be enhanced in public administration and budget processes. Fiscal policies should be differentiated, focusing on the

preservation of discipline during low-inflation periods and on measures that support the institutional framework during high-inflation periods. In addition, the mutual interdependence between monetary and fiscal policies should be taken into account as a fundamental element in ensuring macroeconomic stability.

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