

Tourism Shocks, Debt Scars, and Recovery Amplitude: A Structural Diagnostic of Cabo Verde's Macroeconomic Path, 2000–2025

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Abstract: Cabo Verde is a small, tourism-dependent open economy whose macroeconomic path combines periods of solid expansion with a severe pandemic shock and a subsequent strong rebound. Conventional summaries that rely on long-run average growth rates or the latest annual print obscure the depth of the 2020 collapse, the associated rise in external debt, and the quality of post-2021 recovery. This article applies a structural diagnostic—growth-pressure intensity, resilience capacity, failure and survival propensities, net structural health, and a pre-critical early-warning flag—to Cabo Verde's principal macroeconomic indicators for 2000–2025, drawing on official national series compiled by the Instituto Nacional de Estatística, the Banco de Cabo Verde, and the Ministério das Finanças. Results indicate moderate-to-elevated growth-pressure intensity (approximately 0.53), strong resilience capacity (approximately 0.87), failure propensity below a conventional decision threshold (approximately 0.39), and positive net structural health (approximately +0.19), with no active pre-critical flag. Regime means of real GDP growth shift from about +4.3 per cent (2000–2014) to about –0.1 per cent (2015–2020, including –20.8 per cent in 2020) to about +8.2 per cent (2021–2025). The variables contributing most to the diagnosis are the 2020 GDP collapse, the crash in tourism receipts as a share of GDP, the external-debt peak near 105 per cent of GDP, current-account stress, the 2012–2015 low-growth corridor, and fiscal deficits in crisis intervals—partly offset by post-2021 rebound amplitude and improved reserve cover in months of imports. A static and linear reading of the same data understates structural risk by averaging away the pandemic scar. Recommendations are offered for national fiscal, monetary, tourism, and debt authorities and for international partners, creditors, and investors. Implications extend to surveillance of small island developing states and to the joint reading of activity-path and buffer indicators.

Keywords: Cabo Verde; Cape Verde; tourism shock; external debt; structural fragility; resilience capacity; pre-probabilistic; pandemic recovery; small island developing states; macroeconomic path; risk pressure level test and assessment, structural diagnostic, pre-critical early-warning.

1. Introduction

Cabo Verde has long been cited as a development success among small island developing states (SIDS): political stability, improving social indicators, and sustained periods of growth supported by tourism, remittances, and official financing (World Bank, 2018; AfDB, 2019). Yet the structure of the economy—high openness, tourism intensity, and reliance on external financing—also implies elevated exposure to global demand shocks. The COVID-19 pandemic made that exposure visible: real GDP contracted by approximately 20.8 per cent in 2020, tourism receipts as a share of GDP fell from above 21 per cent in 2019 to about 8.3 per cent in 2020, and the stock of external debt rose above 100 per cent of GDP (INE, BCV & Ministério das Finanças, 2026).

By 2022–2025 the economy had rebounded strongly, with mean real growth in the 2021–2025 interval near 8 per cent, tourism receipts recovering above pre-pandemic shares of GDP, and external debt declining toward the mid-60s as a percentage of GDP. The analytical problem is therefore not whether recovery occurred—it did—but how to characterise the structural quality of the path: how deep the scar was, how much pressure remains, whether resilience capacity is sufficient relative to that pressure, and whether policy frameworks should treat the post-2021 corridor as a new steady state or as a rebound that could reverse under another external shock.

This article applies a regime-sensitive structural diagnostic to Cabo Verde's main macroeconomic indicators for 2000–2025. It distinguishes growth-pressure intensity from resilience capacity; scores failure-, survival-, and thriving-oriented propensities; reports net structural health and a pre-critical early-warning condition; ranks the contribution of observed data variables; and contrasts the structural reading with a static and linear summary of the same series. The aim is decision relevance for national authorities and external partners, not one-step-ahead forecasting of the next annual growth print.

2. Statement of the Problem

Despite regular publication of Cabo Verde's macroeconomic indicators, decision frameworks still lack a compact structural score of the growth and buffer path that: (i) identifies regime intervals rather than pooling all years into a single average; (ii) quantifies pressure from the 2020 collapse, tourism dependence, and debt peaks relative to recovery amplitude; (iii) ranks the contribution of variables actually observed in the national data; and (iv) translates those findings into regime-conditional fiscal, debt, and external assumptions. Full-sample average growth and the latest strong years can read as comfort. They do not, by themselves, answer whether the configuration of outcomes remains fragile under a repeat tourism or financing shock.

3. Research Aim and Objectives

The aim of this study is to provide a structural diagnosis of Cabo Verde's macroeconomic path over 2000–2025 and to derive decision-relevant implications for national and external stakeholders.

Specific objectives are to:

- Characterise real GDP growth and related external, fiscal, and monetary indicators across 2000–2025.
- Identify regime intervals in growth and document associated movements in tourism, debt, the current account, fiscal balances, and reserve cover.
- Apply a structural diagnostic (growth-pressure intensity, resilience capacity, propensities, net structural health, pre-critical early-warning) to the path.
- Rank the contribution of observed data variables to the diagnosis.
- Contrast the structural diagnostic with a static and linear reading of the same series.
- Formulate recommendations for internal authorities and external partners, creditors, and investors.

4. Research Questions

RQ1: How do regime means of Cabo Verde's real GDP growth compare across 2000–2014, 2015–2020, and 2021–2025?

RQ2: What levels of growth-pressure intensity, resilience capacity, and failure versus survival propensity characterise the path?

RQ3: Which variables in the official macro dataset contribute most to the structural diagnosis?

RQ4: What policy and financing implications follow from treating Cabo Verde as a shock-scarred but resilient tourism economy rather than as a steadily average-growth economy?

5. Literature Review

5.1 Conceptual literature

Small island developing states face structural features—small domestic markets, high trade openness, concentration in a few export or tourism markets, and vulnerability to external and climatic shocks—that distinguish their risk profile from that of larger continental economies (Briguglio, 1995; Briguglio et al., 2009; UNCTAD, 2021). Resilience refers to the capacity to absorb shocks and retain or restore function; fragility refers to the tendency for stress to cause disproportionate harm (Taleb, 2012; Briguglio et al., 2009). For tourism-dependent islands, a global mobility shock can collapse activity far more abruptly than a standard business-cycle downturn.

Many macroeconomic assessments remain static: they treat the data-generating structure as fixed and linear and then summarise history with averages or latest

observations (Apanisile, 2026). When a path contains a discrete catastrophe year and a subsequent rebound, the full-sample mean is arithmetically correct but structurally misleading for planning. A pre-probabilistic structural stance reads pressure and resilience from path configuration—regime breaks, shock depth, recovery amplitude, and related buffer movements—before forcing the problem into a single predictive distribution (Apanisile, 2026).

5.2 Theoretical literature

Open-economy models for small tourism and commodity exporters predict nonlinear output responses to external demand and terms-of-trade shocks (Mendoza, 1995; Agénor & Montiel, 2015). Sudden-stop and external-crisis literature emphasises the interaction of activity collapses with reserve adequacy and access to financing (Calvo, 1998; Jeanne & Rancière, 2011). Debt-sustainability frameworks depend on growth, interest rates, and primary balances; for SIDS, growth itself is highly regime-dependent, so DSA baselines that assume smooth mean reversion systematically understate risk (IMF, 2022).

5.3 Empirical literature on Cabo Verde

Empirical and institutional work documents Cabo Verde's tourism-led growth, remittance inflows, euro-linked exchange-rate arrangement, and vulnerability to European demand conditions (World Bank, 2018; IMF, 2019, 2022; AfDB, 2019). The pandemic episode produced one of the sharpest peacetime output contractions in the country's recent history, accompanied by fiscal widening and a jump in public external debt ratios. Post-2021 recovery has been rapid by regional standards, supported by the return of travel and by continued policy engagement with international partners. Fewer studies provide an explicit structural scoring of pressure versus resilience capacity across 2000–2025 that ranks the contribution of observed macro variables and contrasts that score with a static average-growth narrative. This article addresses that gap.

6. Data and Methodology

6.1 Data

The primary source is the official synthesis of principal macroeconomic and financial indicators for Cabo Verde, 2000–2025, compiled from the Instituto Nacional de Estatística (INE), the Banco de Cabo Verde (BCV), and the Ministério das Finanças (INE, BCV & Ministério das Finanças, 2026). Indicators span national accounts, prices and employment; the monetary and financial sector; exchange rates; the external sector; and public finances. Core series for the structural diagnosis include real GDP growth; average and end-period inflation; unemployment; monetary and credit aggregates; the nominal and real effective exchange-rate indices; the current account and capital account balances; gross tourism receipts; emigrant remittances; foreign direct investment; reserve

cover in months of imports; the overall and primary fiscal balances; and stocks of external and domestic debt as percentages of GDP. Values labelled as unavailable (n.d.) are treated as missing. Notes in the source document clarify that 2021–2022 GDP figures draw on quarterly national accounts estimates and that methodological updates affect unemployment measurement from 2022.

6.2 Diagnostic framework

The analysis employs risk pressure level test and assessment (rpla), a structural diagnostic oriented toward decision use. In rpla, structural propensities and early-warning conditions are inferred from the configuration of the observed path—regime means, incidence of highly adverse years, depth of activity drawdown, recovery amplitude, and co-movement of tourism, debt, fiscal, and reserve indicators—rather than from a single probability law assumed constant across regimes (Apanisile, 2026).

The dimensions employed are:

- **Growth-pressure intensity** — the degree to which the path exhibits stress, deep activity drawdowns, adverse years, and related external/fiscal strain.
- **Resilience capacity** — the extent to which the path shows recovery amplitude, positive outcome share, and restoration of key buffers.
- **Failure-oriented propensity** — the structural tendency toward contraction or prolonged underperformance.
- **Survival-oriented propensity** — the structural tendency toward stabilisation and continuation.
- **Thriving-oriented propensity** — the structural tendency toward robust, sustained high-amplitude growth.
- **Net structural health** — the balance between survival-oriented and failure-oriented propensities.
- **Pre-critical early-warning** — a flag when failure-oriented propensity is near or above a decision threshold and/or pressure is already elevated.

Regime windows used for interpretation are 2000–2014 (expansion/build), 2015–2020 (pre-pandemic slowing and pandemic collapse), and 2021–2025 (rebound). Proprietary internal scoring rules are not disclosed; reported indices are normalised scores suitable for comparison and communication. Contribution ranking uses the variables present in the official dataset, ordered by relative importance to the diagnosis.

6.3 Static and linear comparator

The same series is also summarised under a static and linear reading: full-sample mean real growth and treatment of 2020 as a temporary interruption around a positive long-run mean. Section 7.5 contrasts that comparator with the structural diagnostic.

7. Analysis and Results

7.1 Descriptive and regime results

Real GDP growth in Cabo Verde averaged about 4.3 per cent over 2000–2014, with several years above 7 per cent in the mid-2000s. Growth slowed after the global financial crisis and the early-2010s, with several years near or below 1 per cent in 2012–2015. The 2015–2020 regime mean is about –0.1 per cent, dominated by the 2020 contraction of approximately –20.8 per cent. The 2021–2025 regime mean is about +8.2 per cent, including a very strong rebound year in 2022 (approximately +15.8 per cent) and still-solid rates through 2025.

Tourism receipts fell from about 21.3 per cent of GDP in 2019 to about 8.3 per cent in 2020, then recovered to about 23.0 per cent by 2025. External debt stock rose from the 70–90 per cent range in the mid-2010s to a peak near 105 per cent of GDP in 2020–2021, before declining to about 67 per cent by 2025. Reserve cover in months of imports improved over the long sample and reached about 8.8 months by 2025. The overall fiscal balance widened sharply in 2010–2012 and again in 2020–2021, then moved toward near-balance and a projected surplus in the mid-2020s. The current account recorded deep deficits in crisis years and improved markedly by 2024–2025.

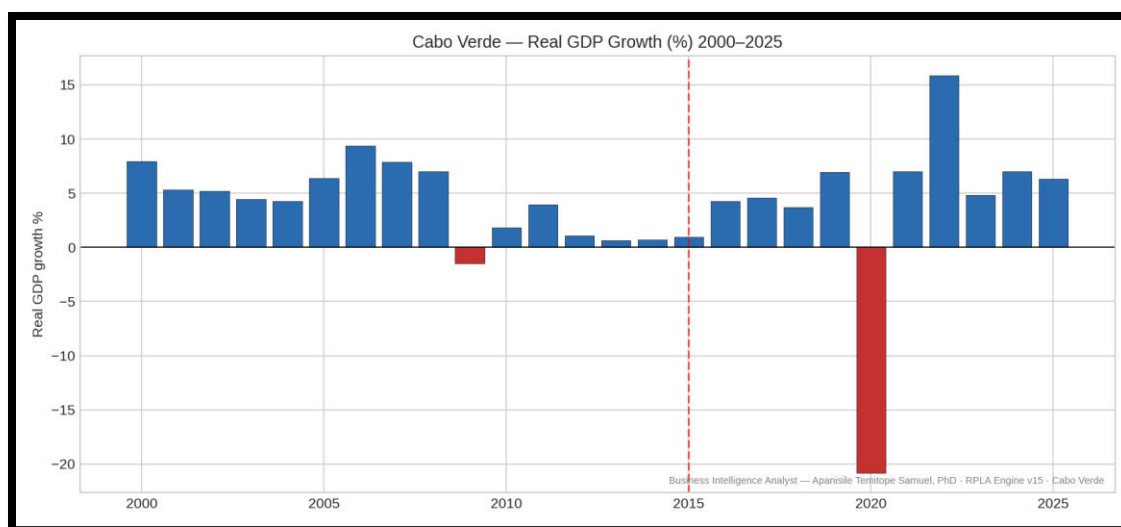


Figure 1. Cabo Verde — real GDP growth (%), 2000–2025.

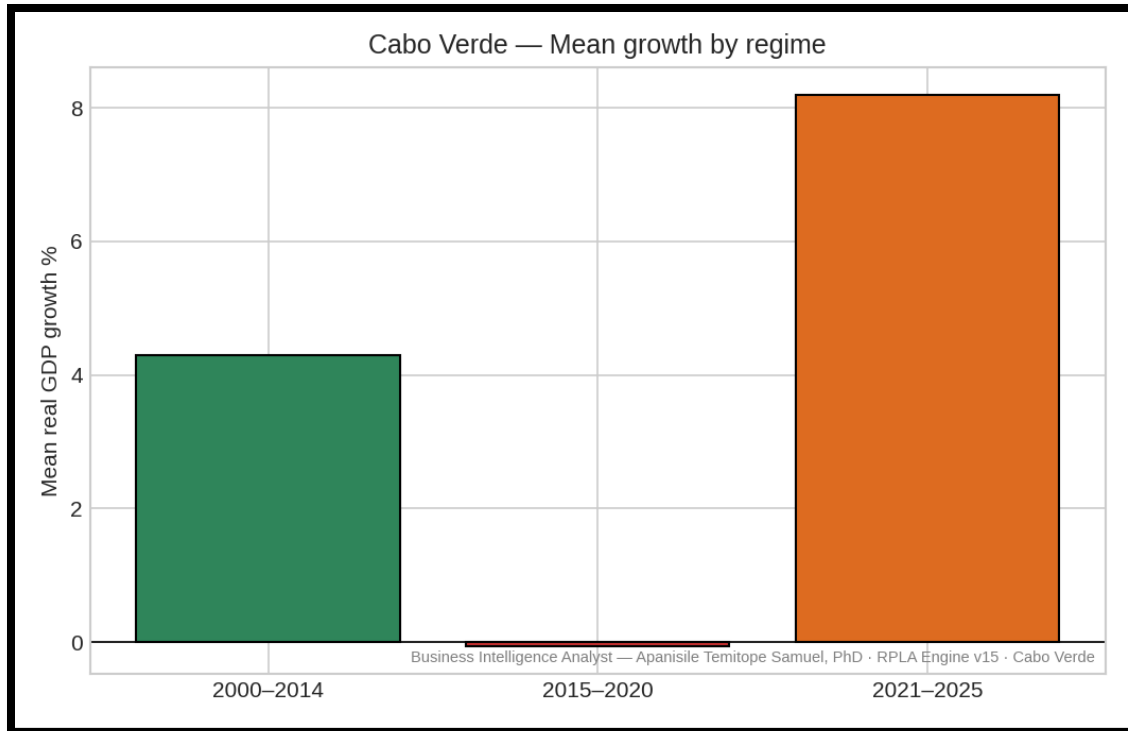


Figure 2. Mean real GDP growth by regime interval.

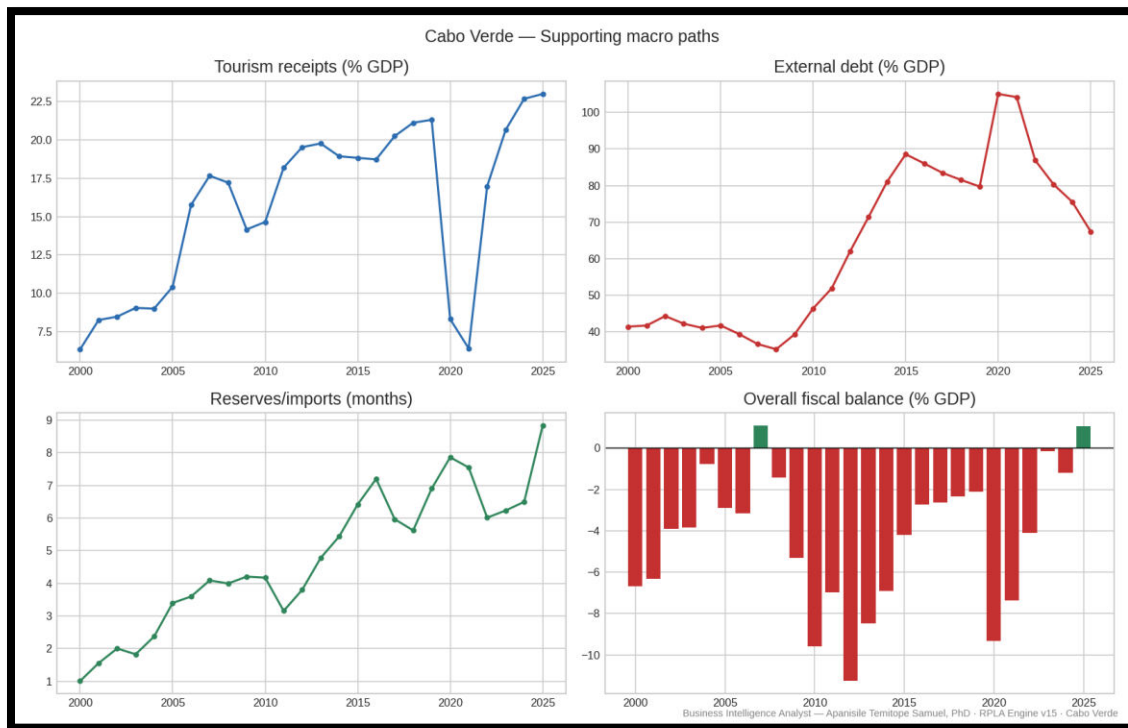


Figure 3. Supporting paths: tourism (% GDP), external debt (% GDP), reserve cover (months), fiscal balance (% GDP).

7.2 RPLA Structural diagnostic scores

The rpla structural diagnostic assigns moderate-to-elevated growth-pressure intensity (approximately 0.53), reflecting primarily the depth of the 2020 activity collapse, tourism concentration, and the associated debt and current-account stress. Resilience capacity is strong (approximately 0.87), reflecting the amplitude of the post-2021 rebound, the restoration of tourism receipts as a share of GDP, debt-ratio reduction, and improved reserve cover. Failure-oriented propensity is approximately 0.39 (below a conventional 0.50 decision threshold); survival-oriented propensity is approximately 0.59; thriving-oriented propensity is low (approximately 0.02), consistent with a path that is volatile and shock-prone rather than a smooth high-build process. Net structural health is positive (approximately +0.19). The pre-critical early-warning condition is not active.

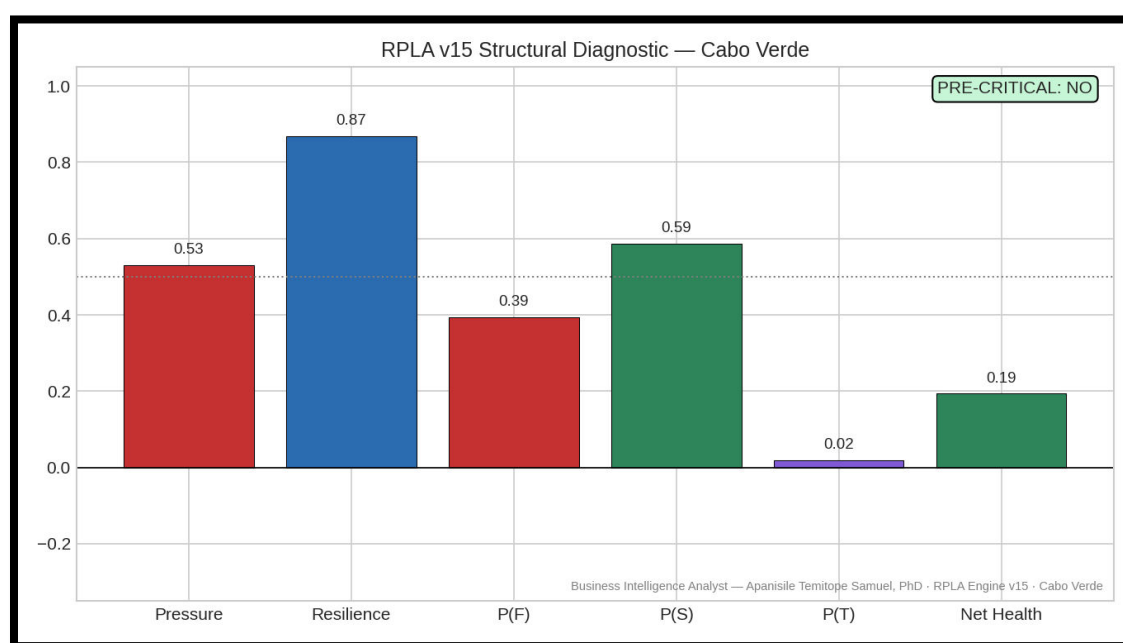


Figure 4. Structural diagnostic overview — pressure, resilience, propensities, net health, and pre-critical flag.

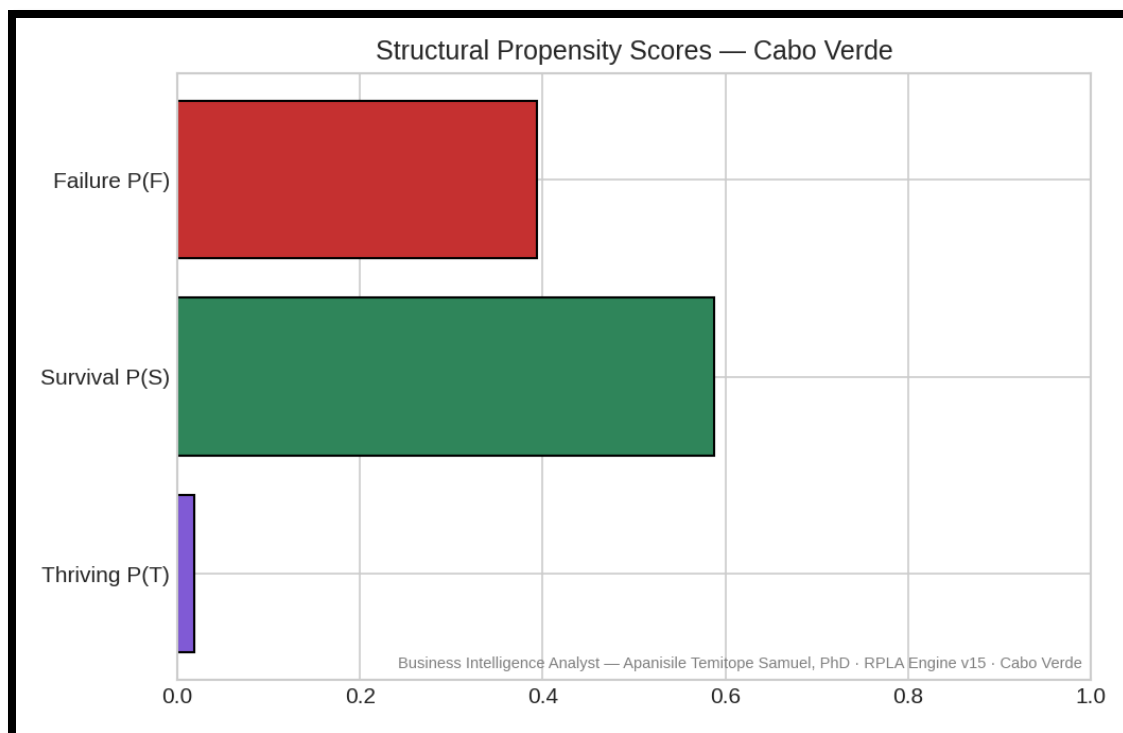


Figure 5. Failure-, survival-, and thriving-oriented propensity scores.

7.3 Contribution ranking of observed variables

Using the variables present in the official synthesis, the features contributing most to the diagnosis, in descending order, are: the 2020 real GDP collapse (–20.8 per cent); the crash in tourism revenues as a percentage of GDP from 2019 to 2020; the external-debt stock peak near 105 per cent of GDP in 2020–2021; current-account deficit spikes in crisis years; the 2012–2015 low-growth corridor; fiscal-deficit deepening in 2010–2012 and 2020–2021; post-2021 rebound amplitude (tourism-led), which supports resilience; the reserve-cover trajectory in months of imports; and unemployment persistence and data gaps.

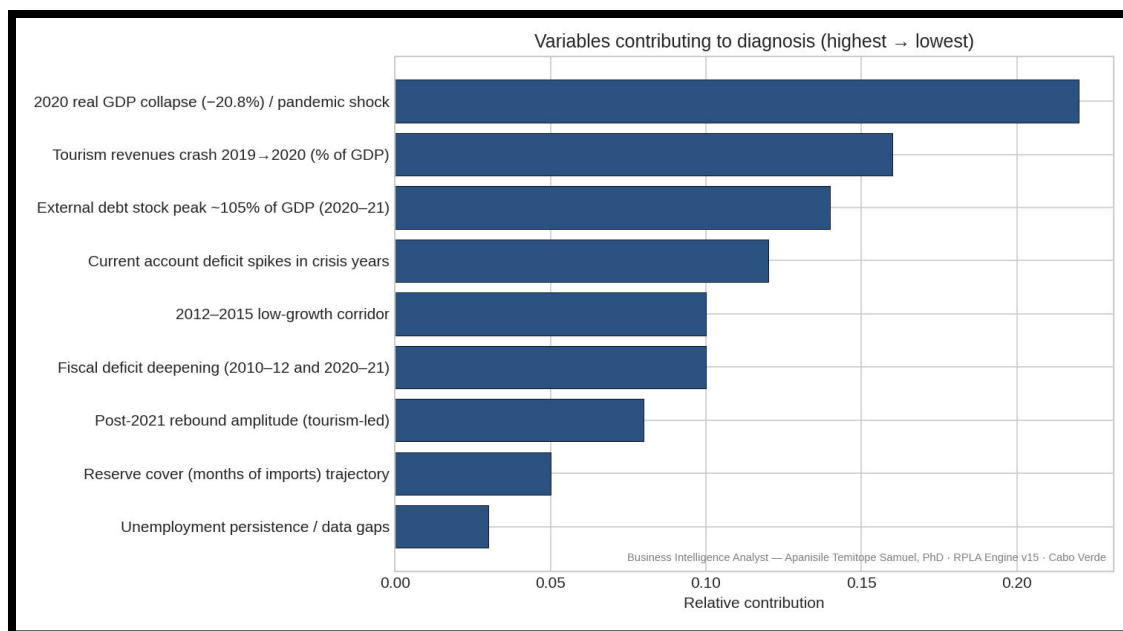


Figure 6. Relative contribution of observed macro variables to the structural diagnosis (highest to lowest).

7.4 Answers to research questions

RQ1: Regime means are approximately +4.3 per cent (2000–2014), –0.1 per cent (2015–2020), and +8.2 per cent (2021–2025). The path is not a single growth regime; it is expansion, stress-and-collapse, then strong rebound.

RQ2: Growth-pressure intensity is moderate-to-elevated (≈ 0.53); resilience capacity is strong (≈ 0.87); failure propensity is below threshold (≈ 0.39); net structural health is positive ($\approx +0.19$); pre-critical status is not active.

RQ3: The dominant contributors are the 2020 GDP collapse, the tourism share crash, the external-debt peak, current-account stress, the early-2010s low-growth corridor, and crisis fiscal deficits—offset by rebound amplitude and reserve-cover improvement.

RQ4: Policy and financing frameworks should stress-test tourism-shock scenarios, protect debt-ratio gains, and treat buffers (reserves, primary balance) as strategic—not treat full-sample average growth as a sufficient planning statistic.

7.5 Comparison with a static and linear reading

A static reading treats Cabo Verde's growth process as a single structure summarised by the full-sample mean. A linear reading treats 2020 as temporary noise around that mean. Table 1 contrasts that comparator with the structural diagnostic.

Dimension	Static / linear reading	RPLA diagnostic	Structural
Central tendency	Positive full-sample mean	Regime means +4.3% →	

	growth	−0.1% → +8.2%
2020 outcome	Temporary interruption	Defining scar (−20.8%); drives pressure
Tourism dependence	Sector success story	Systemic vulnerability indicator
Debt peak >100% GDP	Crisis episode, now improving	Structural scar still relevant for DSA
2021–2025 growth	Return to (or above) trend	Strong rebound; thriving propensity still low
Pressure vs resilience	Not distinguished	Pressure ≈ 0.53 ; resilience ≈ 0.87
Early-warning	None (mean remains positive)	Pre-critical not triggered; watch tourism/debt
Planning anchor	Average growth / latest years	Dual corridor: central + tourism-shock downside

Table 1. Static/linear reading versus structural diagnostic on Cabo Verde's macro path (2000–2025).

Under the static/linear reading, Cabo Verde is a positive-growth economy that suffered a temporary pandemic interruption. Under the structural diagnostic, it is a shock-scarred tourism economy with elevated but not pre-critical pressure, strong recovery capacity, and a continuing need to manage debt and external buffers under downside tourism scenarios. Both statements use the same numbers; only the second is adequate for multi-year fiscal and debt strategy (Hamilton, 1989; Apanisile, 2026).

8. Discussion

Three implications stand out. First, recovery amplitude should not be confused with elimination of structural exposure. Cabo Verde's post-2021 growth is impressive; tourism receipts have more than recovered as a share of GDP; debt ratios have fallen from the peak. None of these facts removes the revealed preference of the data: when global mobility stops, activity and fiscal accounts can move violently (World Bank, 2022; IMF, 2022).

Second, SIDS surveillance that relies on average growth will systematically understate the importance of catastrophe years. A single −20 per cent observation is not a rounding error in a twenty-five-year sample; it is a structural fact about exposure. Debt-sustainability and programme design should therefore embed tourism-shock and financing-shock scenarios as standard, not optional, overlays (IMF, 2022).

Third, buffer indicators moved in a stabilising direction after the crisis—reserve months improved; debt ratios declined; the fiscal balance recovered. These movements

raise resilience capacity and help explain why pre-critical status is not triggered. They also define the policy priority: protect those gains rather than spend the recovery as if average history had resumed without scar.

Limits of the study include the annual frequency of the synthesis (which smooths intra-year dynamics), data gaps for unemployment in some years, and the inherent difficulty of separating global shock effects from domestic policy effects in a highly open economy. The diagnostic is a structural screen, not a full general-equilibrium model. Its value lies in disciplined comparison of pressure and resilience using the variables the authorities already publish.

9. Recommendations

9.1 Internal stakeholders

Government and Ministry of Finance: Publish dual growth corridors in medium-term fiscal frameworks—a central corridor consistent with post-2021 experience and a downside corridor consistent with a material tourism shock. Protect primary-balance gains so that debt dynamics remain favourable if growth slows. Avoid treating 2022–2025 rates as a permanent entitlement in expenditure planning.

Banco de Cabo Verde: Maintain reserve cover as a strategic buffer for an exchange-rate arrangement linked to external anchors. Stress liquidity and FX conditions under a repeat mobility shock. Monitor credit and deposit ratios for signs of stress co-movement with tourism cycles.

Tourism and investment promotion authorities: Treat tourism's share of GDP as both an achievement and a concentration risk. Pursue market and product diversification that reduces the elasticity of GDP to a single source-market or mobility freeze.

Debt management: Continue the post-peak reduction in external debt-to-GDP. Align new borrowing with projects that raise resilience or non-tourism foreign-exchange capacity. Refinance with attention to bunching risk in adverse tourism years.

Statistical system (INE and partners): Sustain timely quarterly national accounts and fill employment data gaps so that structural monitoring can move inside the year, not only at annual frequency.

9.2 External stakeholders

IMF, World Bank, and African Development Bank: Embed tourism-shock scenarios in Article IV, DSA, and programme design. Credit the recovery and buffer improvement, but do not substitute average growth for regime-conditional baselines. Support diversification and buffer policies as resilience investments.

Official and commercial creditors; rating agencies: Differentiate recovery growth from structural exposure. Monitor distance from the debt peak, reserve months, tourism

share, and fiscal primary balances jointly. Avoid reading strong recent years as proof that a 2020-type shock cannot recur.

Foreign direct and portfolio investors: Favour projects with resilience to demand shocks—multi-market tourism, logistics, renewable energy, and domestic linkages. Price country risk off shock depth plus recovery quality, not off the latest GDP print alone.

10. Conclusion

Cabo Verde's macroeconomic path from 2000 to 2025 is best understood as expansion, then stress and pandemic collapse, then strong rebound—not as a single average-growth regime. A structural diagnostic indicates moderate-to-elevated growth-pressure intensity, strong resilience capacity, failure propensity below threshold, positive net structural health, and no active pre-critical early-warning. The dominant observed drivers are the 2020 GDP collapse, the tourism-revenue crash, the external-debt peak, current-account and fiscal stress in crisis years, and the early-2010s low-growth corridor, partly offset by post-2021 rebound amplitude and improved reserve cover.

Full-sample averages obscure this configuration and encourage over-optimistic planning assumptions. National frameworks and external surveillance should therefore use dual corridors, protect debt and reserve gains, and treat tourism concentration as a systemic vulnerability as well as a development asset. Future research should extend the diagnostic to higher-frequency data, joint activity–buffer dashboards for other SIDS, and explicit links between structural scores and debt-sustainability stress tests.

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