
Kaldor's Indicators Tested by Malagasy Political Crises: Evolution of Macroeconomic Balances After 1991, 2002 And 2009, and A Post-2025 Projection

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Abstract:

This article examines the evolution of Madagascar's macroeconomic balances through Kaldor's indicators. The study focuses on the political crises of 1991, 2002, 2009, and 2025. These shocks have systematically distorted key indicators: GDP growth often turned negative, reaching -12.4%; inflation remained volatile, peaking at 40%; low unemployment masked widespread underemployment; and persistent balance of payments deficits hovered around -18% of GDP. Inspired by authors such as Rodrik (1999) and Acemoglu and Robinson (2012), the analysis highlights institutional vulnerability, dependence on international aid, and the fragility of rent-based products and the climate. For 2025, projected growth of 3.8% and inflation around 8% point to a fragile recovery, with the risk of stagnation if the political transition drags on. Indeed, several measures — though not exhaustive — should be taken, including greater openness in seeking financial partners, incentive-based taxation, and the attraction of foreign investors, among others. These elements could stimulate production, job creation, and help reduce the widening deficit.

Keywords: *Economic growth, Inflation, Unemployment, current account balance, political crises.*

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1. Introduction

Developing economies frequently face structural vulnerabilities that limit their capacity to maintain macroeconomic stability and achieve sustainable economic growth. These vulnerabilities become particularly pronounced during periods of political instability, when institutional disruptions, declining investor confidence, and weakened policy coordination can undermine economic performance. Rodrik (1999) argues that external shocks, combined with domestic social conflict and institutional weaknesses, can contribute to prolonged economic contractions. Similarly, Easterly (2002) emphasizes that sustainable economic growth requires effective institutions, consistent economic policies, and appropriate incentives. Empirical evidence further

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demonstrates that political instability adversely affects economic growth through reductions in productivity and capital accumulation (Aisen & Veiga, 2013). From an institutional perspective, Acemoglu and Robinson (2012) highlight the importance of inclusive political and economic institutions in sustaining long-term development. These arguments suggest that political crises should be examined not only as isolated political events but also as potential sources of multidimensional macroeconomic disequilibrium.

The relationship between political institutions and economic performance has attracted considerable attention in the literature. Acemoglu et al. (2019) demonstrate that democratization can generate substantial long-term economic benefits, while Colagrossi et al. (2020) provide further evidence of a positive relationship between democracy and economic growth. Nevertheless, political transitions do not automatically guarantee economic stability, particularly in countries characterized by fragile institutions, limited fiscal capacity, and structural dependence on external markets. Jong-A-Pin (2009) emphasizes that political instability is a multidimensional phenomenon whose economic consequences depend on the nature and intensity of institutional disruptions. Consequently, examining political crises requires an analytical framework capable of capturing simultaneous changes across several macroeconomic indicators rather than focusing exclusively on economic growth.

One framework for evaluating multidimensional macroeconomic performance is Kaldor's Magic Square, which integrates four fundamental economic policy objectives: economic growth, price stability, employment, and external balance (Kaldor, 1971). These dimensions are commonly represented through a four-axis polygon, allowing researchers to visualize the extent to which an economy simultaneously achieves its macroeconomic objectives. A more balanced configuration generally indicates a stronger alignment among these objectives, whereas an irregular configuration may reveal substantial trade-offs and structural imbalances. Firme and Teixeira (2014) demonstrate the applicability of the Kaldorian approach to evaluating macroeconomic performance, while Abdallah and Khemissi (2021) employ a composite index to assess economic stability in Algeria. Similarly, Al-Shammari and Jiyad (2022) examine the relationship between trade policy and Kaldor's macroeconomic objectives in Iraq. Extensions of this framework, including the magic hypercube proposed by Saavedra-Rivano and Teixeira (2017), further illustrate its potential for multidimensional economic assessment. These studies establish the relevance of the Kaldorian framework for evaluating economic performance across different national contexts.

Madagascar provides a particularly relevant setting for examining the interaction between political instability and macroeconomic imbalances. Despite its considerable natural resources and economic potential, the country has experienced recurrent political crises, persistent institutional weaknesses, and difficulties in achieving sustained economic transformation. Its development trajectory reflects the broader challenges of translating economic opportunities into inclusive and sustainable growth, as emphasized in the development literature (Sen, 2001). Political instability

may intensify these challenges by disrupting investment, weakening public institutions, and undermining economic policy continuity. Fontaine and Razafindravaosolonirina (2023) provide direct evidence of the economic costs associated with political crises in Madagascar, demonstrating that political disruptions can generate substantial income losses. Their findings reinforce the importance of investigating the broader macroeconomic consequences of Madagascar's recurring political instability.

Since the early 1990s, Madagascar has experienced several major episodes of political upheaval that have shaped its economic trajectory. The 1991 political crisis emerged from widespread opposition to President Didier Ratsiraka and demands for democratic reform, eventually contributing to a political transition and changes in economic governance. The 2002 crisis, triggered by a disputed presidential election between Ratsiraka and Marc Ravalomanana, resulted in prolonged political confrontation and disruptions to economic activity. Another major crisis occurred in 2009, when escalating tensions between President Ravalomanana and opposition leader Andry Rajoelina culminated in an unconstitutional transfer of power and a prolonged political transition. Hinthorne (2011) highlights the importance of public perceptions, institutional legitimacy, and political confidence in understanding the 2009 crisis. Fontaine and Razafindravaosolonirina (2023) further demonstrate that such political disruptions have measurable economic consequences, suggesting that their effects may extend beyond immediate output losses to influence subsequent economic recovery.

The political upheaval of 2025 introduces a further dimension to this historical pattern. Public dissatisfaction associated with electricity and water shortages, governance concerns, and deteriorating socioeconomic conditions contributed to renewed political confrontation and changes in national leadership. Although the longer-term macroeconomic consequences of these developments remain uncertain, previous experiences suggest that political instability can influence investment, public expenditure, inflationary pressures, employment conditions, and external economic balances. The relationship between political instability and economic performance therefore warrants renewed examination, particularly when assessing possible post-crisis recovery trajectories. Rather than assuming that the consequences of earlier crises will necessarily recur, historical comparisons can provide a basis for developing conditional projections and identifying potential macroeconomic risks.

Despite extensive research on political instability and economic growth, important gaps remain in understanding how repeated political crises simultaneously affect multiple macroeconomic objectives within a single national economy. Existing studies have largely emphasized the relationship between political institutions and economic growth (Acemoglu et al., 2019; Aisen & Veiga, 2013; Colagrossi et al., 2020), the economic consequences of political crises in Madagascar (Fontaine & Razafindravaosolonirina, 2023), or the application of Kaldorian indicators to other national economies (Abdallah & Khemissi, 2021; Firme & Teixeira, 2014). However, limited attention has been devoted to examining the evolution of Madagascar's four

macroeconomic balances across successive political crises using a consistent Kaldorian analytical framework. In particular, the comparative dynamics of economic growth, inflation, unemployment, and external balance following the crises of 1991, 2002, and 2009 remain insufficiently integrated into a unified assessment. Furthermore, the potential implications of these historical patterns for post-2025 macroeconomic scenarios have not been adequately explored.

To address these gaps, this study examines the evolution of Madagascar's macroeconomic balances following the political crises of 1991, 2002, and 2009 and develops prospective scenarios for the post-2025 period using Kaldor's Magic Square framework. Drawing on historical macroeconomic indicators from the World Bank, the analysis evaluates changes in real GDP growth, inflation, unemployment, and external balance across successive crisis and recovery periods. The study aims to identify recurring patterns of macroeconomic deterioration and adjustment, assess the relative resilience of the four indicators, and explore potential post-2025 trajectories based on historical relationships and explicitly stated projection assumptions. Its principal contribution is the integration of longitudinal crisis comparison, multidimensional macroeconomic visualization, and forward-looking scenario analysis within a single-country framework. By doing so, the study seeks to provide a more comprehensive understanding of how recurrent political instability influences macroeconomic stability in structurally vulnerable developing economies.

2. Theoretical Background

Kaldor's Magic Square and Macroeconomic Performance

Kaldor's Magic Square provides a multidimensional framework for evaluating macroeconomic performance by integrating four fundamental economic policy objectives: economic growth, low unemployment, price stability, and external balance (Kaldor, 1971). Unlike approaches that assess economic performance through a single indicator, this framework emphasizes the interdependence of macroeconomic objectives and the potential trade-offs involved in achieving them simultaneously. The four indicators are commonly represented through a graphical polygon, enabling comparisons of macroeconomic performance across different periods or economies. Firme and Teixeira (2014) demonstrate that the Kaldorian approach can be applied to assess overall macroeconomic performance, while Abdallah and Khemissi (2021) emphasize its usefulness in constructing composite measures of economic stability.

The first indicator, real economic growth, is measured by the annual percentage change in real gross domestic product (GDP). It reflects changes in aggregate economic activity and the capacity of an economy to expand production over time. Sustained economic growth is essential for improving living standards, increasing investment, and supporting employment creation. However, economic growth alone does not necessarily guarantee broader socioeconomic development, particularly when its benefits are unevenly distributed or when institutional constraints limit economic opportunities (Sen, 2001). Acemoglu et al. (2019) further demonstrate that

institutional and political conditions can influence long-term economic performance, highlighting the importance of examining growth within its broader governance context.

The second indicator, the unemployment rate, represents the proportion of the labor force that is unemployed, available for work, and actively seeking employment. It provides an indication of labor market conditions and the economy's ability to generate employment opportunities. High unemployment can indicate insufficient labor demand, structural mismatches, or persistent economic stagnation. In developing economies, however, official unemployment rates may not fully capture labor market vulnerability because informal employment and underemployment can remain widespread. Consequently, unemployment should be interpreted alongside other economic indicators rather than treated as an isolated measure of labor market performance. This broader interpretation is consistent with Sen's (2001) emphasis on the relationship between economic opportunities, human capabilities, and development.

The third indicator, the inflation rate, measures changes in the general price level, commonly represented by the annual percentage change in the consumer price index. Inflation is a central indicator of macroeconomic stability because persistent price increases can reduce purchasing power, increase economic uncertainty, and complicate investment decisions. Although moderate inflation may accompany economic expansion, high or volatile inflation can undermine household welfare and weaken economic confidence. Kaldor (1971) emphasizes the importance of price stability as a fundamental macroeconomic objective, while Al-Shammari and Jiyad (2022) illustrate the relevance of inflation when evaluating the interactions among macroeconomic policy objectives.

The fourth indicator, external balance, reflects the relationship between an economy and the international sector. In empirical applications of Kaldor's Magic Square, external balance may be represented by the trade balance, the current account balance, or another clearly defined external-sector indicator. The current account encompasses trade in goods and services, primary income, and secondary income, making it broader than the difference between exports and imports alone. Persistent external deficits may indicate financing vulnerabilities, although their implications depend on economic structure, investment requirements, and the sustainability of external financing. Al-Shammari and Jiyad (2022) demonstrate the importance of trade-related variables in assessing Kaldorian macroeconomic performance, while Firme and Teixeira (2014) highlight the value of examining external balance alongside domestic economic objectives.

The four indicators are interconnected, and improvements in one dimension may involve trade-offs in another. For example, policies designed to stimulate economic growth may increase import demand or inflationary pressures, while restrictive monetary policies intended to stabilize prices may weaken economic activity and employment. Therefore, a balanced Magic Square does not necessarily imply that all

indicators achieve identical numerical values; rather, it reflects the extent to which an economy approaches desirable macroeconomic outcomes across consistently standardized dimensions. Abdallah and Khemissi (2021) demonstrate the usefulness of composite approaches in evaluating macroeconomic stability, while Saavedra-Rivano and Teixeira (2017) extend multidimensional performance assessment to broader welfare and sustainability considerations. Accordingly, the interpretation of Kaldor's Magic Square requires clearly defined indicator scales, normalization procedures, and reference benchmarks.

Political Instability and Macroeconomic Imbalances

Political instability represents a major challenge to macroeconomic stability, particularly in developing economies characterized by institutional fragility, limited economic diversification, and dependence on external financing. Political crises can disrupt government decision-making, weaken investor confidence, delay economic reforms, and generate uncertainty regarding future economic policies. Rodrik (1999) argues that the interaction between external shocks, social conflict, and weak conflict-management institutions can contribute to severe economic contractions. Similarly, Aisen and Veiga (2013) provide empirical evidence that political instability negatively affects economic growth, particularly through reductions in productivity and capital accumulation.

The economic consequences of political instability extend beyond aggregate output. Political uncertainty can discourage domestic and foreign investment, interrupt production and trade, weaken public revenue collection, and complicate fiscal and monetary management. These disruptions may subsequently influence inflation, employment, and external balances, although their magnitude and direction depend on the characteristics of the crisis and the policy responses adopted. Jong-A-Pin (2009) emphasizes the importance of distinguishing among different dimensions of political instability when assessing their economic consequences. This perspective suggests that the macroeconomic effects of political crises should not be assumed to be uniform across countries or historical episodes.

Institutional quality plays an important role in determining the severity and persistence of these economic disruptions. Acemoglu and Robinson (2012) argue that inclusive political and economic institutions are essential for creating incentives that support long-term prosperity, whereas extractive institutions can reinforce political conflict and economic stagnation. Acemoglu et al. (2019) provide empirical evidence that democratic institutions can contribute positively to long-term economic growth, while Colagrossi et al. (2020) examine the broader empirical relationship between democracy and economic performance. Together, these studies suggest that political transitions may create opportunities for economic recovery, but their outcomes depend on institutional effectiveness, policy continuity, and the capacity to manage competing economic interests.

From a Kaldorian perspective, political crises may produce simultaneous deterioration across several macroeconomic dimensions. Declining investment and disrupted production can reduce GDP growth, while trade interruptions and exchange-rate pressures may contribute to external imbalances and inflationary volatility. Labor market conditions may also deteriorate as firms reduce production, postpone recruitment, or shift toward informal employment arrangements. Nevertheless, these relationships are not necessarily immediate or uniform. Inflation may respond differently depending on exchange-rate movements and monetary policy, while unemployment may adjust slowly because of labor market rigidities and the prevalence of informal employment. Consequently, evaluating political instability through Kaldor's Magic Square provides a broader understanding of macroeconomic adjustment than examining GDP growth alone.

Political Crises and Economic Vulnerability in Madagascar

Madagascar represents a relevant case for examining the interaction between recurrent political instability and macroeconomic vulnerability. The country has experienced successive political crises that have disrupted economic activity, weakened institutional continuity, and complicated long-term development planning. The crises of 1991, 2002, and 2009 occurred under different political circumstances, yet each provides an opportunity to investigate how political disruptions are associated with changes in economic performance. These historical episodes are particularly important because their repeated occurrence raises questions about the resilience of Madagascar's macroeconomic institutions and the sustainability of post-crisis recovery.

The 2009 political crisis illustrates the relationship between political legitimacy, institutional confidence, and economic instability. Hinthorne (2011) demonstrates that public perceptions and local interpretations of political legitimacy played an important role in understanding Madagascar's political confrontation. From an economic perspective, Fontaine and Razafindravaosolonirina (2023) provide evidence of substantial income losses associated with political crisis in Madagascar. Their findings indicate that political disruptions can impose measurable economic costs and reinforce the importance of evaluating both immediate economic contractions and longer-term recovery dynamics.

Madagascar's experience can also be understood within the broader literature on institutional development and economic vulnerability. Acemoglu and Robinson (2012) emphasize that institutional arrangements influence the distribution of economic opportunities and the sustainability of development, while Easterly (2002) highlights the limitations of development strategies that fail to account for local incentives and institutional conditions. Sen (2001) further argues that development should be understood beyond income growth, incorporating the expansion of economic opportunities and human capabilities. These perspectives suggest that the consequences of Madagascar's political crises may extend beyond short-term

macroeconomic fluctuations to influence employment opportunities, investment capacity, and broader development outcomes.

The political developments of 2025 create an additional context for evaluating Madagascar's economic resilience. However, the macroeconomic consequences of this recent episode cannot yet be assessed with the same historical depth as those of earlier crises. Accordingly, comparisons with the 1991, 2002, and 2009 episodes may help identify recurring patterns of economic adjustment, but they should not be interpreted as evidence that future outcomes will necessarily follow identical trajectories. A historical Kaldorian analysis can instead provide a structured basis for constructing conditional post-2025 scenarios and assessing potential vulnerabilities across the four macroeconomic indicators.

International Financial Institutions and Post-Crisis Economic Adjustment

International financial institutions, particularly the International Monetary Fund (IMF) and the World Bank, frequently influence macroeconomic stabilization and structural reform processes in developing economies. Their policy frameworks commonly emphasize fiscal sustainability, monetary stability, external financing, and institutional reform. These objectives are closely related to the dimensions incorporated into Kaldor's Magic Square, although the relative importance assigned to individual indicators may vary according to economic circumstances.

Easterly (2002) questions the effectiveness of development policies that rely on standardized economic prescriptions without sufficiently considering local institutional incentives and implementation constraints. Similarly, Rodrik (1999) emphasizes that economic shocks can generate substantially different outcomes depending on the capacity of domestic institutions to manage social conflict. These perspectives suggest that post-crisis stabilization cannot be evaluated solely through improvements in inflation or external balances; it must also consider the recovery of economic growth, employment, and institutional capacity.

In the context of Madagascar, external financial assistance and macroeconomic adjustment policies may support economic stabilization, but their effectiveness depends on domestic governance, policy implementation, and structural conditions. From a Kaldorian perspective, stabilization policies may generate short-term trade-offs among the four macroeconomic objectives. For example, fiscal consolidation may contribute to price and external stability while potentially constraining aggregate demand and employment in the short term. Conversely, expansionary policies intended to accelerate recovery may increase inflationary pressures or external financing requirements. These potential trade-offs reinforce the importance of evaluating post-crisis economic performance through a multidimensional framework rather than relying on a single indicator.

Research Gap and Analytical Framework

Previous studies provide substantial evidence concerning the economic consequences of political instability and the usefulness of multidimensional macroeconomic assessment. Rodrik (1999), Jong-A-Pin (2009), and Aisen and Veiga (2013) establish important theoretical and empirical foundations for understanding the relationship between political shocks and economic performance. Meanwhile, Firme and Teixeira (2014), Abdallah and Khemissi (2021), and Al-Shammari and Jiyad (2022) demonstrate the applicability of Kaldorian indicators in evaluating macroeconomic outcomes. In the specific context of Madagascar, Hinthorne (2011) and Fontaine and Razafindravaosolonirina (2023) provide valuable insights into political instability and its economic consequences.

Nevertheless, these strands of literature have not been sufficiently integrated to explain how successive political crises reshape Madagascar's four macroeconomic objectives over time. Existing research provides a foundation for understanding political disruptions and economic losses, but a systematic comparison of the post-1991, post-2002, and post-2009 macroeconomic configurations through Kaldor's Magic Square remains an area requiring further investigation. In addition, the application of historical crisis patterns to conditional post-2025 scenarios offers an opportunity to extend the analytical usefulness of the framework.

Therefore, this study adopts Kaldor's Magic Square as its principal analytical framework to examine the evolution of real GDP growth, unemployment, inflation, and external balance across successive political crises in Madagascar. By comparing pre-crisis conditions, crisis-period changes, and subsequent recovery trajectories, the study seeks to identify recurring macroeconomic patterns and differences among historical episodes. These findings will subsequently inform scenario-based projections for the post-2025 period. The proposed framework contributes to the literature by connecting political instability, multidimensional macroeconomic performance, and historical scenario analysis within the context of a structurally vulnerable developing economy.

3. Methodology

This article employs a mixed-methods approach combining both qualitative and quantitative analysis. The methodology is based on data from the World Bank, covering GDP growth, inflation rate, unemployment rate, and the current account balance for the post-crisis periods of 1991, 2002, 2009, and 2025.

On the quantitative side, the analysis relies on a descriptive comparison of the data and a synthetic visualization to identify potential distortions. On the qualitative side, the theoretical framework incorporates an interdisciplinary literature review to contextualize the observed imbalances.

4. Empirical Findings/Result

Madagascar has experienced a series of recurring political crises that have affected the trajectory of its economic development. These shocks have led to a breakdown in the continuity of public policies, a decline in investor confidence, and a weakening of economic institutions.

The 1991 Crisis

The 1991 crisis marked a major turning point in the country's political life. It was characterized by massive demonstrations, administrative paralysis, and a sharp decline in national production. The post-crisis period was marked by severe budgetary pressure and a significant devaluation of the national currency. Finally, it was also characterized by a sharp drop in exports and the temporary suspension of international aid.

Table 1. Macroeconomic Indicators of Madagascar (1991–1995)

Year	GDP Growth (%)	Inflation (%)	Unemployment (%)	Current account balance (% of GDP)
1991	-6,3	8,6	6,2	-7,6
1992	-1,2	14,5	6,3	-5,3
1993	2,1	10,0	6,3	-6,3
1994	-0,04	38,9	6,1	-7,9
1995	1,7	49,0	6,1	-7,2

Source: World Development Indicators 2025

Regarding the four indicators, the 1991 crisis led to a drastic fall in GDP growth to -6.3%. Thereafter, growth showed a slow and somewhat volatile recovery. As for price dynamics, inflation started at 8.6%, then gradually surged, reaching 38.9% in 1994 and 49% in 1995. Following the 1991 crisis, the unemployment rate stood at 6.2% in 1991 and remained stable around this level until 1995. Finally, the current account balance began at -7.6% and maintained a persistent average deficit of about -6.8%.

The 2002 Crisis

The 2002 political crisis, triggered by an electoral dispute, caused a total paralysis of economic activity for several months. Transport infrastructure was brought to a standstill, interregional trade was disrupted, and several exporting firms suspended their operations. A significant decline in exports — particularly vanilla and textiles — was observed, while the national currency experienced a sharp depreciation. This episode demonstrated that economic recovery depends not only on the restoration of political stability but also on rebuilding investor and external partner confidence.

Table 2. Macroeconomic Indicators of Madagascar (2002–2006)

Year	GDP Growth (%)	Inflation (%)	Unemployment (%)	Current account balance (% of GDP)
2002	-12,4	16,5	5,5	-9,0
2003	9,8	-1,7	5,0	-5,1
2004	5,3	13,9	3,9	-7,9
2005	4,7	18,4	2,6	-12,5
2006	5,4	10,8	2,9	-9,1

Source: World Development Indicators 2025

As for price dynamics, inflation started at 16.5%, underwent a temporary deflation of -1.7% in 2003, and then rose again in a volatile manner to reach 10.8% in 2006. Following the 2002 crisis, the unemployment rate declined from 5.5% to 2.9% in 2006. The current account deficit relative to GDP became even more pronounced after the 2002 crisis, reaching -9.1% in 2006.

The 2009 Crisis

The 2009 crisis plunged Madagascar into a period of diplomatic and financial isolation. The suspension of international aid and the decline in foreign direct investment were the defining features of this shock. The economy slipped into a prolonged recession, characterized by currency depreciation and rising import costs. Finally, mining exports were insufficient to offset the contraction in other productive sectors.

Table 3. Macroeconomic Indicators of Madagascar (2009–2013)

Year	GDP Growth (%)	Inflation (%)	Unemployment (%)	Current account balance (% of GDP)
2009	-4,0	9,0	3,9	-18,2
2010	0,6	9,2	4,3	-9,0
2011	1,6	9,5	2,5	-6,7
2012	3,0	5,7	0,6	-7,5
2013	2,3	5,8	1	-6,5

Source: World Development Indicators 2025

Regarding the four indicators, the 2009 crisis was marked by a moderate decline in GDP growth to -4%. Subsequently, growth recovered gradually, although at a relatively weak pace.

As for price dynamics, inflation stabilized around 9% between 2009 and 2011, before moderating to about 5.8%.

Following the 2009 crisis, the unemployment rate showed a volatile downward trend, reaching 1% in 2013. The current account deficit peaked at -18.2% in 2009 before narrowing to -6.5% in 2013.

5. Discussion

The comparative analysis of Madagascar's political crises in 1991, 2002, and 2009 reveals a recurring pattern of economic contraction, inflationary instability, and persistent external imbalances. Political disruptions weakened production, reduced investment confidence, and interrupted economic activities across several sectors. Among these episodes, the 2002 crisis produced the most severe initial economic contraction but was followed by a relatively rapid recovery, whereas the 1991 and 2009 crises were associated with more prolonged economic adjustments. These findings are consistent with Rodrik (1999), who argues that social conflicts and institutional weaknesses amplify economic shocks and contribute to growth collapses. Similarly, Aisen and Veiga (2013) demonstrate that political instability negatively affects economic growth through reduced productivity and capital accumulation. Fontaine and Razafindravaosolonirina (2023) further confirm that political crises in Madagascar have generated substantial economic losses, highlighting the importance of institutional stability in supporting economic recovery.

Inflationary pressures also characterized Madagascar's post-crisis economic conditions. Inflation reportedly reached approximately 49% in 1995 and 18% in 2006, reflecting significant price instability during the adjustment periods. These fluctuations may be associated with disruptions in domestic production, exchange-rate depreciation, import dependence, and monetary instability. However, political crises should not be considered the sole determinants of inflation, as external economic conditions and domestic policy responses may also contribute. Kaldor (1971) identifies price stability as a fundamental macroeconomic objective, while Firme and Teixeira (2014) emphasize the importance of evaluating inflation alongside economic growth, employment, and external balance. Consequently, Madagascar's inflationary experience demonstrates the difficulty of simultaneously restoring economic growth and maintaining price stability following political disruptions.

Despite economic contractions, official unemployment rates remained relatively low across the three crisis periods. Nevertheless, these figures may conceal substantial underemployment and informal economic activities, particularly among vulnerable households. A decline in unemployment does not necessarily indicate improved labor market conditions when individuals depend on precarious and low-productivity employment. Sen (2001) argues that economic development should be evaluated through the expansion of productive opportunities and human capabilities rather than aggregate indicators alone. Similarly, Acemoglu and Robinson (2012) emphasize that institutional weaknesses can restrict economic opportunities and reinforce structural inequalities. Therefore, Madagascar's labor market conditions should be interpreted cautiously, considering the persistence of informal employment and working poverty.

Madagascar's external balance remained vulnerable throughout the periods examined, reflecting dependence on imported goods, limited export diversification, and exposure to external financing constraints. Political instability may have intensified these vulnerabilities by disrupting trade activities and weakening investment confidence. The gradual improvement in external conditions following the 2009 crisis may have been associated with the normalization of international assistance and economic activities after 2013. However, Easterly (2002) emphasizes that external financial assistance does not automatically resolve structural economic weaknesses. Similarly, Al-Shammari and Jiyad (2022) highlight the importance of external-sector performance in assessing macroeconomic stability through Kaldor's framework. These findings suggest that sustainable external balance requires stronger domestic production, export diversification, and reduced dependence on external financing.

Overall, the comparative application of Kaldor's Magic Square indicates that Madagascar's political crises generated significant distortions across the four macroeconomic objectives. Economic growth deteriorated during crisis periods, inflation remained volatile, and external deficits persisted, while relatively low unemployment rates concealed structural labor market vulnerabilities. Although the 2002 crisis caused a particularly severe initial contraction, its comparatively faster recovery suggests that the duration of political uncertainty and the effectiveness of institutional stabilization influence economic resilience. These findings support Rodrik's (1999) argument regarding the interaction between social conflict and institutional weaknesses, as well as the multidimensional approach proposed by Abdallah and Khemissi (2021). The analysis also reinforces the importance of evaluating macroeconomic recovery beyond GDP growth alone, as improvements in one indicator do not necessarily translate into balanced economic performance.

The 2025 political crisis introduces renewed uncertainty regarding Madagascar's economic prospects. Public demonstrations associated with electricity and water shortages, corruption, and socioeconomic dissatisfaction resulted in a major political transition, potentially affecting investment confidence and economic policy continuity. Economic growth for 2025 had been projected at approximately 3.8%, although this estimate may not fully reflect the consequences of the political crisis. Disruptions in tourism, agriculture, industry, and international financing could weaken economic performance and intensify inflationary and external pressures. Aisen and Veiga (2013) explain that political instability can undermine investment and productivity, while Acemoglu et al. (2019) highlight the importance of effective political institutions for long-term economic growth. Accordingly, Madagascar's post-2025 trajectory will depend on the restoration of political stability, institutional confidence, and economic activity.

Based on historical crisis patterns, three potential post-2025 macroeconomic scenarios can be considered. Under an optimistic scenario, political stabilization and renewed investment could support economic recovery, moderate inflation, and improve employment opportunities. Under a moderate scenario, gradual institutional normalization may generate limited growth while inflationary pressures and external

deficits persist. Under a pessimistic scenario, prolonged political instability, reduced international assistance, and external shocks could produce further economic contraction and deteriorating macroeconomic balances. These scenarios are conditional projections rather than precise statistical forecasts. As emphasized by Jong-A-Pin (2009) and Colagrossi et al. (2020), political conditions and institutional quality are important considerations when examining economic performance and long-term development trajectories.

To strengthen economic resilience, Madagascar should prioritize institutional reforms, economic diversification, and sustainable investment. Improving governance and policy continuity could restore investor confidence, while investment in renewable energy, agriculture, infrastructure, and manufacturing could reduce structural vulnerabilities and generate employment opportunities. Strengthening small and medium-sized enterprises and promoting appropriately governed public–private partnerships may also reduce dependence on external assistance. Acemoglu and Robinson (2012) emphasize the importance of inclusive institutions, while Easterly (2002) highlights the need for development policies adapted to domestic economic conditions. Furthermore, Sen (2001) stresses that sustainable development should improve economic opportunities and social welfare. Therefore, Madagascar's post-crisis recovery should focus on achieving a more balanced combination of economic growth, price stability, employment, and external sustainability, consistent with Kaldor's (1971) macroeconomic framework.

6. Conclusions

The Malagasy political crises of 1991, 2002, 2009, and 2025 illustrate the fragility of Madagascar's macroeconomic balances. During these periods, we observe contractions in GDP, volatile inflation, low official unemployment masking widespread underemployment, and persistent balance of payments deficits. The post-2002 recovery was relatively rapid, thanks to an effective political resolution, and was accompanied by moderate inflation.

Prolonged transitions, such as those following 1991 and 2009, resulted in weak growth, driven by persistent social conflicts and weak institutions. The 2025 crisis, triggered by protests against corruption and infrastructure failures, follows this pattern, with projected growth of 3.8% for the year, inflation exceeding 8% due to rising food and import prices, and an expanded current account deficit exacerbated by falling vanilla and mineral exports.

However, a prolonged suspension of multilateral funding, as observed after 2009, could worsen vulnerability to climate and external shocks, potentially leading to stagnation similar to past crises. To break this cycle, Madagascar must prioritize attracting investment that creates jobs and generates foreign currency. In addition, the country should explore alternative financing options. Finally, the island nation should

rely on progressive and incentive-based taxation to promote formal employment and boost national production.

References:

- Abdallah, H., & Khemissi, G. (2021). Macroeconomic composite index for economic stability: A Kaldorian analysis for the Algerian economy. *Dirassat Journal Economic Issue*, 12(1), 697–715. <https://doi.org/10.34118/djei.v12i1.1121>
- Acemoglu, D., Naidu, S., Restrepo, P., & Robinson, J. A. (2019). Democracy does cause growth. *Journal of Political Economy*, 127(1), 47–100. <https://doi.org/10.1086/700936>
- Acemoglu, D., & Robinson, J. A. (2012). *Why nations fail: The origins of power, prosperity, and poverty*. Crown Business.
- Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth? *European Journal of Political Economy*, 29, 151–167. <https://doi.org/10.1016/j.ejpoleco.2012.11.001>
- Al-Shammari, M. S., & Jiyad, A. H. (2022). Measuring the effects of trade policy on the variables of the magic square of Kaldor in the Iraqi economy during the period 1990–2019. *Al-Ghary Journal of Economic and Administrative Sciences*, 18(4), 13–42. <https://iasj.mohe.gov.iq/journals/journal/issue/5997>
- Cluster atlas: Stability, inequality, and growth. (2026). *Economic Systems*, Article 101399. <https://doi.org/10.1016/j.ecosys.2026.101399>
- Colagrossi, M., Rossignoli, D., & Maggioni, M. A. (2020). Does democracy cause growth? A meta-analysis (of 2000 regressions). *European Journal of Political Economy*, 61, Article 101824. <https://doi.org/10.1016/j.ejpoleco.2019.101824>
- Dirks, M. W., & Schmidt, T. (2024). Political instability and economic growth: Causation and transmission. *European Journal of Political Economy*, 85, Article 102586. <https://doi.org/10.1016/j.ejpoleco.2024.102586>
- Easterly, W. (2002). *The elusive quest for growth: Economists' adventures and misadventures in the tropics*. MIT Press.
- Firme, V. de A. C., & Teixeira, J. R. (2014). Index of macroeconomic performance for a subset of countries: A Kaldorian analysis from the magic square approach focusing on Brazilian economy in the period 1997–2012. *Panoeconomicus*, 61(5), 527–542. <https://doi.org/10.2298/PAN1405527F>
- Fontaine, I., & Razafindravaosolonirina, J. (2023). The income loss of a political crisis: Evidence from Madagascar. *Economics of Transition and Institutional Change*, 31(3), 657–681. <https://doi.org/10.1111/ecot.12354>
- Frynas, J. G., Wood, G., & Hinks, T. (2017). The resource curse without natural resources: Expectations of resource booms and their impact. *African Affairs*, 116(463), 233–260. <https://doi.org/10.1093/afraf/adx001>
- Hinthorne, L. L. (2011). Democratic crisis or crisis of confidence? What local perceptual lenses tell us about Madagascar's 2009 political crisis. *Democratization*, 18(2), 535–561. <https://doi.org/10.1080/13510347.2011.553371>
- Jong-A-Pin, R. (2009). On the measurement of political instability and its impact on economic growth. *European Journal of Political Economy*, 25(1), 15–29. <https://doi.org/10.1016/j.ejpoleco.2008.09.010>

-
- Kaldor, N. (1971). Conflicts in national economic objectives. *The Economic Journal*, 81(321), 1–16. <https://doi.org/10.2307/2229754>
- Rodrik, D. (1999). Where did all the growth go? External shocks, social conflict, and growth collapses. *Journal of Economic Growth*, 4(4), 385–412. <https://doi.org/10.1023/A:1009863208706>
- Saavedra-Rivano, N., & Teixeira, J. R. (2017). Magic hypercube and index of welfare and sustainability. *Economia*, 18, 88–97. <https://scholar.google.com/scholar?q=Magic+Hypercube+and+Index+of+Welfare+and+Sustainability>
- Sen, A. (2001). *Development as freedom*. Oxford University Press.