
GUYANA ECONOMY 2030

Converting Exceptional Resource Wealth into Durable National Prosperity

An Academic and Executive Research Monograph, Comprehensive Scrutiny and Factual Audit Edition

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This study examines the economic architecture Guyana might possess by 2030, the conditions required to convert petroleum income into durable national wealth, and the risks capable of weakening the transition. The analysis combines current 2026 macroeconomic evidence, public finance, petroleum development, sector data, international research on resource-rich economies, and original scenario frameworks. Observed data, institutional projections, and author scenarios are separated throughout.

Research cut-off: 19 September 2026. All monetary values are nominal unless identified otherwise.

Independent analytical monograph. Not an official forecast, reserve audit, or peer-reviewed journal article.

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1 Executive Abstract

Guyana is undergoing one of the fastest economic transformations recorded in a modern small state. The 2026 Budget Speech estimated real GDP growth at 19.3 percent in 2025, while IMF staff reported that growth averaged nearly 40 percent during 2023-2024. The Ministry of Finance estimates first-half 2026 real growth at 33.3 percent and revised the full-year 2026 projection to 20.8 percent, with non-oil growth projected at 10.2 percent. [1][4][36][40] Oil production surpassed 900,000 barrels per day by the end of 2025 and IMF staff reported similar volumes during the first half of 2026. [12][40] ExxonMobil's corporate planning case points toward eight developments, gross production near 1.3 million barrels per day and installed production capacity near 1.7 million barrels per day by 2030. Those figures are operator projections, not observed output or a government-revenue forecast. [12][39]

These numbers place Guyana in an economic category with few modern comparators. The country has moved from a small commodity-based economy into a petroleum producer whose export earnings, public revenue, investment pipeline and per-capita output are changing at exceptional speed. Yet rapid GDP growth does not settle the development question. The central question for 2030 is whether the petroleum windfall is converted into assets capable of producing income after the oil expansion slows.

This paper therefore does not treat GDP as the final objective. The analytical frame is national wealth conversion. Petroleum is a depleting asset. Long-run success depends on replacing part of the extracted underground asset with higher stocks of productive infrastructure, human capital, competitive firms, institutional capability, financial assets, technological capacity, resilient communities and protected natural capital. This approach follows the core logic of comprehensive wealth accounting and the economic literature on resource-rich states. [4][5][19][20][21]

The evidence presents both strength and vulnerability. Guyana's non-oil economy has recorded double-digit growth in recent years. Construction, agriculture, manufacturing, mining and services have expanded alongside oil. IMF staff continues to assess the risk of debt distress as low. [3][40] The Natural Resource Fund is accumulating financial assets. The revised 2026 official projection places NRF inflows at US\$6.712 billion, withdrawals at US\$2.374 billion and the year-end balance at US\$7.588 billion. [1] That year-end figure is a forecast, not a realised balance. At 30 June 2026, official reporting placed the cumulative NRF balance at US\$4.2942 billion after US\$1.02 billion of first-half withdrawals. [45] Quarterly NRF reports provide the institutional record for fund flows and investment holdings. [13][26] Merchandise exports remain concentrated: crude oil represented 88.4 percent of 2025 merchandise export value, while raw gold represented another 8.0 percent. [10]

That distinction is critical. Non-oil GDP growth is not the same as structural diversification. A large share of construction, commerce, transport, professional services and household demand is connected directly or indirectly to oil-funded expenditure, foreign direct investment and public capital spending. A more demanding test asks whether the economy is developing internationally competitive activities able to earn foreign exchange outside crude petroleum and gold. By this measure, diversification is advancing from a narrow base and remains unfinished.

The 2030 challenge is therefore one of conversion under speed. Guyana needs to build roads, bridges, ports, power systems, housing, drainage, schools, hospitals, digital infrastructure and public institutions at the same time that wages, imports, credit, land values and expectations rise. Absorptive capacity becomes as important as access to money. The marginal value of another dollar of public investment falls when engineering capacity, procurement systems, maintenance capability, skilled labour and project sequencing fail to expand at the same pace.

The report develops an original Guyana National Wealth Conversion Framework built around seven forms of capital: financial, physical, human, productive, institutional, natural, and social-spatial capital. It also proposes a Resource Conversion Scorecard and an Absorptive Capacity Stress Index

for monitoring whether resource income is being converted into durable productive capability rather than short-lived demand.

The central thesis is direct:

Guyana's 2030 success will be measured less by the peak size of petroleum GDP than by the strength of the economy that exists beside petroleum, and eventually beyond petroleum.

Under a balanced transformation scenario, Guyana enters 2030 with strong fiscal buffers, a growing NRF, lower electricity costs, improved logistics, a deeper domestic private sector, higher agricultural and manufacturing productivity, expanding tourism and digital services, better health and education outcomes, and a more diversified non-oil export base. Under a capacity-constrained scenario, rapid spending produces congestion, labour shortages, wage-price pressure, import dependence and a non-tradable boom without a proportional increase in export capability. Under an adverse external scenario, lower oil prices or project delays expose the difference between permanent spending commitments and volatile resource income. Under a diversification-breakthrough scenario, energy, infrastructure, skills, logistics and regional market access combine to create a second growth engine before the petroleum cycle matures.

No single 2030 forecast is treated as inevitable. The paper uses ranges and conditional scenarios because production schedules, oil prices, project execution, migration, technology, climate events and global demand remain uncertain. Where this report uses institutional projections, the source is identified. Where it uses original calculations, assumptions are shown.

2 Research Questions

This monograph addresses twelve core questions.

1. What economic structure is plausible for Guyana by 2030 under current oil development and non-oil growth trajectories?
2. How much of recent non-oil growth reflects durable productive capacity rather than oil-linked demand and construction?
3. What indicators should replace headline GDP as the principal test of national economic success?
4. What level of public investment is consistent with Guyana's absorptive capacity?
5. How should petroleum revenue, borrowing and NRF accumulation interact across the economic cycle?
6. Which sectors possess credible paths toward internationally competitive non-oil exports by 2030?
7. How large are labour, housing, energy, logistics and institutional constraints relative to the scale of planned investment?
8. What forms of Dutch disease risk are relevant in Guyana, and which observable indicators would reveal them?
9. How should local content evolve from procurement compliance toward productivity, capability and export competitiveness?
10. How should climate resilience and natural capital enter the 2030 economic balance sheet?
11. What compound shocks pose the greatest risk to fiscal stability and household living standards?
12. What empirical research programme would allow universities and policy institutions to test whether the resource transformation is succeeding?
13. How should population growth and migration alter infrastructure and public-service planning?
14. How should regional economic policy differ across Guyana's ten administrative regions?
15. How can the financial system allocate more capital toward productive non-oil investment without increasing systemic risk?
16. What fiscal anchors would remain credible under a prolonged oil-price decline?

17. How should carbon markets, forests and climate resilience enter the national balance sheet?
18. What post-2030 transition plan would prevent a petroleum plateau from becoming a fiscal cliff?

3 Methodology and Evidence Standard

The study uses a mixed analytical method. The first layer is descriptive macroeconomic evidence from the Ministry of Finance, Bank of Guyana, Bureau of Statistics, IMF, World Bank, IDB, EITI and petroleum-sector disclosures. The second layer is comparative economic theory drawn from research on Dutch disease, resource revenue management, sovereign wealth funds, structural transformation and comprehensive wealth. The third layer consists of transparent author scenarios rather than point forecasts.

Source priority follows a hierarchy. Official Guyanese statistical and fiscal publications are used for observed domestic data. Multilateral institutions are used for external validation, medium-term projections and comparative frameworks. Corporate petroleum disclosures are used for operator-specific development schedules and stated capacity expectations. Peer-reviewed literature is used for theoretical interpretation. Advocacy or commentary sources are used only where the analysis concerns the existence of a debate, not as the sole basis for quantitative claims. The IMF Staff Concluding Statement of the July 2026 Article IV mission is treated as a preliminary staff assessment. It does not represent a final Executive Board conclusion, and references to it in this paper are labelled as IMF staff or mission assessments rather than Board findings. [40]

The research cut-off is 19 September 2026. The most current official domestic source used extensively is the Ministry of Finance Mid-Year Report 2026, published in September 2026 and covering January through June. It estimates first-half 2026 real GDP growth at 33.3 percent and first-half non-oil growth at 10.1 percent. It also revises the full-year 2026 growth projection to 20.8 percent overall and 10.2 percent for non-oil real GDP. [1][36]

Important measurement limitations remain. Guyana's economic structure is changing faster than many statistical systems were designed to capture. IMF staff has highlighted the need to update national accounts, price, external-sector and household statistics. The World Bank also notes data gaps that limit current assessment of poverty reduction. [40][7]

3.1 Evidence and Attribution Protocol

This edition applies a source hierarchy. Official statistical publications and audited or statutory reports are used for observed administrative and macroeconomic data. Multilateral institutions are used for external assessments, comparative frameworks and independently produced projections. Company sources are used only for operator-reported production, capacity, project schedules and corporate planning assumptions. Government press releases are treated as primary evidence of official estimates, policy positions and implementation schedules, not as independent proof of policy effectiveness. Author calculations are identified explicitly and are reproducible from the cited inputs.

Forecasts are never merged across vintages. A later forecast does not retroactively make an earlier forecast erroneous. Where institutions publish different values for the same historical year, the report labels the source and vintage rather than silently selecting a single number. For example, the IMF's 2025 Article IV staff report records 2024 real GDP growth at 43.6 percent and non-oil growth at 13.1 percent, while the World Bank's current country overview reports 43.4 percent for total 2024 growth. The difference is treated as a source-vintage issue, not as evidence of an arithmetic inconsistency. [3][8]

For this reason, the report distinguishes five classes of evidence:

Class	Meaning	Treatment
Observed	Published historical outcome	Reported directly with source
Official estimate	Preliminary or mid-year official estimate	Labelled as estimate
Institutional projection	IMF, World Bank, government or operator forward estimate	Source and horizon identified
Author scenario	Conditional calculation developed in this paper	Assumptions shown
Research proposition	Testable hypothesis	No claim of observed causality

4 Evidence Reconciliation and Scrutiny Register

A fast-changing economy creates a second research risk beyond ordinary forecast error: **vintage error**. Two figures can both originate from credible institutions and still describe different information sets. This edition therefore records revisions rather than averaging them away.

Variable	Evidence available at the research cut-off	Scrutiny interpretation
First-half 2026 real GDP	Ministry of Finance estimate: 33.3%	Preliminary official estimate for January-June 2026, not a final annual observation. [36]
First-half 2026 non-oil real GDP	Ministry of Finance estimate: 10.1%	Distinct from the 10.2% revised full-year non-oil projection. [36]
Full-year 2026 real GDP	Government revised projection: 20.8%; IMF country page: 16.2%	Different forecast vintages. The later domestic Mid-Year revision should not be averaged with the earlier IMF number. [2][36]
Full-year 2026 inflation	Government Mid-Year projection: 4.3%; IMF country page: 4.1%	Close estimates from different vintages and frameworks. [2][36]
Population	Bureau of Statistics: 878,674 on Census night in 2022 and estimated 956,044 at end-2024; IMF country page: 1.024 million	Different reference dates and estimation frameworks. Population denominators must be source-labelled in per-capita work. [2][9]
End-2025 unemployment	6.2%	Household-survey labour-market estimate. Distribution matters: youth and female unemployment remain higher than the national rate. [11]
2030 petroleum scale	ExxonMobil: gross production around 1.3 million barrels per day and installed capacity around 1.7 million barrels per day	Operator planning assumptions, not guaranteed output and not a government-revenue forecast. [12][39]

Variable	Evidence available at the research cut-off	Scrutiny interpretation
2026 NRF closing balance	US\$7.588 billion in the revised official projection used in this study	Forecast stock at year-end, not a realised balance at the research cut-off. [1]
Poverty reduction	No sufficiently current household evidence for a precise 2026 trend	The World Bank states that data gaps limit assessment. Strong GDP growth must not be translated mechanically into a poverty estimate. [7]

4.1 Source-Vintage Rules

Five rules govern the quantitative interpretation in this edition.

1. An observed outcome takes precedence over an earlier projection for the same period, while the earlier projection is retained where forecast accuracy itself matters.
2. Preliminary estimates remain labelled as estimates until the responsible statistical authority publishes a final or revised series.
3. Forecasts from different institutions or dates are not averaged unless a formal ensemble method is stated and justified.
4. Petroleum project schedules and capacity numbers from operators are treated as corporate expectations. They are not recast as guaranteed national production.
5. Author scenarios remain conditional experiments. They do not become forecasts through repetition or graphical presentation.

This treatment is important for scrutiny. A 2026 forecast of 16.2 percent and a later revision to 20.8 percent do not, by themselves, demonstrate that one institution is analytically superior. They represent information sets produced at different dates. The same principle applies to inflation, population estimates, petroleum schedules and fiscal flows.

4.2 Headline Evidence Status

The paper classifies headline claims as one of four states: **published observed outcome**, **official preliminary estimate**, **institutional or operator projection**, or **author-derived calculation**. Derived calculations are recalculated from source values and shown with their formulas where the result materially affects the argument.

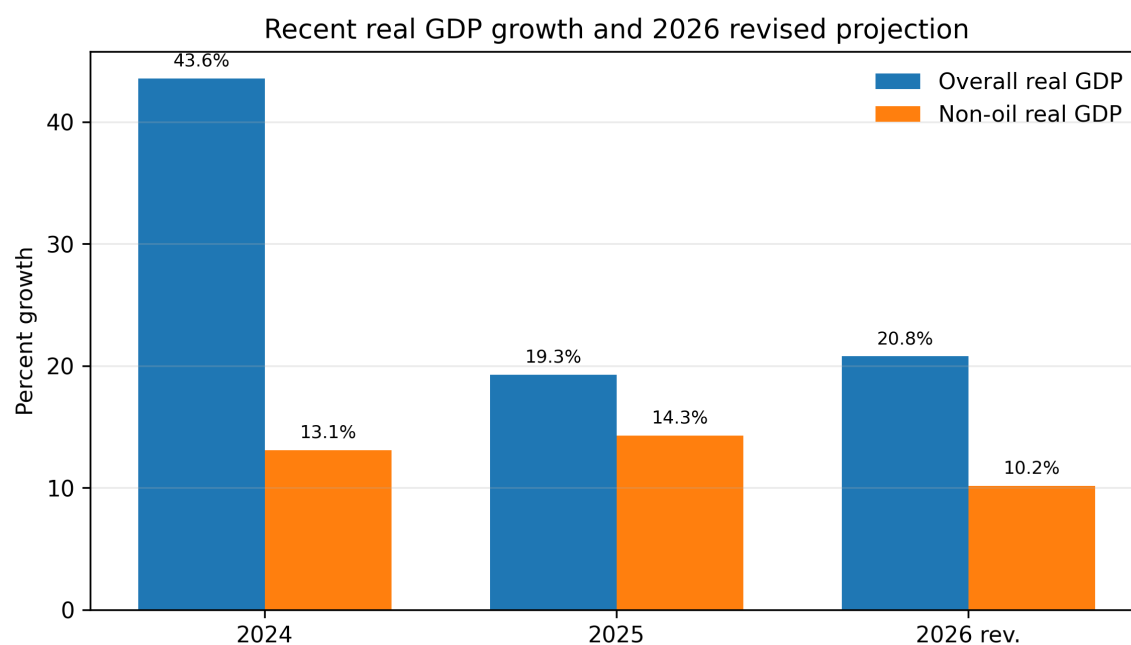
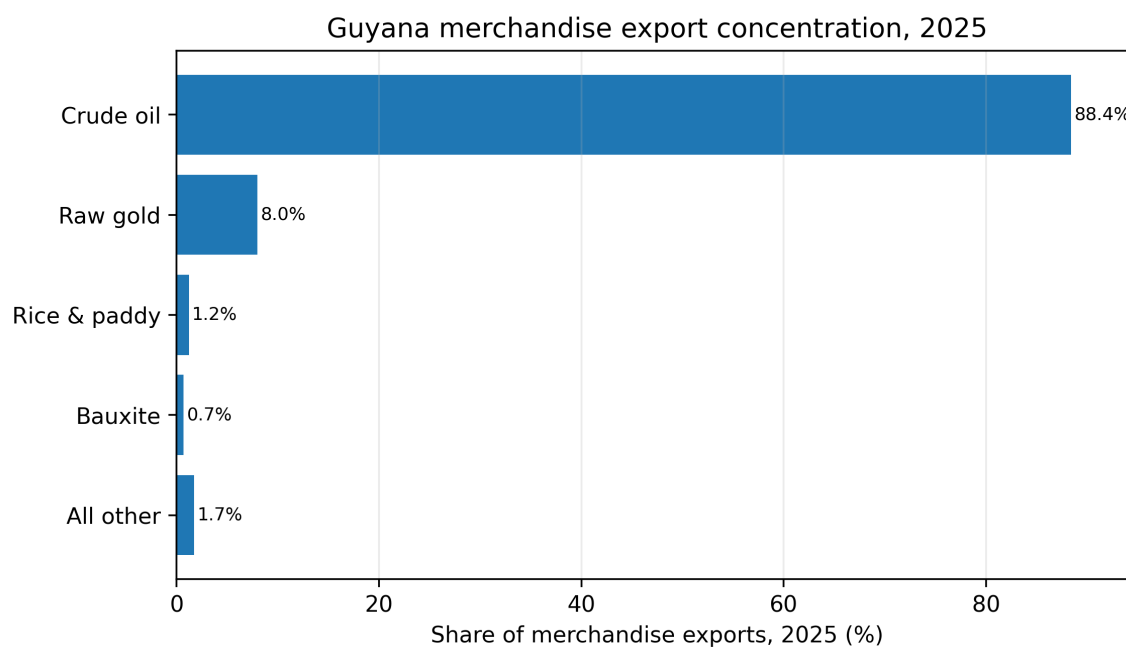
5 The 2026 Starting Point

The 2030 discussion must begin with the scale of change already visible.

The IMF 2025 Article IV staff report recorded real GDP growth of 43.6 percent in 2024 and non-oil growth of 13.1 percent. The Government's Budget Speech 2026 estimates 2025 real GDP growth at 19.3 percent and non-oil growth at 14.3 percent. The 2026 Mid-Year Report estimates first-half 2026 growth at 33.3 percent overall and 10.1 percent outside oil, then revises the full-year projection to 20.8 percent overall and 10.2 percent for the non-oil economy. [1][3][4][36]

At the same time, the composition of exports remains concentrated.

Bureau of Statistics data show 2025 merchandise exports of US\$20.14 billion. Crude oil contributed US\$17.80 billion, or 88.4 percent. Raw gold contributed 8.0 percent. Rice and paddy, bauxite and all remaining goods together formed a small share of the total. [10]

**Figure 1:** Recent real growth**Figure 2:** Export concentration

This dual picture matters. Guyana has both strong non-oil growth and high export concentration. The combination is consistent with an economy in rapid transition where domestic activity is broadening faster than its external earning structure.

The concentration intensified further in the first half of 2026. The Mid-Year Report records total export earnings of US\$16.1997 billion and crude-oil export earnings of US\$15.0537 billion. Dividing crude-oil exports by total merchandise exports gives a period-specific oil share of approximately 92.9 percent. Non-oil exports nevertheless rose 24.6 percent to US\$1.146 billion. Both facts matter: non-oil exports grew, yet oil expanded faster and raised the concentration ratio. [36]

Sectoral growth was also uneven. Construction expanded an estimated 24.7 percent in the first half of 2026, services 7.2 percent and manufacturing 3.0 percent, while agriculture, forestry and fishing contracted 0.5 percent after heavy rainfall affected crop activity. The headline non-oil aggregate therefore conceals materially different sector dynamics. [36]

The external accounts require similar care. A US\$3.3403 billion current-account surplus coexisted with an overall balance-of-payments deficit of US\$293.9 million in the first half of 2026, while official foreign reserves stood at US\$1.0623 billion at end-June. The pattern reflects large capital and financial-account movements in an investment-intensive petroleum economy. A current-account surplus alone is therefore not a complete measure of external liquidity or macroeconomic pressure. [36]

The fiscal scale has expanded in parallel. The revised Public Sector Investment Programme for 2026 reached G\$829.7 billion, up from an original G\$779.6 billion, with additional investment directed toward power generation and distribution, housing and public infrastructure. [1]

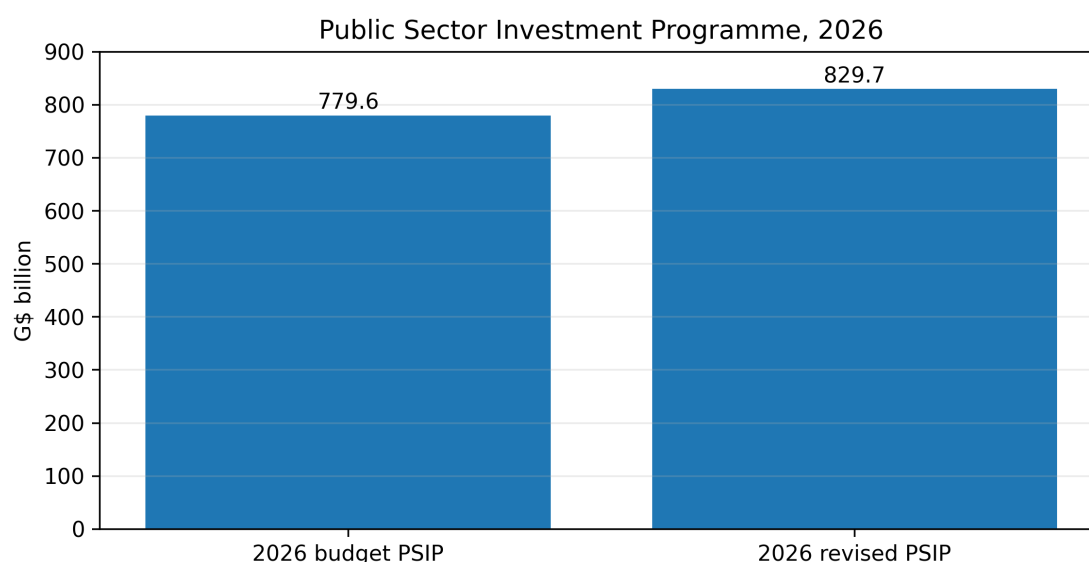


Figure 3: Public investment

The Natural Resource Fund is also growing quickly. The revised 2026 official projection places petroleum revenue deposits at US\$6.498 billion, total inflows at US\$6.712 billion, withdrawals at US\$2.374 billion and a closing balance of US\$7.588 billion. [1]

This combination of rapid output growth, rising fiscal capacity, high public investment, large FDI and a growing sovereign fund gives Guyana unusually large policy space. The same combination increases the cost of poor sequencing. A road, school, hospital, transmission line or drainage project completed late or built without maintenance planning does not merely waste expenditure. It also absorbs scarce construction labour, imported inputs, management attention and fiscal room that might have produced higher returns elsewhere.

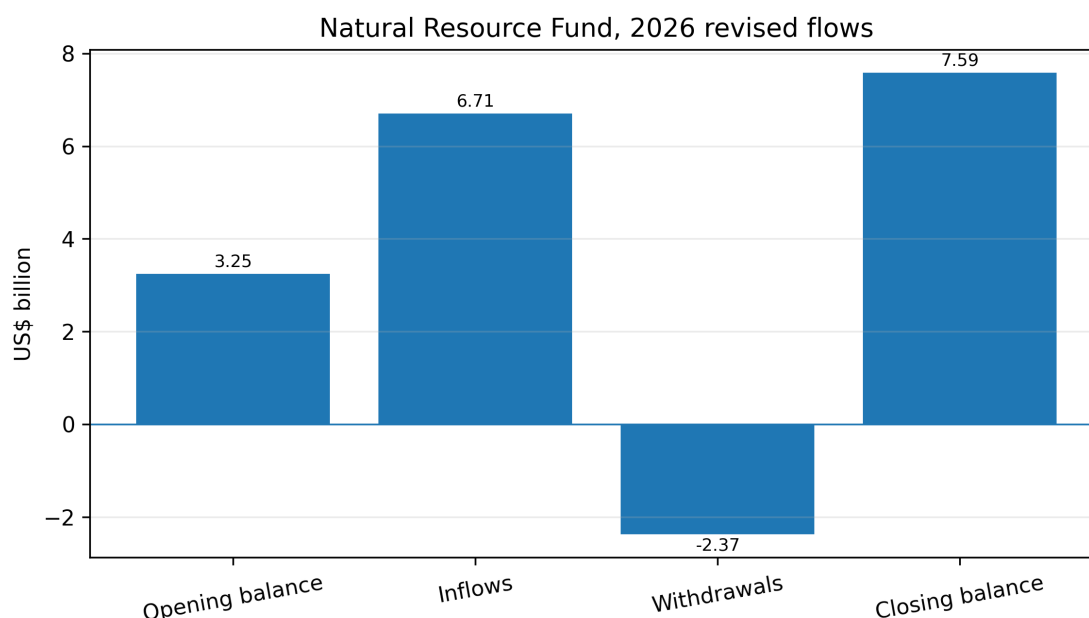


Figure 4: Natural Resource Fund

6 The Core Economic Problem: Converting a Depleting Asset

Oil production transforms the flow of national income, but extraction also reduces a finite natural asset. A long-run development framework therefore needs a balance-sheet perspective.

The World Bank's comprehensive wealth approach treats national wealth as a portfolio composed of produced capital, human capital, renewable and nonrenewable natural capital, and net foreign assets. Sustainable development requires the productive base available to future generations to rise rather than fall as nonrenewable resources are extracted. [19]

For Guyana, this principle leads to a practical rule: petroleum income should be judged by what replaces the petroleum asset. Replacement does not require one-for-one financial saving. A portion of the resource may be converted into transport infrastructure, reliable energy, education, health, productive firms, technology, stronger institutions, resilient drainage, housing systems and foreign financial assets. The quality of conversion matters more than the label attached to spending.

The optimal split between external saving and domestic investment is not a fixed percentage. Van der Ploeg and Venables show why capital-scarce developing economies can rationally direct part of a resource windfall toward domestic public and private capital rather than saving the entire windfall abroad. Berg, Portillo, Yang and Zanna add a crucial qualification: investment efficiency, absorptive-capacity constraints, Dutch-disease effects, maintenance financing and revenue volatility determine how large an investment scale-up an economy can productively absorb. These findings support a balanced architecture of productive domestic investment, financial buffers and explicit capacity constraints rather than either extreme of spending all windfall income or saving all of it abroad. [37][38]

The classical Dutch disease model explains one risk. A booming export sector raises income and demand, draws labour and capital toward the booming and non-tradable sectors, and creates pressure on the real exchange rate. Tradable sectors outside the boom can lose competitiveness. Corden and Neary formalised this mechanism in 1982. Later literature showed that institutions, fiscal policy, volatility, financial development and public investment quality influence whether resource wealth becomes a curse or a source of durable prosperity. [20][21]

Guyana's circumstances differ from textbook cases in several respects. The population is small, large infrastructure gaps remain, petroleum production is offshore and capital intensive, migration adjusts labour supply, and the country has significant untapped agricultural, mining, tourism and ecosystem assets. These factors create room for rapid productivity gains. They do not remove macroeconomic constraints.

The relevant question is therefore not whether Guyana has Dutch disease. A binary diagnosis is too crude. The relevant question is whether symptoms associated with resource-driven competitiveness pressure are emerging faster than productivity improvements.

Observable indicators include:

- wage growth relative to labour productivity;
- construction-cost inflation relative to regional comparators;
- real exchange rate appreciation;
- imported share of consumption and capital goods;
- vacancy duration in skilled occupations;
- land and housing prices relative to incomes;
- non-oil export volumes and unit values;
- profitability of agriculture and manufacturing outside protected or subsidised segments;
- service-sector export growth;
- share of government recurrent commitments funded indirectly by volatile petroleum income.

The IMF's July 2026 mission statement reported no clear signs of overheating or resource-driven competitiveness pressure based on available indicators, while also pointing to strong wage growth and wage-based real exchange rate measures as areas requiring close monitoring. [40]

7 The Guyana National Wealth Conversion Model

This paper proposes seven capital stocks for evaluating the transformation to 2030.

7.1 Financial Capital

Financial capital includes NRF assets, foreign reserves, fiscal buffers, pension assets, domestic savings, bank capital and the sovereign balance sheet. The objective is not maximum saving. The objective is enough financial resilience to absorb oil-price volatility, finance future obligations and avoid abrupt fiscal adjustment.

7.2 Physical Capital

Physical capital includes roads, bridges, ports, airports, power generation, transmission, water systems, drainage, housing infrastructure, digital networks, hospitals, schools and industrial facilities. Quality, utilisation, maintenance and network effects matter more than construction value alone.

7.3 Human Capital

Human capital includes health, education, technical skills, management capability, research capacity and workforce participation. In a small population, human capital is also a binding scale variable. A billion dollars of physical investment cannot produce expected returns without engineers, teachers, nurses, technicians, operators, regulators, accountants and managers.

7.4 Productive and Enterprise Capital

This category covers domestic firms, export capability, standards, technology adoption, supply-chain depth, managerial capability, access to finance and firm-level productivity. Local content becomes economically durable when Guyanese firms compete beyond protected procurement categories.

7.5 Institutional Capital

Institutional capital includes public investment management, procurement, audit, regulation, statistics, tax administration, contract management, courts, competition policy, local government and the ability of public bodies to execute complex programmes. Fast-growing budgets increase the value of institutional quality.

7.6 Natural Capital

Natural capital includes forests, biodiversity, freshwater, coastal protection, fisheries, agricultural land and mineral resources. Guyana's development strategy carries an unusual dual balance sheet: petroleum wealth expands financial resources while forests and ecosystems hold economic, climate and biodiversity value.

7.7 Social and Spatial Capital

Social-spatial capital covers housing availability, urban planning, regional connectivity, safety, community trust, inclusion, access to services and the geographic distribution of opportunity. A high-income economy with severe congestion, housing stress or regional exclusion represents incomplete transformation.

The model evaluates conversion using a simple conceptual relation:

$$\text{National Wealth Conversion} = f(F, P, H, E, I, N, S)$$

where F is financial capital, P physical capital, H human capital, E enterprise capital, I institutional capital, N natural capital and S social-spatial capital.

The framework is deliberately multidimensional. A rise in one stock does not fully compensate for deterioration in another. For example, a larger NRF cannot replace lost coastal resilience, and a new highway cannot replace weak education outcomes.

8 Petroleum Through 2030

Petroleum will remain the dominant macroeconomic force through 2030 under currently announced development plans. ExxonMobil Guyana reported production above 900,000 barrels per day in late 2025 after Yellowtail ramp-up. Uaru is scheduled for 2026, Whiptail for 2027 and Hammerhead for 2029. The operator has stated an expectation of eight developments with capacity around 1.7 million barrels per day and gross production around 1.3 million barrels per day by 2030, subject to project approvals, reservoir performance and execution. [12][39]

The schedule should not be confused with realised output. The Uaru FPSO, *Errea Wittu*, arrived in Guyana in August 2026. Government reporting at the time described first oil as expected in the fourth quarter of 2026 and stated that Uaru startup would take production above one million barrels per day. This is an implementation milestone and an official schedule statement, not evidence that one million barrels per day had already been achieved at the research cut-off. [44]

A central analytical distinction is required between installed capacity, annual average production and fiscal revenue. Capacity is not production. Production is not export value. Export value is not government revenue. Government revenue depends on production-sharing terms, cost recovery, royalty, timing, prices and other contractual factors.

The following table therefore estimates only gross crude sales value under transparent author scenarios. It does not estimate government receipts.

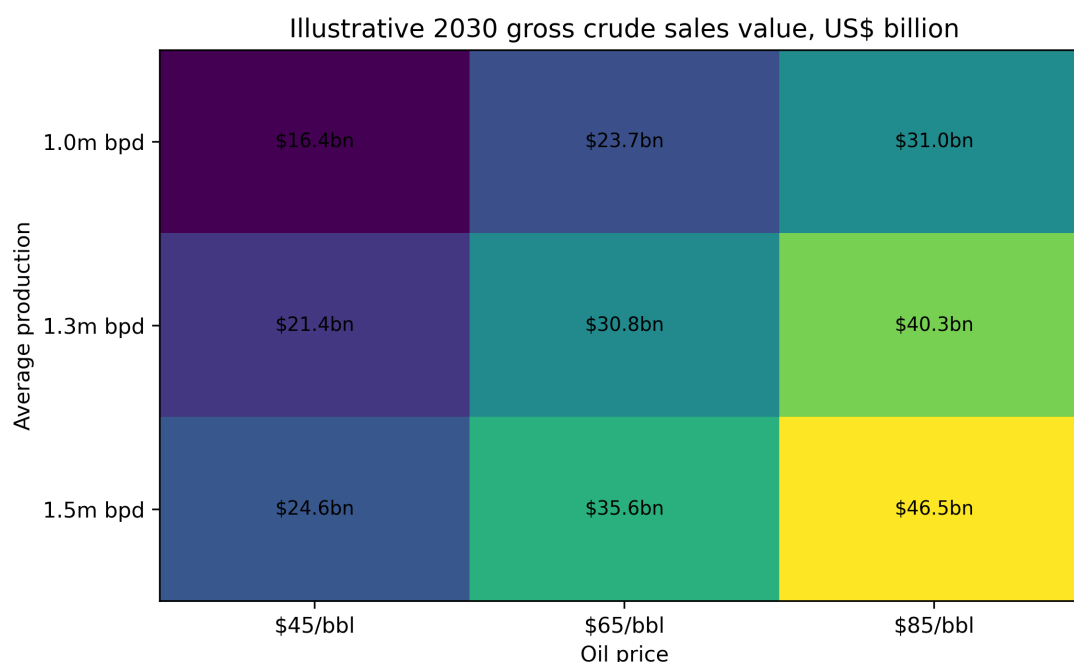


Figure 5: Oil sensitivity

Average 2030 production	US\$45/bbl	US\$65/bbl	US\$85/bbl
1.0 million bpd	US\$16.4bn	US\$23.7bn	US\$31.0bn
1.3 million bpd	US\$21.4bn	US\$30.8bn	US\$40.3bn
1.5 million bpd	US\$24.6bn	US\$35.6bn	US\$46.5bn

These values show why nominal GDP and export earnings remain sensitive to petroleum assumptions. They also explain why fiscal planning needs a structural anchor separated from current oil prices.

The 2025 IMF baseline projected 2030 crude production of 438 million barrels for the year, equivalent to roughly 1.2 million barrels per day on average, nominal GDP of G\$8.5865 trillion, and GDP per capita of US\$50,788.8 under its assumptions. The same table notes that oil fields under development beyond Whiptail were excluded from the IMF staff projection, which is why real oil GDP growth reaches zero in the 2030 column. [3]

The implication is important. A single headline 2030 GDP number is less useful than a range of structural indicators. New projects may raise petroleum GDP sharply without changing the productivity of the rest of the economy. Conversely, a lower oil-price year can reduce nominal output and fiscal inflows even while roads, power, skills and firms continue to improve.

9 The Natural Resource Fund and the Fiscal State

Guyana's Natural Resource Fund has three economic roles: intergenerational saving, macro-fiscal buffering and financing of national development through legislated withdrawals. The quality of the overall fiscal framework depends on how NRF rules interact with borrowing, recurrent spending and public investment. Resource-governance research treats fiscal rules, fund governance and transparency as separate but connected safeguards. [24][25]

The 2026 Mid-Year Report revised expected NRF inflows sharply upward following high petroleum receipts and price conditions. Official projections show a closing balance of US\$7.588 billion at end-2026 after planned withdrawals of US\$2.374 billion. [1]

The IMF's 2025 debt sustainability analysis assessed Guyana at low risk of overall and external debt distress. Under that baseline, public debt rises through the investment phase before stabilising at relatively low levels, while NRF assets accumulate. The July 2026 IMF mission again described debt distress risk as low and encouraged the development of medium- and long-term fiscal guideposts centred on the non-oil primary balance. [40][3]

Guyana's earlier petroleum-revenue policy work also framed fiscal-rule and sovereign-wealth-fund design as linked questions. [29]

The main policy challenge is not debt in isolation. A resource-rich state may hold financial assets and debt simultaneously for sound reasons. The key questions are whether borrowed projects earn social or economic returns above financing costs, whether debt maturities remain manageable, and whether spending obligations survive a resource-price downturn.

This paper proposes five fiscal tests for 2030:

1. **Structural balance test.** What would the fiscal position look like at a conservative long-run oil price?
2. **Recurrent commitment test.** What share of permanent wages, transfers and subsidies relies on petroleum-linked financing?
3. **Asset replacement test.** How much petroleum wealth has been converted into financial, physical, human and natural capital?
4. **Project productivity test.** Do completed public projects produce measurable reductions in travel time, energy cost, flood loss, logistics cost or service waiting time?
5. **Shock liquidity test.** For how long would essential expenditure continue after a major oil-price or production shock without destabilising tax, debt or monetary conditions?

10 Absorptive Capacity: The Constraint Behind the Budget

Large resource revenues do not remove scarcity. They change which inputs are scarce.

For Guyana, money is increasingly less constrained than skilled labour, project management, contractor capacity, imported equipment, construction materials, logistics, regulatory review, utility connections, maintenance systems and institutional bandwidth.

The 2026 Mid-Year Report revised the Public Sector Investment Programme to G\$829.7 billion. Public capital spending therefore operates at a scale capable of reshaping national infrastructure, while also placing pressure on the domestic construction and engineering ecosystem. [1]

An Absorptive Capacity Stress Index may be constructed around six variables:

$$ACSI = w_1L + w_2C + w_3M + w_4P + w_5U + w_6I$$

where L represents skilled-labour scarcity, C construction-cost pressure, M imported-input dependence, P project delay and procurement stress, U utility bottlenecks, and I institutional workload.

Weights should be pre-specified, estimated where data permit, and sensitivity-tested across plausible alternatives rather than selected to fit a preferred conclusion.

A high ACSI does not imply spending should stop. It implies sequencing matters. Projects that expand capacity, such as electricity, ports, technical education, drainage, digital public systems and transport corridors, often deserve priority because they raise the economy's ability to absorb later investment.

This is one of the most important differences between a spending plan and a development strategy. A spending plan allocates money. A development strategy expands the economy's capacity to convert money into productive assets.

11 Non-Oil Growth: A More Demanding Definition of Diversification

The IMF expects Guyana's non-oil economy to grow by about 7 percent on average over the next five years in its July 2026 mission assessment. [40] If sustained from a 2025 index of 100, a 7 percent annual path reaches roughly 140 by 2030. A 4 percent path reaches about 122, while a 10 percent path reaches about 161.

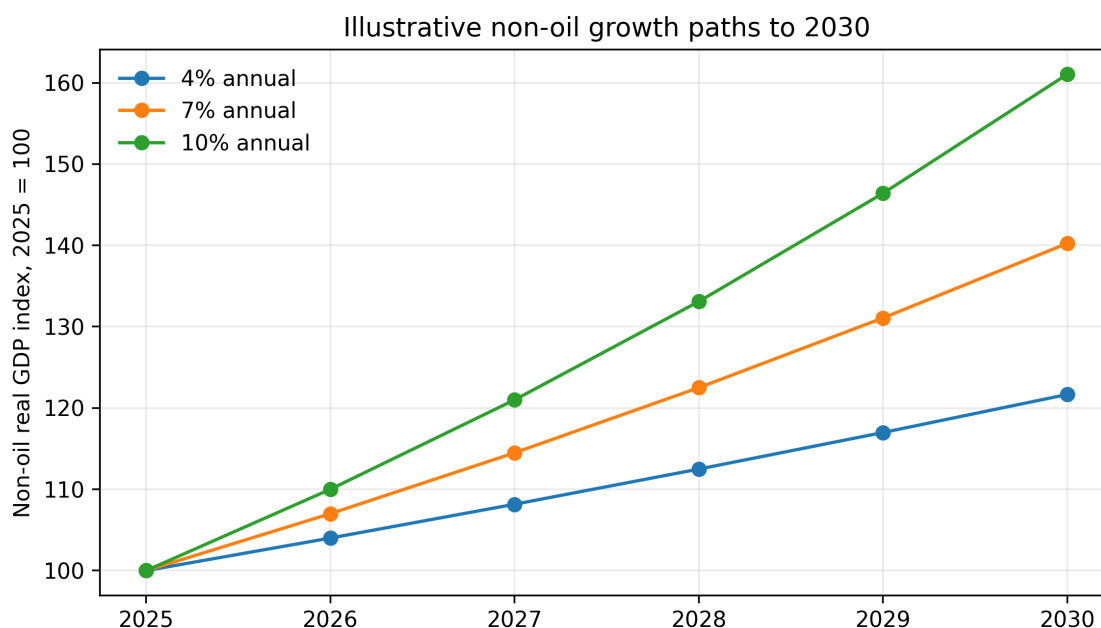


Figure 6: Non-oil scenarios

These are author scenarios, not forecasts.

The more difficult question is composition. Non-oil GDP includes sectors whose demand is partly created by oil income and public spending. Construction is the clearest example. Retail, professional services, transport, real estate and finance also receive spillovers. This activity is economically real and valuable, but it should not be confused automatically with independent diversification.

The strongest diversification metric is external competitiveness. By 2030, Guyana should therefore track:

- non-oil merchandise exports as a share of total exports;
- service exports excluding oil-sector support;
- number of firms exporting for three consecutive years;

- export destinations per major non-oil product;
- domestic value added in oil-sector procurement;
- manufacturing value added per worker;
- agricultural output per hectare;
- logistics cost as a share of export value;
- energy cost per unit of industrial output;
- private research, training and technology spending;
- share of domestic firms meeting international standards and certification.

A country may record high non-oil GDP growth while remaining externally concentrated. The 2025 export data demonstrate why this distinction matters. [10]

12 Sector Architecture to 2030

Guyana's 2030 economy will not be diversified simply because many sectors are growing. A meaningful structural transformation requires sectors with distinct demand bases, export markets, productivity drivers and capital structures. The following assessment separates scale from durability.

12.1 Agriculture and Food Systems

Agriculture remains strategically important because it links rural incomes, food security, export diversification, climate resilience and regional trade. The official Guyana Agri-Investment Prospectus sets 2030 ambitions including agricultural output growth above 30 percent, rice production above one million metric tonnes, higher rice yields, expanded agro-processing, stronger agricultural exports, more food hubs and higher technology adoption. [15]

The Ministry of Agriculture reported in September 2026 that domestic production across 15 CARI-COM priority commodities increased from 1.41 million tonnes in 2020 to 1.81 million tonnes in 2025. Corn, coconut, livestock and soybean expansion form part of a broader regional food-security strategy. [16]

The strategic opportunity is larger than primary production. Guyana possesses land, water and geographic proximity to a food-importing Caribbean market. The stronger 2030 model combines production with cold storage, grading, certification, packaging, processing, maritime logistics, insurance and contract farming. The sector's economic value rises when more stages of the value chain remain inside Guyana.

Constraints are equally clear. Drainage and irrigation remain essential. Climate volatility threatens yields. Farm labour competes with construction and services. Small producers face financing and technology barriers. Regional trade still encounters transport costs, standards differences and irregular shipping. Agro-processing therefore depends on logistics and energy policy as much as agricultural policy.

A useful 2030 agriculture dashboard should track yield per hectare, export value per hectare, post-harvest loss, electricity cost, cold-chain capacity, shipping frequency, agro-processing value added, crop insurance penetration and the share of production sold under forward contracts.

12.2 Mining Beyond Petroleum

Gold, bauxite, manganese and other minerals remain important sources of foreign exchange and regional employment. Gold represented 8.0 percent of merchandise exports in 2025, far above any non-oil export category. [10]

The challenge is to prevent petroleum scale from reducing policy attention to mining productivity, formalisation, environmental management and downstream opportunity. A stronger 2030 mining

economy would feature improved geological information, higher recovery rates, more mechanisation, transparent licensing, stronger environmental compliance, traceability, mine rehabilitation and selected downstream processing where economics support it.

The gold sector also intersects with governance, foreign exchange, illicit trade risk and environmental management. The IMF's 2026 mission highlighted ongoing work to strengthen oversight and transparency in gold mining and the planned extractive-industry risk assessment. [40] EITI reporting provides an institutional base for greater data transparency across extractive sectors. [22]

12.3 Manufacturing

Manufacturing is one of the hardest tests of diversification because the sector competes directly on energy, logistics, labour productivity, financing, standards and market access. The 2026 Mid-Year Report estimates manufacturing growth at 3 percent in the first half and projects 10.7 percent for the full year, with activity in fabricated metal products, apparel, chemicals, plastics, sugar and rice manufacturing. [1]

A credible manufacturing strategy for 2030 should avoid equating every factory with competitiveness. The strongest candidates are industries where Guyana has a cost or market advantage, including food processing, construction materials, selected wood products, packaging, metal fabrication linked to domestic and regional infrastructure, and services-intensive light manufacturing.

Three conditions matter most. First, electricity cost and reliability must improve materially. Second, export logistics must become predictable. Third, firms need standards, quality systems, management capability and finance. Without these conditions, manufacturing growth risks depending on domestic construction demand and import substitution behind high transport costs rather than export competitiveness.

12.4 Construction and Real Estate

Construction is one of the largest non-oil growth engines. Public infrastructure, private commercial investment, housing and oil-linked facilities have created sustained demand. The sector's scale brings both productivity gains and macroeconomic risk.

Construction raises future capacity when projects reduce transport time, flood risk, energy cost or service constraints. Construction becomes less productive when activity is fragmented, poorly sequenced, delayed, over-designed or disconnected from maintenance capacity.

Real estate requires separate monitoring. Rapid income growth, migration, public housing and commercial investment may raise land and property values quickly. The IMF's 2026 mission specifically recommended closer monitoring of housing-market dynamics and development of a real-estate price index. [40]

By 2030, Guyana should possess regular data on residential prices, commercial rents, vacancy rates, construction costs, mortgage debt, land transactions and regional housing supply. Without these metrics, policymakers and banks operate with limited visibility over one of the economy's fastest-changing asset markets.

12.5 Tourism

Tourism offers a service-export channel with different risk exposure from petroleum. Arrival statistics provide an important high-frequency demand indicator and should be interpreted beside length of stay, spending and capacity measures. [27] Guyana recorded 453,489 visitor arrivals in 2025, a 22 percent increase over 2024, according to official tourism reporting. Government reporting on 9 September 2026 recorded more than 271,000 arrivals during the first seven months and a target above 500,000 arrivals for the full year. [17][46]

The strategic advantage lies less in mass tourism than in differentiated products: nature, biodiversity, adventure, culture, diaspora travel, sport, business travel and high-value eco-tourism. Guyana's forest asset creates an opportunity to link tourism with conservation income and regional development.

The main constraint is carrying capacity. Hotel rooms, airlift, internal transport, trained guides, service standards, destination management, waste systems, safety and environmental safeguards need to scale with arrivals. Tourism value should therefore be tracked using visitor spend, nights, regional dispersal, local procurement and environmental intensity rather than arrivals alone.

12.6 Digital Services, BPO and Professional Exports

Digital services have strong relevance for a small economy because they reduce the market-size constraint. Business-process outsourcing, software, remote professional services, fintech support, digital public services and data-enabled sectors offer export potential without the freight costs faced by goods.

The opportunity depends on reliable electricity, broadband, cybersecurity, English-language skills, data protection, management quality and a workforce large enough to serve growing demand. Digital government also matters. Efficient identity, licensing, tax, customs, land and business systems reduce transaction costs across the whole economy.

A 2030 digital-economy scorecard should include service exports, BPO employment, software and ICT firm revenue, broadband quality, cybersecurity maturity, digital payment adoption, average time to register or license a business, and the share of government services completed end-to-end online.

12.7 Financial Services

Guyana's banking system is entering a new scale. Private-sector credit increased strongly through 2025, while household mortgages and business lending expanded. The IMF's 2026 mission described banks as well capitalised and liquid while warning that rapid credit growth, housing exposure and concentration risks deserve close monitoring. [40][6]

The 2030 financial-sector opportunity is broader than loan growth. Guyana needs deeper capital markets, long-term project finance, insurance, pension assets, venture and growth capital, trade finance and financial products linked to agriculture, housing and small enterprise. An economy financing large infrastructure primarily through banks and sovereign borrowing leaves gaps in risk allocation.

Financial deepening should therefore be measured by maturity and diversity, not only credit volume. Key indicators include private credit relative to non-oil GDP, non-performing loans, concentration by sector and borrower, mortgage loan-to-value ratios, pension assets, insurance penetration, local bond issuance, equity-market activity and SME financing.

13 Energy as an Economy-Wide Productivity Input

Energy policy is economic policy because electricity affects nearly every non-oil sector. High-cost or unreliable power raises the cost of manufacturing, cold storage, hotels, digital services, hospitals, schools and household welfare.

The Gas-to-Energy project is designed to deliver 300 megawatts in Phase One. Government reporting on 8 September 2026 stated that the first turbine was being prepared for initial firing and testing in December and was expected, once integrated, to add approximately 57 megawatts to the grid, with the remaining units following. [18]

The economic value of cheaper electricity will depend on transmission, distribution, reliability and tariff design. Generation capacity alone does not create industrial competitiveness if grid bottlenecks persist. The 2026 Mid-Year Report records expanded investment in generation, transmission and distribution in response to rapidly growing demand. [1]

Guyana also retains a wider energy transition agenda involving solar, hydropower options, storage and grid expansion. By 2030, the central economic metric should be the delivered cost and reliability of electricity to households and productive users.

A useful 2030 energy dashboard should include average outage duration, system losses, reserve margin, industrial tariff, household tariff, fuel import dependence, renewable share, grid investment, connection time for new firms and the number of large projects delayed by power constraints.

14 Infrastructure and the Geography of Growth

Guyana's economic geography has historically concentrated population and economic activity along the coast. The 2022 Census recorded 878,674 residents, with 87.16 percent living in coastal regions. The Bureau of Statistics later estimated population at 956,044 at end-2024 after natural growth and net migration. [9]

Infrastructure therefore has both efficiency and spatial-development roles. New river crossings, highways, ports, airports and regional roads change commuting patterns, land values, market access and investment location. These network effects can be larger than the direct output generated during construction.

The strongest infrastructure tests are outcome based:

- travel time between major economic nodes;
- freight cost per tonne-kilometre;
- port dwell time;
- road fatality rate;
- flood-related hours of business interruption;
- electricity connection time;
- access time to hospitals and schools;
- broadband latency and coverage;
- maintenance expenditure relative to asset stock;
- percentage of capital projects with published post-completion evaluation.

A recurring risk in resource-rich economies is overbuilding before maintenance systems mature. Guyana's 2030 public-investment framework should therefore treat lifecycle cost as part of project approval. A bridge, road or drainage system should enter the public balance sheet with an operating and maintenance plan, not only a construction budget.

15 Labour, Migration and Human Capital

The labour market is one of the most binding constraints on the 2030 growth path. Guyana combines a small population with unusually fast demand for labour in construction, oil services, government, health, education, logistics, hospitality, agriculture, finance and professional services. The Guyana Labour Force Survey provides the principal recurring household-based evidence for employment, unemployment and labour-force participation. [11]

The IMF's July 2026 mission reported unemployment at 6.2 percent at end-2025 and identified labour shortages and skills alignment as reform priorities. [40] Labour scarcity is not automatically a negative sign. It reflects strong demand. The risk appears when wage growth consistently exceeds productivity, when essential public services lose staff, or when projects are delayed by skills

shortages.

The Bureau of Statistics' fourth-quarter 2025 labour-force results provide more detail. The labour force was estimated at 449,183 people, of whom 421,334 were employed, with labour-force participation at 59.2 percent. National unemployment was 6.2 percent, but youth unemployment was 12.6 percent. Female unemployment, at 8.7 percent, remained above male unemployment at 4.5 percent. Employment was spread across wholesale and retail trade, construction, public administration, agriculture and manufacturing, among other sectors. These differences matter because aggregate labour scarcity can coexist with demographic and occupational mismatches. [11]

Migration is therefore part of macroeconomic adjustment. Net inward migration expands labour supply, consumption, housing demand and tax revenue. It also increases demand for schools, health care, water, housing and transport. A 2030 labour strategy must integrate workforce policy with population and urban planning.

The quality of skills matters as much as quantity. Guyana needs layered capability: craft workers, technicians, operators, supervisors, engineers, health professionals, teachers, accountants, data specialists, project managers and senior executives. Training programmes should therefore be linked to occupational demand forecasts and employer outcomes rather than enrolment counts alone.

Human capital should be tracked with measures such as learning outcomes, completion rates, technical certification, graduate employment, health-adjusted life expectancy, labour-force participation, wage productivity, vacancy duration and employer-reported skill gaps.

16 Education and Research Capacity

The transformation of a resource-rich economy requires more than expanding access to education. The education system must become an economic production system for skills, research, problem solving and innovation.

By 2030, Guyana's universities and technical institutions should play a stronger role in applied research on petroleum economics, agriculture, climate adaptation, biodiversity, public health, engineering, data science, construction materials, logistics and public policy. The country presents a rare natural laboratory for studying rapid structural transformation in a small state.

A national research architecture would strengthen evidence quality. Universities, the Bureau of Statistics, Bank of Guyana, ministries and independent researchers should have access to anonymised administrative and household data under strong privacy rules. This would improve evaluation of social transfers, housing, labour-market change, business productivity and regional inequality.

The value of research is practical. Fast-moving policy requires faster learning. A project evaluated three years after completion produces more value than a project whose outcomes are never measured.

17 Health and Social Development

High national income does not guarantee high human development. Health outcomes depend on primary care, hospitals, prevention, workforce quality, pharmaceuticals, sanitation, nutrition and access across regions.

The resource boom provides fiscal room for rapid health-system improvement, yet the same boom raises wage competition for nurses, technicians and administrators. Health investment therefore needs both facilities and workforce planning.

The strongest 2030 social-development framework would track outcomes rather than expenditure alone. This direction also aligns with the IDB country strategy emphasis on human capital, re-

silient infrastructure and institutional capacity. [14] Examples include maternal and infant mortality, avoidable hospital admission, waiting times, chronic-disease control, life expectancy, school learning outcomes, household overcrowding, potable-water reliability and poverty measured with current household data.

The World Bank's 2026 Macro Poverty Outlook notes that progress in poverty reduction is difficult to assess because of data gaps. [7] This is not a minor statistical issue. If the national objective is broad-based prosperity, household surveys, income data and cost-of-living measures become part of core economic infrastructure.

18 Climate Resilience and Natural Capital

Guyana's coastal concentration makes climate resilience a macroeconomic issue. Flooding may damage homes, agriculture, transport networks, public infrastructure and private investment. Sea defences, drainage and resilient construction therefore produce economic returns through avoided losses as well as direct services.

Guyana also holds an unusual natural asset base. Forests cover roughly 80 percent of the country according to the World Bank, while the Low Carbon Development Strategy seeks to combine forest conservation, carbon-market income and economic development. [8]

A 2030 national balance sheet should account for natural capital more explicitly. GDP records timber extraction or construction activity, yet does not fully record changes in ecosystem services, flood protection, biodiversity or forest carbon value. The World Bank's comprehensive wealth framework offers a useful conceptual base. [19]

Natural-capital policy should therefore connect forestry, mining, agriculture, infrastructure and climate planning. The relevant question is not development versus conservation. The economic question is which development path produces the highest long-term value across produced, human and natural assets.

19 The Private Sector and Local Content

Petroleum local-content policy seeks to increase Guyanese participation in employment and procurement. The longer-term economic objective should be broader: build firms capable of competing in other sectors and other countries.

A procurement target is an input measure. A productivity gain is an outcome measure. By 2030, the strongest local-content success story would feature Guyanese companies that entered the oil supply chain, upgraded standards and management systems, accumulated capital, and then sold services across the Caribbean, Suriname, Latin America or other energy markets.

Local content should therefore evolve through four stages:

1. **Participation:** Guyanese labour and firms enter the supply chain.
2. **Capability:** firms meet technical, safety, quality and delivery standards.
3. **Productivity:** firms reduce unit cost, improve technology and deepen management systems.
4. **Exportability:** firms win contracts outside the protected domestic market.

The official Local Content Secretariat provides the administrative framework for certification and petroleum-sector participation. [23] The next analytical step is to publish outcome data on firm survival, productivity, wages, training, export activity and supplier concentration.

20 Trade and the Regional Market

Guyana's domestic market is small relative to the scale of investment now entering the economy. Regional integration therefore matters for diversification. CARICOM provides a nearby market for food, manufactured goods, professional services, construction services, finance and tourism.

Yet regional market access depends on transport, customs, standards, payment systems and commercial relationships. A product competitive at the factory gate may still fail if shipping schedules are irregular or freight costs are high.

Guyana's 2030 trade strategy should therefore treat logistics infrastructure as export policy. Port modernisation, cold storage, customs digitisation, air cargo, ferry networks and reliable regional shipping have direct effects on farm and factory competitiveness.

The 2025 export structure also shows why services deserve greater focus. Merchandise diversification from an oil-dominated base takes time. Digital services, tourism, professional services and regional corporate functions offer additional channels for foreign exchange.

21 Monetary Conditions, Inflation and the Exchange Rate

Resource booms create complex monetary conditions. Large foreign-currency inflows enter alongside heavy import demand, private investment, public spending and rapid credit growth. The exchange rate may appear stable while underlying demand pressures rise.

Bank of Guyana's 2025 Annual Report projected continued exchange-rate stability for 2026 and strong monetary expansion alongside private-sector credit growth. [6] The IMF's 2026 mission described the existing stabilised exchange-rate regime as appropriate at present, while noting that greater flexibility might deserve consideration over the medium term as policy frameworks and diversification mature. [40]

The central 2030 issue is competitiveness. A stable nominal exchange rate does not guarantee a stable real exchange rate. If domestic wages and prices rise faster than trading partners without matching productivity gains, non-oil exporters become less competitive even with an unchanged nominal rate.

Inflation analysis should therefore separate imported inflation, demand pressure, construction bottlenecks, housing costs, wage pressure and administered-price policy. Household experience also differs from headline CPI when food, rent, transport and utilities move differently from the basket average.

22 Public Debt and the Sovereign Balance Sheet

Total public and publicly guaranteed debt reached US\$8.573 billion at the end of June 2026, according to the Mid-Year Report. The report projects US\$10.329 billion by year-end, reflecting continued development financing. [1]

Debt ratios alone offer an incomplete view in a fast-growing oil economy. The sovereign balance sheet includes debt, NRF assets, infrastructure, state enterprises, future petroleum revenue and contingent liabilities. A more complete fiscal analysis therefore examines both assets and obligations.

The risk is not simply borrowing too much. Another risk is borrowing for projects with weak returns while petroleum income creates a temporary sense of unlimited fiscal space. The opposite risk also exists: underinvesting in high-return infrastructure because of excessive focus on gross debt.

The 2030 objective should be debt that finances productive assets within a transparent medium-term

framework, paired with rising financial buffers and strong project appraisal.

23 Governance, Statistics and State Capacity

Economic transformation places unusual pressure on the state. Ministries and agencies face larger budgets, more procurement, more contracts, more investors, more workers, more regulatory complexity and higher public expectations.

Institutional capacity therefore becomes an economic input. Slow permitting delays private investment. Weak procurement reduces public-investment returns. Incomplete data weakens monetary and social policy. Limited contract-management capability raises fiscal risk.

The IMF's 2026 mission highlighted public financial management, procurement, public-enterprise accounts, oil-sector audit capacity, beneficial ownership, AML/CFT and statistical modernisation as continuing priorities. [40]

The goal should not be bureaucracy for its own sake. The goal is a state able to make fast decisions with high integrity, accurate data and clear accountability.

A 2030 institutional scorecard should include procurement-cycle time, audit timeliness, contract publication, project cost variance, tax-administration efficiency, business-registration time, court case duration, official statistics release lags, public-enterprise reporting and open-data quality.

24 International Comparator Laboratory: Lessons Without Copying Models

Cross-country comparison is useful only when the comparison is disciplined. Guyana differs from most established resource exporters in population scale, timing, geography, climate exposure, institutional history, petroleum contract structure, domestic market size and the extraordinary speed of the present investment cycle. No country therefore provides a template. The relevant exercise is to identify mechanisms that repeatedly influence whether resource income becomes durable wealth.

The comparative literature points to five mechanisms that matter more than labels such as “resource curse” or “resource blessing”: the quality of institutions that allocate rents, the fiscal treatment of volatile revenue, the rate at which public investment is converted into productive assets, the protection of non-resource tradable sectors, and the accumulation of human and financial capital. Mehlum, Moene and Torvik show that institutional quality helps explain why resource abundance has produced different outcomes across countries. Hartwick's classic intergenerational result formalises the logic of investing rents from exhaustible resources into reproducible capital. Gelb's comparative work on oil windfalls shows why the composition and timing of expenditure matter as much as the size of the windfall. [30][31][32]

24.1 Norway: Financial Saving, Fiscal Discipline and Institutional Depth

Norway is often invoked in discussions of sovereign wealth management, but the transferable lesson is not the size of its fund. Norway entered the petroleum era with established institutions, a broad tax base, high human capital and an existing productive economy. Its experience therefore does not offer a direct sequence for Guyana.

The useful lesson lies in separating the ownership of petroleum wealth from the annual decision on how much resource income should enter domestic demand. Large foreign financial assets allow a country to transform volatile underground wealth into a diversified portfolio. A fiscal framework then determines the rate at which those assets support public expenditure. This separation reduces the risk that annual spending follows commodity prices mechanically.

For Guyana, the research question is not whether to reproduce Norway's institutional design. The question is whether the NRF, fiscal rules, budget process and public investment system together create an equivalent economic function: smoothing volatile income, preserving financial assets for future generations, and preventing temporary revenue from becoming an irreversible expenditure base.

24.2 Botswana: Institutions, Public Investment and the Limits of a Single Success Story

Botswana's historical diamond experience is important because it demonstrates that a resource-intensive economy may combine mineral dependence with long periods of macroeconomic stability and public investment. Yet the case also shows why resource management and diversification should be evaluated separately. Strong management of mineral revenue does not automatically create a broad export structure.

The implication for Guyana is that good fiscal stewardship is necessary but insufficient. A country might save responsibly, maintain debt sustainability and still enter 2030 with a narrow tradable base. Diversification therefore requires an additional test: whether resource income raises the productivity of firms and workers operating outside the resource sector.

This distinction matters for measurement. A public road project might be fiscally affordable and well constructed, but its development return depends on whether the road reduces logistics cost, connects productive land, raises labour mobility, supports exports or improves access to services. Asset completion is not the same as asset productivity.

24.3 Chile: Stabilisation, Commodity Cycles and Institutional Rules

Chile's copper experience is relevant to the design of fiscal policy under commodity-price uncertainty. The broader lesson is that expenditure decisions should distinguish structural revenue from temporary price effects. Commodity prices are difficult to forecast and high-price periods often create political and economic pressure to treat temporary receipts as permanent income.

For Guyana, a similar analytical principle applies to petroleum. The exact fiscal instrument will differ because the production profile, contract structure and size of the petroleum sector differ. The useful rule is to stress-test budgets against lower prices and delayed projects before commitments become recurrent obligations.

The strongest version of fiscal resilience is not a forecast that oil prices will remain favourable. It is a budget architecture whose essential services, maintenance requirements and priority investments remain financeable under less favourable conditions.

24.4 Trinidad and Tobago: Regional Proximity and the Diversification Challenge

Trinidad and Tobago provides a geographically and economically relevant comparator because it is a Caribbean hydrocarbon producer with a long history of energy-based industrialisation. Its experience highlights both the potential and the limits of downstream development.

Energy availability may support petrochemicals, manufacturing and industrial services where scale, feedstock, logistics, skills and market access align. Yet downstream activity should not be treated as diversification merely because it involves processing. If revenue, export earnings and fiscal receipts remain highly correlated with the same hydrocarbon cycle, the economy remains exposed to a common underlying shock.

For Guyana, the analytical test for downstream petroleum proposals is therefore multidimensional. A project should be assessed for commercial competitiveness, fiscal exposure, infrastructure re-

quirements, emissions implications, employment intensity, foreign-exchange contribution and sensitivity to the same oil-price cycle that already dominates national income.

24.5 United Arab Emirates and Qatar: Infrastructure, Connectivity and State Capacity

Gulf hydrocarbon exporters show how resource wealth may support globally connected aviation, logistics, urban infrastructure, finance and services. Their experiences also reveal the importance of scale, geography, state execution capability and long planning horizons.

Guyana's geography creates a different opportunity set. The relevant comparison is functional rather than institutional. Resource income may fund infrastructure that changes the country's economic distance from markets. Reliable electricity, ports, digital connectivity, aviation links, roads and customs efficiency influence whether a small economy participates in regional value chains.

The lesson is that infrastructure produces diversification only when combined with firms, skills and market access. A port without competitive exporters is an asset with weak productive spillovers. A data centre without reliable power, fibre, cyber capability and technical talent has limited strategic value. Infrastructure policy and enterprise policy therefore need a common economic logic.

24.6 Ghana: New Petroleum Production and the Importance of Expectations

Ghana's more recent petroleum era offers a caution about expectations. Resource discoveries often create assumptions about future fiscal space before production and revenue fully materialise. Public expectations may rise faster than sustainable income, while borrowing and expenditure commitments anticipate future receipts.

Guyana's current fiscal position differs materially, but the mechanism remains relevant. The larger the expected future petroleum stream, the stronger the case for transparent distinction between revenue already received, revenue contractually expected, operator production guidance, market assumptions and author projections.

This paper therefore avoids treating announced capacity as realised production and avoids treating gross petroleum value as government revenue. Those accounting distinctions are not technical details. They are central to realistic fiscal planning.

24.7 A Comparator Matrix for Guyana

The comparative cases support a simple research matrix.

Mechanism	Question for Guyana to 2030	Observable evidence
Revenue smoothing	Does expenditure remain stable when oil prices or project schedules change?	Non-oil primary balance, recurrent spending, NRF withdrawals, stress tests
Wealth conversion	Is depleted petroleum replaced by other assets?	NRF assets, infrastructure quality, human capital, productive capital, natural capital
Tradable resilience	Are non-oil exporters becoming more productive?	Export volumes, destination diversity, firm survival, productivity, unit costs

Mechanism	Question for Guyana to 2030	Observable evidence
Institutional capacity	Does administrative capability keep pace with fiscal scale?	Project delivery, procurement time, audit findings, statistical timeliness, staffing
Intergenerational equity	Are future citizens inheriting a stronger balance sheet?	Real comprehensive wealth per capita, debt, financial assets, maintenance liabilities
Shock resilience	Does the economy retain policy room under adverse conditions?	Liquidity, debt service, reserves, fiscal buffers, bank capital, import coverage

The central comparative conclusion is deliberately narrow. Resource wealth does not produce one predetermined outcome. Institutions, incentives, timing and the quality of investment mediate the result. [30][32][33]

25 Public Investment Effectiveness: From Capital Spending to Productive Assets

Guyana's public investment programme is historically large relative to the scale of the pre-oil economy. The annual Budget Estimates provide the programme-level appropriation baseline against which execution and revisions should be assessed. [28] The 2026 Mid-Year Report revised the Public Sector Investment Programme to G\$829.7 billion. The economic question is therefore no longer whether the state possesses investment resources. The harder question is how efficiently projects move from concept to durable public asset. [1]

The IMF's Public Investment Management Assessment framework divides the public investment cycle into planning, allocation and implementation, with attention to legal frameworks, staff capability and information systems. The framework is relevant to Guyana because high capital budgets increase the cost of weak project selection, fragmented sequencing, procurement delay and under-funded maintenance. [34][35]

25.1 The Four Conversion Losses

This paper proposes four categories of public investment conversion loss.

First is selection loss. A project may be technically feasible yet produce a lower social return than an alternative use of the same capital. Weak appraisal, optimistic demand assumptions or poor strategic fit create this loss before construction begins.

Second is delivery loss. Cost overruns, procurement delay, design changes, contractor capacity and weak coordination reduce the value obtained from the approved budget.

Third is integration loss. An asset may be completed but fail to achieve its intended return because complementary systems are missing. A highway needs feeder roads, land-use planning, safety systems and maintenance. A hospital needs staff, diagnostics, medicines, information systems and referral networks. A power project needs transmission and distribution capacity. A port needs customs, logistics services and competitive cargo flows.

Fourth is lifecycle loss. Infrastructure loses value when maintenance, renewal and asset management receive less attention than new construction. Rapid capital accumulation without lifecycle budgeting creates hidden future liabilities.

25.2 A Public Asset Productivity Test

Every major project could be assessed against six research questions:

1. What measurable economic or social constraint does the project address?
2. What counterfactual exists if the project is delayed or not built?
3. Which complementary investments are necessary for the expected benefits to materialise?
4. What recurrent operating and maintenance cost follows completion?
5. What indicators will measure utilisation, service quality and productivity after commissioning?
6. How sensitive is the project's return to population, traffic, energy demand, climate and cost assumptions?

The output should not be a single score used to approve or reject projects mechanically. It should be a transparent record of assumptions that researchers and auditors may test later.

25.3 Maintenance as a National Balance-Sheet Issue

A construction boom changes the future budget. Every road, bridge, school, hospital, drainage system, public building and digital platform creates a stream of maintenance and replacement obligations. These obligations are economically similar to liabilities even when they do not appear as conventional public debt.

A 2030 fiscal assessment should therefore include an asset register that records acquisition cost, estimated useful life, maintenance requirement, condition and replacement value. Without such a register, a country may appear fiscally strong while accumulating a large stock of assets whose service quality deteriorates.

25.4 Measuring Public Investment Efficiency

Universities and policy institutions could construct a Guyana Public Investment Outcomes Database covering major projects from approval through at least five years of operation. The dataset should include original budget, final cost, planned completion date, actual completion date, physical output, utilisation, maintenance spending and a small set of project-specific outcome measures.

For transport projects, outcome measures might include travel time, freight cost, traffic volume and accident rates. For drainage, they might include flood duration and avoided loss. For schools, enrolment, attendance, teacher availability and learning outcomes matter more than building count. For health facilities, service availability, waiting time, referral rates and health outcomes matter more than floor area.

This type of dataset would allow researchers to estimate whether the marginal return on public investment changes as the capital programme grows. That relationship is central to the absorptive-capacity thesis in this paper.

26 Beyond GDP: A 2030 National Wealth Accounting Agenda

GDP measures production during a period. It does not measure the complete stock of assets supporting future production. For a country extracting a depleting resource, that distinction becomes central.

The World Bank's comprehensive wealth framework includes produced capital, human capital, renewable and non-renewable natural capital and net foreign assets. Its sustainability logic is that real wealth per capita should not decline over time if future generations are to inherit at least the same productive opportunity set. [19]

Guyana is an unusually strong case for applying this framework because petroleum extraction raises

GDP while simultaneously reducing a non-renewable asset. The national accounts record petroleum output as current production. A national wealth account asks what assets are accumulating in return.

26.1 Proposed Guyana Wealth Dashboard

A practical annual dashboard could report seven balance-sheet domains.

Domain	Illustrative 2030 measures
Financial wealth	NRF market value, public deposits, net foreign assets
Produced capital	Transport, energy, water, digital and public-building assets adjusted for depreciation
Human capital	Education attainment, learning outcomes, health-adjusted working life, skills and labour-force participation
Enterprise capital	Productive fixed assets, firm formation, technology adoption, export capability
Renewable natural capital	Forests, mangroves, fisheries, agricultural land, water systems and ecosystem services
Non-renewable natural capital	Remaining petroleum and mineral resource value under transparent assumptions
Net liabilities	Public debt, guarantees, PPP obligations, maintenance backlogs and other material commitments

The purpose is not to produce a perfect single number. Valuing ecosystems, human capital and subsoil assets involves assumptions. The purpose is to force a balance-sheet question beside the income statement.

26.2 Real Wealth Per Capita as a Generational Test

Population growth and migration matter. Aggregate wealth might rise while wealth per resident stagnates if the population grows faster than productive assets. The relevant measure for inter-generational welfare is therefore real wealth per capita rather than nominal aggregate asset value alone.

This metric would also improve analysis of petroleum-funded migration. Additional workers may raise productive capacity and human capital, while rapid population growth also increases the infrastructure and service requirement. A wealth framework captures both sides more clearly than GDP growth alone.

26.3 Natural Capital and Climate Risk

Guyana's forests, water systems and coastal ecosystems are economic assets. Coastal protection, carbon storage, biodiversity, fisheries and water regulation produce services that conventional market accounts only partly capture. Climate damage may therefore reduce national wealth even when reconstruction expenditure raises measured GDP.

A 2030 research programme should combine the System of Environmental-Economic Accounting with project appraisal and national risk modelling. Infrastructure decisions should account for avoided climate losses, not only construction cost.

26.4 Why This Changes the 2030 Debate

If petroleum production reaches a high level in 2030, GDP per capita may appear extraordinary. A wealth perspective asks a different question: after accounting for depletion, depreciation, liabilities and population growth, is the country's productive asset base stronger?

That question is harder, but it aligns more closely with the objective of converting a temporary resource opportunity into persistent prosperity.

27 The Household Economy: Living Standards Behind the Aggregate Numbers

Macroeconomic growth reaches households through wages, employment, public services, asset ownership, transfers, prices and the availability of housing and infrastructure. These channels do not move at the same speed.

Rapid growth may raise nominal income while housing, transport, food and service costs also rise. A household may therefore receive a salary increase without experiencing an equivalent increase in real purchasing power. Measuring living standards requires price data and distributional data detailed enough to distinguish household groups and locations.

27.1 A Household Prosperity Dashboard

A 2030 household dashboard should track at least six dimensions: real disposable income, housing cost relative to income, food and transport burden, access to reliable utilities, health and education service quality, and household financial resilience.

The dashboard should be disaggregated by region, income group, household type and labour-market status. National averages may conceal large differences between coastal urban areas, rural communities and hinterland regions.

27.2 Housing as Both Asset and Cost

Housing occupies a special position in a rapidly growing resource economy. Rising property values benefit owners but increase entry costs for renters and first-time buyers. Construction adds GDP, yet land-price inflation may divert capital toward speculative activity rather than productive enterprise.

A Housing and Land Observatory should therefore measure transaction prices, rents, vacancy, mortgage conditions, serviced-land supply, construction cost, commuting time and household crowding. The goal is not to target one preferred price level. The goal is to identify whether housing supply and infrastructure respond fast enough to population and income growth.

27.3 Public Services as Real Income

Improvements in health, education, water, drainage, transport and public safety raise household welfare even when they do not appear as cash income. Weak service quality has the opposite effect because households purchase substitutes privately or lose time and productivity.

This matters for international comparison. High GDP per capita does not by itself show whether households receive the service quality associated with high-income economies. A credible 2030 assessment should therefore place service outcomes beside income measures.

27.4 Distribution and Asset Ownership

Income distribution is only one dimension of inclusion. Asset ownership determines who participates in long-term wealth accumulation. Research should track home ownership, land tenure, pension assets, financial assets, business ownership and access to credit.

A resource transformation is more durable when households accumulate productive and financial assets rather than relying exclusively on current income linked to the boom. This provides another reason to measure national and household balance sheets together.

28 A Sector-by-Sector 2030 Research Scorecard

A diversification strategy needs observable tests. The following scorecard converts broad sector ambitions into research questions and measurable outcomes. It does not set official targets. It identifies variables that allow researchers to distinguish genuine productivity growth from activity generated mainly by the petroleum cycle.

Sector	Core 2030 question	High-value indicators
Agriculture	Is output rising through productivity and value addition rather than acreage alone?	Yield, post-harvest loss, processing share, export unit value, cold-chain access
Forestry	Is value captured while maintaining natural capital?	Certified output, processing depth, forest condition, export value per cubic metre
Fisheries	Are stocks and exports both sustainable?	Catch per unit effort, aquaculture output, cold-chain quality, stock assessments
Gold and minerals	Is mining productivity compatible with environmental performance?	Output, recovery, formalisation, reclamation, mercury use, local services
Manufacturing	Are firms competitive beyond protected domestic demand?	Export share, capacity utilisation, energy cost, labour productivity, technology adoption
Construction	Does the sector move from boom activity toward durable capability?	Productivity, completion time, cost escalation, certification, prefabrication, maintenance work
Tourism	Is visitor growth producing higher local value?	Spend per visitor, length of stay, room occupancy, domestic procurement, air connectivity
ICT and BPO	Are services earning external revenue at rising skill levels?	Export revenue, wage levels, occupations, broadband quality, client concentration
Logistics	Is Guyana reducing the cost of moving goods?	Port dwell time, customs time, freight cost, reliability, regional cargo volume
Energy	Are reliability and cost supporting enterprise competitiveness?	Outage duration, system losses, industrial tariff, reserve margin, connection time

Sector	Core 2030 question	High-value indicators
Finance	Is intermediation supporting productive investment?	SME credit, long-term finance, NPLs, payment efficiency, capital-market activity
Professional services	Are domestic firms exporting expertise?	Cross-border revenue, certifications, regional clients, high-skill employment

The scorecard deliberately mixes output, productivity, quality and external competitiveness. A sector growing because government expenditure raises domestic demand should not receive the same diversification interpretation as a sector earning new foreign exchange through productivity gains.

29 Reproducibility, Data Dictionary and Replication Protocol

A research monograph intended for reuse should specify how key concepts are measured. The following protocol is designed so that universities, public agencies and independent researchers may reproduce the main indicators without adopting the author's conclusions.

29.1 Core Data Hierarchy

The preferred hierarchy is: Guyanese official statistical and fiscal sources; statutory financial reports; multilateral surveillance and development reports; operator disclosures for project schedules and capacity; peer-reviewed literature for theory; and author calculations for clearly identified scenarios.

Where two official series differ because of timing or methodology, both should be retained with metadata rather than silently harmonised. Revision history matters in a fast-changing economy.

29.2 Key Definitions

Overall real GDP growth refers to the published real growth rate for total economic output.

Non-oil real GDP growth refers to the official aggregate excluding petroleum and should not be interpreted automatically as independent diversification.

Petroleum production refers to realised average or period production, not nameplate capacity.

Installed production capacity refers to the technical capacity of operating projects and should not be treated as expected annual production without uptime and operational assumptions.

Gross petroleum sales value is an author sensitivity metric equal to production volume multiplied by an assumed oil price. It is not government revenue, profit, fiscal take or net national income.

Petroleum revenue to government should include only receipts defined under the relevant fiscal and contractual framework and reported by authorised institutions.

NRF inflow refers to deposits into the Natural Resource Fund, while **NRF withdrawal** refers to transfers authorised under the governing framework. The year-end balance is a stock and should not be confused with annual revenue.

Public and publicly guaranteed debt should follow the Ministry of Finance or recognised multi-lateral definition and should state the measurement date.

Diversification in this paper means an increase in the economy's capacity to generate value, employment and foreign exchange from activities whose competitiveness does not depend primarily on petroleum extraction or petroleum-financed domestic demand.

Absorptive capacity means the ability of labour markets, firms, institutions, infrastructure and project systems to transform spending into productive assets without disproportionate cost escalation or quality loss.

Real comprehensive wealth per capita follows the conceptual direction of the World Bank's comprehensive wealth framework: produced, human, natural and net foreign assets measured in real per-person terms where data permit. [19]

29.3 Replication Steps for the Main Charts

The recent-growth chart uses official 2024 and 2025 growth observations and the latest 2026 revised forecast available at the research cut-off. Researchers reproducing it after a statistical revision should preserve the original vintage in a separate series.

The export-concentration chart divides 2025 merchandise export values by the published total. Petroleum's share should be recalculated if the Bureau of Statistics revises trade values.

The NRF flow chart uses the 2026 revised opening balance, projected inflows, withdrawals and closing balance in the Mid-Year Report. The identity should be checked after accounting for investment income, valuation and timing definitions in the underlying report.

The non-oil scenario chart is not a forecast. It sets a 2025 index equal to 100 and compounds hypothetical annual real growth rates of 4, 7 and 10 percent through 2030. Its purpose is to demonstrate how persistent differences in non-oil growth accumulate.

The oil sensitivity chart multiplies three hypothetical production levels by three hypothetical prices and 365 days. The result represents gross annual crude value before downtime, quality differentials, costs, partner shares, fiscal terms or government take.

29.4 Reproducible Calculations Used in This Edition

Several headline metrics are derived directly from published inputs. The formulas below make those calculations auditable.

Merchandise export concentration

$$OilShare_t = \frac{CrudeOilExports_t}{TotalMerchandiseExports_t} \times 100$$

For January-June 2026, the source values are US\$15.0537 billion of crude-oil exports and US\$16.1997 billion of total exports, yielding approximately 92.9 percent. [36]

Gross crude-sales sensitivity

$$GrossSales = Production_{bpd} \times 365 \times Price_{USD/bbl}$$

This is a market-value sensitivity only. It excludes downtime, quality differentials, costs, contractor shares, cost recovery, taxes, royalties, profit-oil allocation and other fiscal terms.

Indexed non-oil scenario path

$$Index_t = 100 \times (1 + g)^{t-2025}$$

where g is an assumed annual real growth rate. The 4, 7 and 10 percent paths in this report illustrate compounding, not predictions.

Real wealth per-capita test

Where a future comprehensive-wealth dataset is assembled, the core sustainability test should be stated as:

$$\Delta \left(\frac{\text{Real Comprehensive Wealth}}{\text{Population}} \right) > 0$$

A positive result is not sufficient for inclusive prosperity, but a persistent negative result would challenge claims that depletion is being replaced with durable assets.

All derived indicators should retain the underlying source values, units, reference dates, calculation code and revision status in a replication file.

29.5 Data Quality Flags

Every dataset used for future editions should carry at least five metadata fields: source institution, publication date, reference period, revision status and definition note. Survey-based data should also include sample size and weighting information where available.

Researchers should mark breaks in series where classifications, base years or survey methods change. The speed of Guyana's structural transformation means old weights may become unrepresentative faster than in a stable economy.

29.6 Version Control

A national 2030 research archive should retain every published vintage of major macroeconomic, fiscal, trade, labour and population datasets. Revisions are analytically valuable. They show where measurement systems struggle with rapid change and prevent researchers from comparing a revised historical series with an unrevised contemporary forecast without noting the difference.

29.7 Suggested Open Research Package

A replication package associated with future editions could contain machine-readable tables, chart scripts, a data dictionary, source snapshots, scenario parameters and a change log. No proprietary model is required for the core analysis. Transparency is more valuable than complexity when the objective is public verification.

30 Comprehensive Structural Deep Dives

The following chapters extend the core framework into population, regional development, urban systems, fiscal institutions, financial markets, sector economics, climate resilience, public administration and post-2030 transition risk. They are designed as research modules that can be updated independently as new official data become available.

31 Economic History and the Structural Baseline Before Oil

A 2030 assessment needs a pre-oil reference point. Without one, rapid petroleum-era growth can obscure which constraints are inherited, which are being solved, and which are being created by the boom itself.

Before first oil in December 2019, Guyana's economy rested on a narrower production base dominated by gold, rice, sugar, bauxite, construction, commerce, public services and remittance-supported household demand. The country possessed substantial natural assets and strategic geographic advantages, but output per worker, infrastructure quality, domestic capital depth, logistics, electricity reliability and the scale of the formal private sector constrained productivity. The economic transformation after 2020 therefore did not begin from an institutional or infrastructure blank slate. It began from a small economy with significant development gaps and a limited domestic market.

This matters because the petroleum boom simultaneously relaxes and intensifies constraints. It relaxes the financing constraint by expanding public revenue, foreign exchange earnings, investment and sovereign assets. It intensifies the real-resource constraint because labour, contractors, engineers, land, port space, project-management capability and institutional attention remain finite. In macroeconomic terms, Guyana has moved rapidly from a problem of insufficient finance toward a problem of converting abundant finance into scarce real capacity.

A useful structural baseline separates seven inherited constraints:

1. **Scale constraint.** A small population limits the domestic market, specialist labour pool and number of firms able to absorb large contracts.
2. **Infrastructure constraint.** Transport, drainage, electricity, ports, water systems and digital connectivity require high fixed investment relative to population.
3. **Human-capital constraint.** Rapid demand for engineers, technicians, health professionals, teachers, managers and skilled trades can outpace domestic training systems.
4. **Geographic constraint.** Economic activity is concentrated along a low-lying coast while natural resources and communities extend across a large, sparsely populated interior.
5. **Enterprise-depth constraint.** Many domestic firms are small and face financing, certification, technology and management constraints when attempting to enter complex value chains.
6. **Institutional-throughput constraint.** A small public administration is required to regulate and execute a much larger volume of projects, contracts, permits and programmes.
7. **External-dependence constraint.** Capital goods, machinery, specialised services, construction inputs and many consumption goods are imported.

The development objective is not to eliminate every constraint by 2030. It is to change the binding constraint. A successful transformation would mean that electricity reliability, logistics, skills and institutions cease to be the principal brakes on productive investment. A weak transformation would leave the country financially richer while the same physical and institutional bottlenecks continue to ration opportunity.

This baseline also changes how growth should be interpreted. A road programme can raise construction GDP immediately, but the deeper economic gain appears only if the road lowers travel time, freight cost, vehicle operating cost, accident risk or land isolation after completion. A hospi-

tal can raise public expenditure immediately, but national wealth rises only if staffing, maintenance, diagnostics, referral systems and patient outcomes improve. The pre-oil baseline therefore provides a counterfactual against which the productivity of petroleum-financed investment should be tested.

For long-horizon research, the most useful pre-oil comparison is not a single GDP figure. It is a panel of structural indicators covering electricity losses and outages, freight time, export concentration, labour productivity, learning outcomes, health access, business density, domestic credit, road connectivity, drainage capacity, public investment completion, and household living standards. The 2030 question is whether these structural variables have shifted sufficiently to support growth after the petroleum construction cycle moderates.

32 Demography, Migration and the Size of the Future Economy

Population has become an economic variable of first-order importance. The 2022 census recorded 878,674 residents, 17.63 percent above the 2012 count. The Bureau of Statistics subsequently estimated the population at 956,044 by end-2024 after accounting for natural increase and net migration. Region 4 remained the largest population centre, while Region 3 had become the second-largest region. [9]

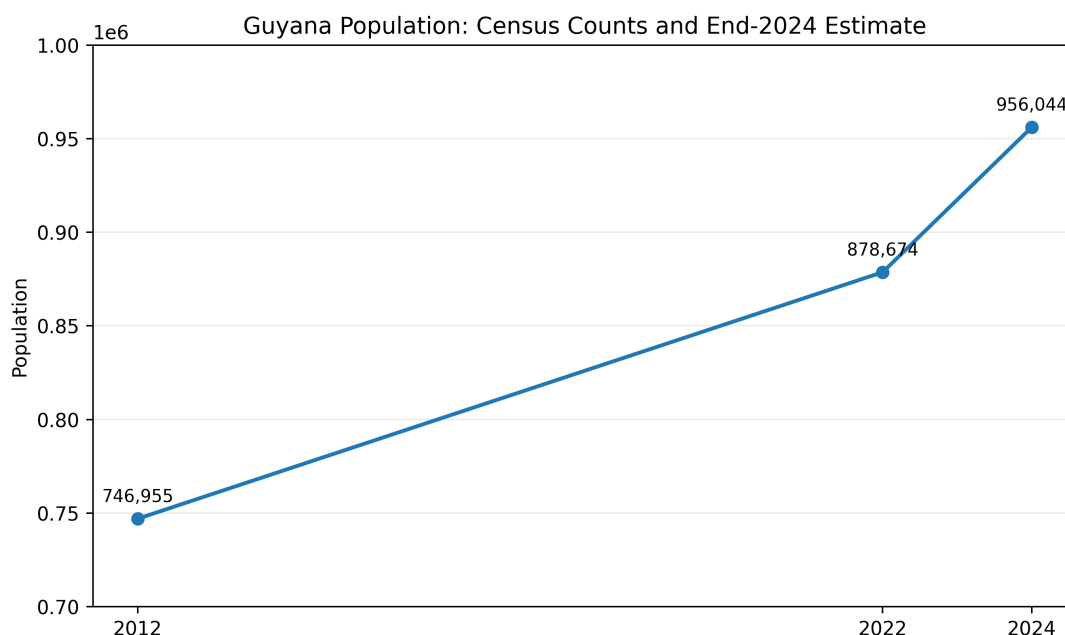


Figure 7: Population change

The speed of economic expansion means migration will influence almost every 2030 scenario. Labour demand can be met through four channels: higher participation by existing residents, movement of workers from lower-productivity activities, return migration and diaspora engagement, and inward migration. Each channel has different implications for wages, housing, public services, social integration and productivity.

A population strategy should therefore be treated as economic infrastructure. The question is not simply how many people Guyana will have in 2030. The more relevant questions are who is arriving, which skills they bring, where they settle, how quickly housing and public services adjust, and whether immigration raises productivity faster than congestion costs.

Three demographic scenarios should be tracked.

Scenario A: Moderate population expansion. Population rises gradually through natural increase and net migration. Labour remains scarce in specialist occupations, wage pressure persists, and firms automate or import services where possible.

Scenario B: High migration and rapid urban expansion. Labour availability improves, construction and services expand, and the tax base broadens. Housing, transport, schools, hospitals and drainage face greater pressure unless urban infrastructure grows ahead of demand.

Scenario C: Skills-selective migration and diaspora return. The total population grows less dramatically, but the skill composition improves. Senior managers, engineers, clinicians, educators, scientists, entrepreneurs and technicians raise productivity and transfer knowledge into domestic institutions and firms.

The third scenario offers the highest productivity effect per additional resident but requires a deliberate system. Credential recognition, work-permit processing, professional licensing, housing, schooling, security, healthcare and tax administration become part of the investment climate.

Demographic statistics also need sharper treatment. Headcount alone is insufficient. By 2030, a national demographic dashboard should publish age structure, labour-force participation, dependency ratios, migration by skill category, internal migration by region, housing formation, household size, births, deaths, school-age population and the share of residents born abroad. The same dataset should distinguish temporary project workers from long-term residents.

Population uncertainty materially affects per-capita analysis. If GDP, public spending or sovereign assets are divided by an outdated denominator, per-capita prosperity can be overstated. This paper therefore recommends source-labelled population denominators and sensitivity ranges for all 2030 per-capita indicators. [9]

33 Regional Economies: Ten Regions, Ten Different Development Problems

National averages conceal spatial differences large enough to change policy design. Guyana's ten administrative regions vary in population density, transport access, economic base, climate exposure, proximity to borders, Indigenous population, agricultural potential and links to the capital. A comprehensive 2030 strategy therefore needs a regional production and service-delivery model rather than a single national template.

Region	Strategic economic role toward 2030	Principal constraint to monitor
1 Barima-Waini	forestry, agriculture, fisheries, eco-tourism, border commerce	connectivity and logistics
2 Pomeroon-Supenaam	rice, coconut, agriculture, fisheries, tourism	drainage, storage and market access
3 Essequibo Islands-West Demerara	housing expansion, logistics, agriculture, industry linked to new transport corridors	urban planning and congestion
4 Demerara-Mahaica	national services, government, finance, logistics, construction and knowledge economy	land, transport, drainage and affordability
5 Mahaica-Berbice	agriculture, agro-processing and food systems	climate resilience and value-chain depth
6 East Berbice-Corentyne	agriculture, manufacturing, regional trade and energy-related opportunity	market scale, logistics and workforce renewal

Region	Strategic economic role toward 2030	Principal constraint to monitor
7 Cuyuni-Mazaruni	mining, tourism, forestry and services	transport, environmental management and settlement capacity
8 Potaro-Siparuni	mining, tourism, ecosystem services	high logistics cost and service access
9 Upper Takutu-Upper Essequibo	agriculture, livestock, tourism and Brazil-facing trade	transport corridors, water and market connectivity
10 Upper Demerara-Berbice	mining, manufacturing, logistics and services	industrial renewal, skills and connectivity

This matrix is analytical rather than prescriptive. Each region contains more economic activity than the table can show. The purpose is to reveal that national infrastructure priorities should be judged partly by whether they create new regional production systems rather than merely move existing activity.

Regional development also has an inclusion dimension. The 2022 census found 87.16 percent of the population in coastal regions and 12.84 percent in hinterland regions. The hinterland is geographically vast, so per-capita infrastructure costs are high. Digital connectivity, telemedicine, distributed renewable energy, aviation and river transport can therefore produce unusually high welfare returns even where conventional urban cost-benefit ratios appear weak. [9]

A 2030 regional accounts programme should estimate regional output, employment, household income, enterprise formation, public investment, electricity access, travel time, internet quality and climate exposure. Without regional economic accounts, spatial policy will continue to rely too heavily on project inputs rather than measured regional outcomes.

34 Urbanisation, Housing and Land Economics

Rapid income growth changes the economics of land. Roads, bridges, industrial zones, housing programmes and private development alter accessibility and therefore land values. This creates wealth for existing owners, but also raises entry costs for new households and businesses.

Housing should be analysed as four linked systems: shelter, household asset, land market and macro-financial exposure. A surge in construction can reduce physical housing shortages while land appreciation raises affordability pressure. Mortgage expansion can improve ownership while increasing household leverage. New settlements can expand opportunity while increasing commute times if transport planning lags.

The 2022 census preliminary results reported 271,946 households and 311,742 buildings, with national average household size falling to 3.23 persons from 3.65 in 2012. The building stock had risen 42.02 percent over the decade. These changes indicate significant household formation even before the full effects of the petroleum-era population increase were visible. [9]

By 2030, housing policy should therefore be evaluated through a housing-system dashboard:

- median house price relative to median household income;
- median serviced-land price relative to income;
- rent-to-income ratio;
- mortgage debt service relative to household income;
- housing completions by region and price segment;
- vacancy rates and time-to-occupancy;
- commute time and transport cost from new settlements;

- flood exposure and drainage service level;
- utility connection time;
- share of new housing within planned road, school and health-service catchments.

The economic risk is not simply a housing bubble. It is spatial mismatch: households live farther from jobs and services than infrastructure can efficiently support. The productivity cost appears as traffic, fuel use, lost work time, road maintenance and pressure for additional public infrastructure.

Land-value capture deserves further research. Large public investments can create private land-value gains. Betterment levies, development charges, infrastructure contribution agreements and transparent land auctions are mechanisms used internationally to recover part of this uplift for public infrastructure. Any model would require careful legal design and protection for low-income households and long-standing communities.

35 Labour Productivity, Wages and the Skills Constraint

Guyana's labour market is now an economy-wide transmission mechanism for the resource boom. Rising public and private demand increases wages, attracts migrants, shifts workers between sectors and raises the cost structure of non-oil exporters.

The Bureau of Statistics reports an unemployment rate around 6 percent for the fourth quarter of 2025. A low national unemployment rate in a rapidly expanding economy does not necessarily mean labour allocation is efficient. Shortages can coexist with underemployment, skills mismatch, low female participation in some segments, youth unemployment and geographic immobility. [11][42]

The key 2030 variable is therefore productivity-adjusted wage growth. Wage increases are sustainable when output per worker rises alongside compensation. They become a competitiveness risk when labour costs rise substantially faster than productivity in tradable sectors.

A national productivity account should measure output per worker and, where feasible, output per hour across agriculture, construction, manufacturing, tourism, logistics, professional services and public administration. It should also track vacancy duration, turnover, occupational wage premiums and imported labour by skill level.

Human-capital policy requires three time horizons.

Immediate horizon, one to two years: targeted immigration, accelerated certification, apprenticeship expansion, contractor training and overseas recruitment fill urgent shortages.

Medium horizon, three to five years: technical institutes, university programmes, teacher quality, nursing and medical training, engineering, construction management and digital skills expand domestic supply.

Long horizon, beyond 2030: early childhood development, foundational literacy and numeracy, research universities and health improvements raise lifetime productivity.

A common policy error is to evaluate training programmes by enrolment rather than labour-market outcomes. By 2030, publicly financed skills programmes should publish completion, certification, employment, wage progression and employer-retention outcomes. This converts training from a budget item into a measurable productivity investment.

36 Education, Science, Research and Innovation Capacity

A resource transformation becomes durable only when knowledge accumulation outlives the resource cycle. Education policy therefore should be connected to an explicit national innovation system.

The education system has three distinct economic roles. First, it raises foundational human capital.

Second, it supplies occupations required by the current investment cycle. Third, it creates research, engineering and entrepreneurial capability able to generate new industries.

The third role is often the least developed in small economies. Guyana's 2030 research agenda should focus on areas where national conditions create comparative research advantages: tropical agriculture, flood and coastal engineering, forestry and biodiversity, carbon accounting, extractive-industry governance, offshore engineering, tropical medicine, renewable energy, water management, geoscience, remote sensing, logistics and small-state public administration.

A university-industry research compact could measure:

- research expenditure as a share of GDP and non-oil GDP;
- number of peer-reviewed publications and patents linked to national priority areas;
- industry-funded research projects;
- postgraduate completion in engineering, science, medicine, economics and public policy;
- international research partnerships;
- commercialisation and start-up formation from university research;
- share of major public projects with local research or evaluation components.

Scholarships should also be treated as a portfolio investment. The relevant outcome is not the number awarded. It is the proportion of graduates returning, entering priority occupations, remaining in-country, and transferring knowledge into firms and institutions.

37 Health as Human Capital and Economic Infrastructure

Health spending is usually discussed as social expenditure. In a rapidly expanding economy, it is also productive infrastructure. A healthier workforce has lower absenteeism, higher labour-force participation and greater lifetime productivity. Reliable healthcare also affects the country's ability to attract and retain skilled workers and returning diaspora.

Rapid population growth complicates planning. Hospital beds, diagnostic equipment, specialist services, primary care and emergency response need to expand ahead of population rather than after congestion appears. Construction of facilities without workforce planning risks creating capital that is physically complete but operationally constrained.

The economic evaluation of health investment should therefore include a service-readiness test covering clinicians, nurses, technicians, pharmaceuticals, laboratories, maintenance, digital records, referral networks, ambulance response, infection control and recurring operating budgets.

By 2030, Guyana should be able to publish outcome-based indicators such as preventable mortality, maternal and infant outcomes, waiting times, non-communicable disease control, emergency-response times and regional specialist access. These measures provide a stronger test of conversion from petroleum wealth into human capital than health capital spending alone.

38 Taxation Beyond Petroleum and the Non-Oil Fiscal Base

Petroleum revenue creates a fiscal illusion risk. When resource income is large, governments can finance expanded services without immediately raising non-oil taxes. Yet permanent public services require a durable revenue base after production plateaus or prices weaken.

The correct 2030 objective is not to maximise taxation while resource revenue is abundant. It is to maintain a capable, fair and broad non-oil tax system so fiscal institutions do not atrophy.

A non-oil fiscal sustainability dashboard should track:

- non-oil tax revenue as a share of non-oil GDP;
- recurrent spending financed by non-oil recurrent revenue;

- petroleum revenue used for capital versus recurrent purposes;
- tax expenditures and exemptions;
- arrears and compliance rates;
- property-tax coverage and valuation quality where applicable;
- customs revenue net of major investment-project effects;
- effective tax rates by sector and firm size;
- revenue volatility under alternative oil-price assumptions.

The strongest intergenerational rule is not simply to save a fixed share of oil income. It is to prevent temporary resource income from financing recurrent commitments that cannot be sustained under conservative long-run revenue assumptions.

This principle suggests a structural fiscal balance for analysis. One possible research metric would replace actual petroleum revenue with a smoothed reference revenue based on a conservative price and production path. Expenditure above this structural envelope would be flagged even if current cash balances remained strong.

39 The Financial System, Credit Allocation and Capital-Market Deepening

Financial development will influence whether domestic firms become owners of productive assets or remain subcontractors dependent on external capital. Banks, insurers, pension funds, securities markets and development-finance institutions determine how savings are converted into investment.

The petroleum boom can increase deposits and collateral values while also creating concentration risk. Banks may expand credit toward construction, real estate, consumer finance and government-linked activity because these sectors are easier to underwrite during a boom. Exporting firms, technology ventures and agricultural processors often require longer-term capital with more uncertain cash flows.

The 2030 financial-system question is therefore one of allocation, not only stability.

Key indicators should include:

- private credit as a share of non-oil GDP;
- sectoral concentration of bank lending;
- mortgage and real-estate exposure;
- non-performing loans through the cycle;
- average loan maturity for productive investment;
- collateral requirements faced by SMEs;
- venture and growth-equity financing;
- corporate bond and securities issuance;
- pension and insurance assets invested in domestic productive instruments;
- foreign-currency mismatches;
- financial inclusion by region and income group.

Capital-market deepening should not be pursued for symbolism. A stock exchange with little disclosure or liquidity adds limited productive value. The priority is a credible market infrastructure with high accounting standards, investor protection, transparent beneficial ownership, reliable settlement and a pipeline of firms able to issue securities.

A development-finance function can address long-duration investment gaps, but governance is decisive. Credit allocation should follow published criteria, independent risk assessment and transparent performance reporting to avoid converting development finance into political credit.

40 Public Procurement, Project Delivery and the State's Execution Capacity

Public investment is now one of Guyana's largest economic engines. This increases the importance of procurement quality, project preparation, contract management and asset maintenance.

The IMF Public Investment Management Assessment framework distinguishes planning, allocation and implementation institutions. For Guyana, the most valuable extension is a project-throughput model that asks whether the state possesses enough qualified staff and systems to move the entire portfolio from concept to operation without quality loss. [34][35]

Every major project should pass seven gates:

1. strategic relevance;
2. economic appraisal;
3. climate and environmental screening;
4. design maturity;
5. procurement readiness;
6. operating and maintenance funding;
7. post-completion evaluation.

The purpose is not to slow development. It is to reduce rework, variation orders, cost escalation and stranded assets.

A transparent national project database would materially improve scrutiny. For each large project it should publish approved cost, procurement method, contractor, start date, expected completion, current completion percentage, revised cost, variation orders, physical outputs and responsible agency. A second layer should report operational outcomes after completion.

This is particularly important in a small economy where the same contractors, engineers and suppliers may work across multiple projects. Portfolio-wide demand can exceed sector capacity even when each project appears feasible in isolation.

41 Transport, Ports, Logistics and the Economics of Connectivity

Guyana's economic geography makes connectivity a productivity variable. Transport investment influences labour-market size, land values, agricultural access, tourism, construction costs and the feasibility of regional trade.

A comprehensive logistics strategy should distinguish five networks: coastal road and bridge corridors, river transport, hinterland roads, ports and maritime logistics, and aviation. Each has different economics.

The relevant measure is not kilometres of road or number of bridges completed. It is generalised logistics cost. For firms, this includes freight charges, travel time, inventory carried because of unreliable delivery, port dwell time, damage, customs processing and security costs.

By 2030, Guyana should publish corridor-level freight indicators. A shipment from an agricultural producer, mine or factory should be traceable through travel time, border or port time and final delivered cost. This would reveal whether large infrastructure programmes are translating into export competitiveness.

The Brazil-Guyana corridor has potentially significant strategic value because it could connect northern Brazil to Atlantic access while increasing Guyana's hinterland commerce. The economic case depends on traffic, road quality, customs interoperability, port capability, security, environmental management and complementary private investment. Infrastructure without cargo volume creates

low utilisation. Cargo potential without reliable infrastructure leaves the opportunity unrealised.

42 Electricity, Gas-to-Energy and Industrial Competitiveness

Electricity is among the most consequential economy-wide inputs in the 2030 transformation. Reliable and lower-cost power affects households, digital services, cold chains, manufacturing, mining, hospitality, healthcare and investment decisions.

The economic test for new generation capacity is not capacity alone. It is delivered system performance. Generation, transmission, distribution, maintenance, fuel supply, reserve margins, technical losses, commercial losses and grid management jointly determine the price and reliability experienced by users.

Guyana's energy strategy therefore should be evaluated with a system dashboard:

- average generation cost;
- average tariff by customer class;
- system losses;
- outage frequency and duration;
- reserve margin;
- transmission congestion;
- connection time for new industrial users;
- share of isolated systems using lower-carbon generation;
- fuel dependence;
- maintenance backlog;
- industrial electricity cost relative to regional competitors.

The Gas-to-Energy programme is economically significant because power costs affect nearly every domestic value chain. Yet lower generation cost will create full productivity gains only if transmission and distribution performance improve alongside generation. This is an example of complementarity: the return on one infrastructure asset depends on the readiness of the rest of the system.

43 Agriculture and Food Systems: From Output Expansion to Productivity

Agriculture offers one of Guyana's clearest non-oil export pathways because the country has land, freshwater, established rice and sugar industries, livestock potential, fisheries, and proximity to a CARICOM market with substantial food imports. The government's agricultural investment programme and regional food-security agenda have raised the sector's strategic importance. [15][16]

The challenge is to shift from acreage and production targets toward productivity and value-chain economics.

Rice competitiveness depends on yield, milling efficiency, energy cost, freight, market access, quality and climate resilience. Sugar requires a different analytical framework because estate economics, labour, field productivity, factory utilisation and product mix determine viability. High-value crops depend on cold-chain logistics, standards, packaging and consistent volumes. Livestock requires genetics, feed, veterinary capacity, processing and biosecurity. Aquaculture requires water quality, feed, disease management, processing and export certification.

A 2030 agricultural transformation scorecard should therefore include output per hectare, labour productivity, post-harvest loss, storage capacity, cold-chain coverage, irrigation reliability, farm-gate versus export prices, certification, share processed domestically, crop-insurance coverage and export market diversification.

Climate risk is central. Heavy rainfall affected agricultural activity in the first half of 2026. This illustrates why drainage, irrigation, water storage and climate information systems are productive agricultural infrastructure rather than only defensive expenditure. [36]

44 Forestry, Carbon Markets and the Ecosystem Services Economy

Guyana's forests create an unusual second natural-resource balance sheet alongside petroleum. LCDS 2030 describes approximately 18 million hectares of forest and a model designed to generate economic value from forest climate services while maintaining low deforestation. The country secured a US\$750 million carbon-credit sale through 2030, and the LCDS reports continuing payments and community allocations. [41]

The strategic importance extends beyond current carbon-credit revenue. Forests provide carbon storage, water regulation, biodiversity, tourism value, cultural value and potential scientific and pharmaceutical research opportunities. Economic accounting that values only timber understates the asset.

A comprehensive 2030 forest-economy framework should monitor:

- deforestation and degradation rates;
- verified carbon-credit issuance and realised sale prices;
- carbon revenue by use;
- community revenue and project outcomes;
- sustainable timber value added;
- certified timber exports;
- biodiversity finance;
- eco-tourism income;
- research and bioprospecting partnerships;
- forest-fire and climate risk;
- governance and permanence risk in carbon markets.

Carbon revenue also introduces market risk. Voluntary carbon markets can change in price, methodology and buyer demand. Revenue should therefore be treated as a potentially valuable but variable income stream rather than a guaranteed fiscal substitute for petroleum.

45 Gold, Bauxite and the Non-Petroleum Extractive Economy

Petroleum has become dominant, but gold, bauxite and other minerals remain economically important. The export data for 2025 show raw gold as the second-largest merchandise export category after crude oil. [10]

The post-2030 question is whether non-petroleum mining remains primarily an extractive export sector or develops stronger domestic services, processing, technology, environmental management and rehabilitation capability.

Mining policy should distinguish formal large-scale operations from smaller and more dispersed activity. The economic and environmental risk profiles differ. Mercury use, river impacts, land rehabilitation, safety, tax compliance, beneficial ownership and licensing transparency require different regulatory tools across scales.

EITI reporting provides an institutional base for extractive-sector transparency, including licensing, beneficial ownership, payments and employment data. Continued strengthening of open data will matter more as the value and complexity of the extractive economy grow. [43]

46 Manufacturing and Industrial Policy in a High-Wage Small Economy

Manufacturing in Guyana faces a structural challenge: the resource boom tends to raise wages and non-tradable costs, while the domestic market remains small. Successful manufacturing therefore needs either high productivity, low logistics and energy costs, strong regional market access, natural-resource linkages, or niche specialisation.

The strongest candidates are not necessarily heavy import-substitution industries. More plausible opportunities include food processing, building materials, wood products, specialised fabrication, packaging, marine services, selected chemicals, repair and maintenance, and products linked to agriculture, mining and offshore operations.

Industrial policy should therefore be performance-based. Support should be tied to measurable outcomes such as export sales, productivity, certification, training, technology adoption and domestic value addition. Permanent protection without performance tests risks creating high-cost firms that depend on the resource boom rather than diversify it.

A 2030 manufacturing dashboard should measure manufacturing value added per worker, energy cost, export share of output, imported-input intensity, capacity utilisation, certification, R&D or engineering spending, and supplier linkages to agriculture, construction, mining and petroleum.

47 Tourism, Aviation and the Experience Economy

Tourism is small relative to petroleum but economically useful because it converts natural, cultural and hospitality assets into service exports. It also distributes income across transport, accommodation, food, guides, entertainment and regional destinations.

The 2030 opportunity is not mass tourism by default. Guyana's strongest differentiation lies in nature, wildlife, Indigenous culture, adventure, sport, business travel and high-value eco-tourism. These segments depend on air connectivity, safety, destination marketing, service quality, domestic aviation, roads, digital booking and environmental conservation.

Visitor arrivals alone are therefore an incomplete metric. The stronger indicators are visitor expenditure, average length of stay, room occupancy, air-seat capacity, regional dispersion of visitor spending, repeat visitation, employment productivity and environmental carrying capacity.

Business travel associated with the petroleum economy creates demand but should not be counted automatically as tourism diversification. The more demanding test is whether leisure and experience-based travel can retain demand after petroleum-related corporate travel normalises.

48 Digital Services, AI, BPO and the Knowledge Export Economy

Digital services offer a diversification path with relatively low freight costs. Guyana's English-speaking workforce, time-zone alignment with North America and expanding connectivity support business-process outsourcing, professional services and remote work.

The next step is to move from labour-arbitrage services toward higher-value activities: accounting, compliance, engineering support, software, data services, cybersecurity, digital creative industries and AI-enabled business services.

The constraint shifts from physical logistics to human capital, broadband quality, cybersecurity, power reliability, data protection and management capability.

A digital-export scorecard should track service-export revenue, value added per worker, occupational mix, broadband latency and uptime, data-centre capacity, cybersecurity incidents, international certifications, remote-worker income and the number of firms selling digital services abroad. Government digitalisation can reinforce the sector by creating demand for local technical capability, but procurement should avoid vendor lock-in and require interoperability, data standards and cybersecurity controls.

49 SMEs, Competition and the Ownership Structure of Growth

Broad-based prosperity depends partly on who owns productive assets. If growth is concentrated in foreign firms, a narrow domestic elite or land appreciation, household income can rise without creating a deep domestic enterprise base.

SME policy should therefore move beyond grants and procurement quotas toward firm capability. The strongest interventions are management training, digital accounting, standards certification, export assistance, credit information, invoice financing, supply-chain mentoring and mechanisms that help firms graduate from small contracts to larger and more complex work.

Competition policy also matters. Rapid growth can create concentrated markets because first movers acquire land, distribution networks, capital and supplier relationships quickly. High concentration is not automatically harmful in a small market, but barriers to entry should be monitored.

By 2030, Guyana should publish business-demography statistics covering firm births, deaths, survival, employment growth, ownership, productivity and export status. This dataset would make it possible to test whether local content is producing durable companies rather than temporary contract participation.

50 Local Content 2.0: From Procurement Share to Capability Formation

Guyana's Local Content Secretariat states that its role is to prioritise Guyanese nationals and companies in petroleum-sector procurement while supporting sustainable capacity development. [23]

The next stage should be evaluated through capability, not only procurement share.

A firm that wins a contract but does not improve management systems, technology, safety performance, certification or export capability contributes less to long-run diversification than a firm that uses oil-sector demand to build capabilities transferable to other markets.

A Local Content 2.0 framework would measure:

- domestic value added, not invoice value alone;
- share of management and technical roles held by Guyanese nationals;
- certifications gained;
- productivity improvement;
- equipment and intellectual property owned locally;
- supplier graduation into more complex categories;
- exports or overseas contracts won using capabilities developed in Guyana;
- training expenditure and apprenticeship completion;
- joint ventures that transfer technology and decision-making authority.

The 2030 objective is therefore not maximum local content in every category. Some highly specialised services will remain imported. The objective is strategic capability accumulation in categories where Guyanese firms can become competitive at regional or global scale.

51 Trade, CARICOM and the Economics of Market Size

Guyana's domestic market is too small to support every industry at efficient scale. Regional and international market access is therefore a central part of diversification.

CARICOM provides a nearby market with shared institutions and significant food, manufactured goods and service imports. Northern Brazil and Suriname add neighbouring opportunities. The broader Caribbean, North America and Europe offer larger markets but higher standards and logistics requirements.

Trade policy should therefore be connected to firm-level export readiness. Market access is economically valuable only when firms meet quality, quantity, standards, logistics and price requirements.

A 2030 trade scorecard should track:

- non-oil export value and volume;
- services exports;
- number of active exporters;
- exporter survival over three and five years;
- concentration by product and destination;
- border and port clearance times;
- standards and certification coverage;
- share of exports entering preferential markets;
- regional transit time;
- logistics cost as a share of final export value.

The ratio of exports to imports is not, by itself, a welfare objective. Capital-goods imports can raise future productive capacity. The analytical question is whether imports are financing consumption alone or building assets that later generate productivity and exports.

52 Climate Adaptation as Macro-Fiscal Risk Management

Guyana's coastal concentration creates a direct link between climate resilience and macroeconomic stability. Flooding can damage homes, agriculture, roads, businesses and public infrastructure simultaneously. Climate adaptation is therefore not only an environmental programme. It is a form of national balance-sheet protection.

LCDS 2030 identifies drainage, irrigation, canals, sluices, pumps, mangrove protection and other adaptation investments. [41]

A stronger economic framework would estimate expected annual climate loss under different adaptation scenarios. The avoided-loss value of drainage or coastal defence should enter project appraisal alongside construction cost.

The 2030 climate-risk dashboard should include:

- population and assets exposed to coastal and river flood risk;
- drainage capacity and maintenance status;
- agricultural area with reliable water management;
- insured versus uninsured catastrophe exposure;
- public contingent liabilities after major events;
- critical infrastructure with climate-resilience standards;
- mangrove and natural-defence condition;
- climate-related fiscal expenditure;
- disaster-recovery time.

Climate investment should also be sequenced with urban expansion. Building new housing or industrial assets in poorly drained areas creates future public liabilities even if the initial construction is

privately financed.

53 Social Protection, Inequality and the Distribution of Resource Wealth

A country can record extraordinary GDP growth while households experience unequal gains. The World Bank's April 2026 Macro Poverty Outlook explicitly notes that progress in poverty reduction is difficult to assess because of data gaps. This makes household measurement a priority rather than a minor statistical issue. [7]

Distribution should be examined across five dimensions: income, consumption, wealth, geography and access to public services.

Cash transfers affect disposable income immediately. Housing and land policies affect household wealth. Free or subsidised education, health, transport, electricity and water affect real consumption even when they do not appear as wages. Regional infrastructure affects opportunity. A complete distributional account should therefore measure more than labour income.

The absence of current poverty data also creates policy risk. Programmes can become universal because targeting information is weak, or remain poorly targeted because vulnerable groups are not visible in administrative systems.

By 2030, Guyana should establish a regular household income and expenditure survey cycle with poverty, inequality and wealth modules. A longitudinal household panel would allow researchers to distinguish temporary income gains from durable mobility.

54 Macroeconomic Policy Under Extreme Growth

Guyana's macroeconomic management problem differs from that of a conventional developing economy. The country is receiving large petroleum-related foreign exchange inflows, large FDI, strong public spending and rapid population and import growth at the same time.

The IMF's 2026 mission continued to emphasise the importance of sound macroeconomic management and institutional strengthening in the context of rapid resource-led growth. The IMF country page also illustrates the importance of forecast vintages: its published 2026 real-growth projection differs from the later domestic mid-year estimate because the information sets are different. [40][2]

Three balances require simultaneous monitoring.

The fiscal balance asks whether public expenditure is sustainable under conservative oil assumptions.

The external balance asks whether foreign exchange inflows, imports, FDI and reserve accumulation remain consistent with financial stability.

The real-resource balance asks whether domestic labour, construction, land and institutions can absorb expenditure without excessive inflation or quality loss.

These balances can move in opposite directions. A government can possess ample cash while the economy faces labour shortages. The current account can be in surplus while official reserves experience other balance-of-payments pressures. Inflation can remain moderate while land prices or construction costs rise rapidly.

This is why a single macro indicator is inadequate for a resource boom of Guyana's scale.

55 The Sovereign Balance Sheet: Assets, Liabilities and Contingent Risks

The NRF is only one part of the public balance sheet. A comprehensive sovereign view includes financial assets, public infrastructure, public debt, guarantees, pension obligations, state-owned enterprises, public-private partnerships, natural resources and contingent liabilities from climate events or financial stress.

A sovereign balance-sheet framework creates a stronger fiscal discipline because it distinguishes borrowing used to create productive assets from borrowing used to finance consumption. It also forces maintenance liabilities into the analysis.

Guyana should move toward an annual public-sector balance-sheet statement showing:

- NRF financial assets;
- cash and deposits;
- debt by currency and maturity;
- major public infrastructure assets;
- state-owned enterprise assets and liabilities;
- guarantees and PPP commitments;
- pension obligations where measurable;
- climate-related contingent liabilities;
- petroleum and mineral resource estimates with clear valuation caveats.

The purpose is analytical, not to imply that roads or oil reserves can be sold to pay debt. The balance sheet reveals intergenerational trade-offs and hidden liabilities more clearly than annual cash accounting.

56 Institutions, Regulation and the Administrative State

Resource wealth increases the quantity of decisions the state must make. Petroleum regulation, environmental permitting, procurement, immigration, taxation, land, competition, public utilities, financial regulation, statistics and social services all face higher workloads.

Institutional capacity should therefore be treated as a stock of capital that depreciates when skilled staff leave, systems are outdated or agencies are overloaded.

The 2030 institutional agenda should emphasise:

- professional civil-service career paths;
- competitive recruitment for scarce technical skills;
- digital case-management systems;
- service standards and processing-time publication;
- independent audit and evaluation;
- beneficial-ownership transparency;
- regulatory data sharing;
- predictable consultation procedures;
- conflict-of-interest rules;
- preservation of institutional memory.

The IDB country strategy for 2023-2026 explicitly identifies resilient infrastructure, human capital and institutional capacity as core priorities. That framing remains relevant because infrastructure and institutions are complements. [14]

57 Statistical Capacity and the Measurement State

A fast-changing economy requires faster statistics. Annual data can become obsolete before publication when population, wages, trade, oil output and construction are changing quickly.

The Bureau of Statistics now publishes a growing range of current indicators, including inflation, labour-market data and external trade. Its 2026 public dashboard reports, among other indicators, H1 2026 provisional exports and imports and a fourth-quarter 2025 unemployment rate near 6 percent. [42]

The next statistical frontier should include:

- quarterly regional economic indicators;
- annual household income and consumption updates;
- business demography;
- property and rent indices;
- construction cost indices;
- wage indices by occupation;
- migration by skill and status;
- service-export statistics;
- public project completion data;
- productivity by sector;
- government balance-sheet statistics;
- environmental-economic accounts.

A statistical system is part of economic infrastructure. Better data reduces policy error, improves private investment decisions and enables independent scrutiny.

58 2030 Annual Milestone Architecture

The period from 2027 to 2030 should be managed as a sequence rather than a distant endpoint. The following milestone architecture is proposed as a research and monitoring framework.

58.1 2027: Capacity Expansion Year

Priority tests should be whether power, transmission, ports, roads, drainage, technical training and public project-management capacity are expanding faster than economy-wide demand. Baseline dashboards for housing, regional accounts, productivity and public assets should be operational.

58.2 2028: Productivity Conversion Year

The focus should move from physical completion toward utilisation and productivity. New roads should show travel-time gains. New power capacity should show reliability and cost gains. Training should show employment outcomes. Local-content firms should show capability progression.

58.3 2029: Export Capability Year

By 2029, sectors targeted for diversification should be producing visible export outcomes. Agriculture, food processing, tourism, digital services, mining services and selected manufacturing should be evaluated by foreign-exchange earnings, market diversification and firm survival rather than project announcements.

58.4 2030: Balance-Sheet Test

The 2030 assessment should compare the petroleum wealth extracted during the decade with the increase in financial, physical, human, enterprise, institutional and natural-capital assets. The strongest success metric is whether real national wealth per capita has risen on a durable basis.

59 A Comprehensive 2030 National Dashboard

The following dashboard is proposed as the headline measurement architecture for the national transformation. No single indicator receives a pass-fail threshold in this edition because baseline definitions and policy targets require official validation.

Domain	Primary 2030 indicators	Why it matters
Petroleum	average production, realised price, government revenue, depletion path	scale and volatility of resource income
Fiscal	structural balance, recurrent coverage, NRF assets, debt service	sustainability
External	non-oil exports, services exports, reserves, FDI composition	foreign-exchange resilience
Productivity	non-oil output per worker, manufacturing productivity, farm yield	durable growth
Labour	participation, unemployment, vacancies, migration by skill	capacity constraint
Education	learning outcomes, TVET completion, tertiary STEM output	future productivity
Health	preventable mortality, access, workforce coverage	human capital
Infrastructure	travel time, electricity reliability, port dwell time	productive efficiency
Housing	price-to-income, rent burden, commute time	household welfare and stability
Enterprise	firm survival, exporter count, domestic value added	local ownership of growth
Finance	productive credit, market depth, NPLs, mortgage exposure	capital allocation
Climate	expected annual loss, drainage performance, insured exposure	resilience
Natural capital	forest cover, carbon revenue, biodiversity indicators	wealth preservation
Inclusion	poverty, inequality, regional service gaps, wealth distribution	broad-based prosperity
Institutions	procurement performance, regulatory time, audit follow-up	state capability

Domain	Primary 2030 indicators	Why it matters
Statistics	data timeliness, survey frequency, open-data coverage	accountability

60 Post-2030 Transition Risk: Preparing Before the Plateau

The most important time to prepare for a petroleum plateau is before it arrives. By the time production stops growing, wage structures, public expectations and recurrent programmes may already reflect years of extraordinary income.

Post-2030 planning should therefore begin during the expansion phase.

Four risks deserve explicit modelling.

Production risk. New projects can be delayed or reserves may be developed on a different schedule than current expectations.

Price risk. Global oil prices can fall materially even when production remains high.

Transition risk. Technology, climate policy and global demand can change long-run petroleum economics.

Fiscal rigidity risk. Recurrent spending and wage commitments can remain high after resource revenue growth slows.

A post-2030 resilience test would ask whether the non-oil primary balance, NRF assets, debt structure and non-oil tax base are sufficient to sustain core public services under a conservative petroleum scenario.

The correct objective is not to predict the exact year of peak production. It is to ensure that no plausible peak date creates a fiscal cliff.

61 Expanded Research Agenda for Universities and Scientific Institutions

A comprehensive Guyana research programme should combine economics with engineering, public health, climate science, ecology, statistics, sociology, political economy, logistics and computer science.

Priority research clusters include:

1. **Resource-economy macroeconomics:** structural fiscal rules, Dutch disease, exchange-rate effects and sovereign asset allocation.
2. **Petroleum depletion and public wealth:** conversion of exhaustible assets into comprehensive wealth.
3. **Climate-resilient coastal systems:** drainage, sea defence, land subsidence, rainfall, flood modelling and urban design.
4. **Agricultural productivity:** crop science, irrigation, soil health, aquaculture, post-harvest systems and export standards.
5. **Forest and biodiversity economics:** carbon markets, biodiversity value, permanence risk and community governance.
6. **Migration and urbanisation:** labour supply, housing, social integration and infrastructure demand.
7. **Health systems:** population growth, non-communicable disease, specialist capacity and health productivity.

8. **Education and skills:** learning outcomes, training returns and occupational forecasting.
9. **Firm dynamics:** local content, productivity, ownership, exporting and technology adoption.
10. **Public investment science:** project selection, procurement, cost overruns, asset utilisation and maintenance.
11. **Regional development:** spatial productivity, transport corridors and hinterland service delivery.
12. **Digital transformation:** AI adoption, cybersecurity, e-government and service exports.

Research should use pre-analysis plans where feasible, publish code and data dictionaries, and distinguish causal inference from descriptive association. The objective is to build a body of evidence that future governments, universities and investors can reproduce rather than rely on one-off consultancy reports.

62 Quantitative Annex: Core Identities and Stress Tests

The following identities provide a reproducible backbone for future updates.

62.1 Petroleum Export Value

$$V_o = Q_o \times P_o$$

where V_o is gross crude export value, Q_o is annual exported barrels and P_o is the realised average price. This is not government revenue.

62.2 Non-Oil Export Concentration

A simple Herfindahl-Hirschman Index can be calculated across non-oil export categories:

$$HHI = \sum_{i=1}^n s_i^2$$

where s_i is each product's share of non-oil export value. A falling HHI, combined with rising non-oil exports, would indicate broader external diversification.

62.3 Structural Recurrent Coverage Ratio

$$RCR = \frac{\text{Non-oil recurrent revenue}}{\text{Recurrent expenditure}}$$

A rising ratio would indicate that permanent public services are becoming less dependent on temporary petroleum revenue.

62.4 Public Asset Productivity

$$PAP = \frac{\Delta Y_{non-oil}}{\Delta K_{public}}$$

This simple ratio should not be interpreted causally without controls, but it provides a starting point for evaluating whether growth in public capital is associated with non-oil productive output.

62.5 Real Wealth Per Capita

$$RWPC_t = \frac{FA_t + PK_t + HC_t + NC_t - L_t}{Population_t}$$

where FA is net financial assets, PK produced capital, HC human capital, NC renewable natural capital measured under a consistent methodology, and L public liabilities. Valuation challenges are substantial, so changes should be reported with sensitivity ranges.

62.6 Export Survival

$$ESR_3 = \frac{\text{Firms exporting in year } t \text{ that also exported in } t-1 \text{ and } t-2}{\text{Exporting firms in year } t-2}$$

A rising three-year exporter-survival rate would indicate increasing firm capability rather than one-off export activity.

63 Quantitative Annex: Data Gaps That Limit Stronger Conclusions

Several questions cannot yet be answered with the precision expected in a mature research system. These gaps are not criticisms of individual agencies. They are priorities created by the extraordinary pace of economic change.

1. Current household poverty and consumption data are insufficient for a precise distributional reading of the boom. [7]
2. Population estimates vary by source and reference date, affecting per-capita calculations. [2][9]
3. Regional GDP and productivity estimates are limited.
4. Firm-level productivity, survival and export data are not yet published as an integrated business-demography system.
5. Property prices and rents lack a comprehensive national transaction index.
6. Public infrastructure asset values, condition and utilisation are not available in one consolidated balance sheet.
7. Service exports are harder to separate by petroleum linkage than merchandise exports.
8. Occupational vacancy and wage data are not sufficiently granular for real-time skill forecasting.
9. Climate contingent liabilities and expected annual loss are not integrated into the fiscal framework.
10. Local-content invoice values do not fully reveal domestic value added or capability transfer.

A comprehensive 2030 monitoring system should treat closing these gaps as a development outcome in its own right.

64 Petroleum Economics: From Reservoir to National Income

Petroleum affects Guyana through several transmission channels that should be analysed separately. Conflating them produces weak conclusions about national income and fiscal capacity.

The first channel is **physical production**. Production depends on field development, FPSO capacity, reservoir performance, maintenance, project schedules and operational uptime. Announced nameplate capacity is an engineering ceiling under stated conditions, not a guarantee of average annual output.

The second channel is **export value**. Export receipts depend on the volume sold and realised price. Price benchmarks, quality differentials, cargo timing and marketing arrangements affect realised value. Gross crude export value belongs to the national external account, but it is not equivalent to the state's share of revenue.

The third channel is **company cash flow**. Contractors recover eligible development and operating costs, pay suppliers, service financing obligations and distribute returns under applicable contractual and tax arrangements. The timing of cost recovery changes the relationship between gross sales and government receipts.

The fourth channel is **government revenue**. Royalties, profit-oil allocation, taxes where applicable, interest or other receipts, and transfers into the NRF determine the fiscal flow. Government revenue therefore has a different volatility profile from gross crude exports.

The fifth channel is **domestic demand**. Offshore operations purchase local goods and services, employ workers, rent property, use ports, consume professional services and create local-content demand. This channel raises non-oil GDP but also creates dependence on petroleum-linked activity.

The sixth channel is **asset conversion**. NRF savings, public infrastructure and human-capital expenditure determine whether the temporary petroleum stream becomes a lasting national balance-sheet improvement.

A scrutiny-grade petroleum model should therefore maintain at least six separate time series: production, gross export value, petroleum-sector GDP, government petroleum revenue, NRF inflows and petroleum-linked domestic procurement. These variables answer different questions.

64.1 Depletion and the Difference Between Income and Asset Sale

National accounts record petroleum production as current output, yet part of the associated cash flow reflects depletion of a nonrenewable asset. This is why conventional GDP can overstate the amount of income that can be consumed indefinitely.

The economic concept of adjusted net saving provides one way to think about the issue. Resource depletion reduces natural wealth while investment in produced and human capital increases other forms of wealth. Guyana's policy challenge is to keep total wealth per capita rising even as petroleum reserves are extracted.

This perspective changes the interpretation of fiscal surpluses and deficits. A balanced cash budget can still reduce national wealth if resource revenue is consumed without creating replacement assets. Conversely, a fiscal deficit can be consistent with wealth accumulation if borrowing finances high-return infrastructure and the sovereign balance sheet remains strong. The quality of assets and liabilities matters.

64.2 Petroleum Price Stress Testing

A robust fiscal framework should not rely on one oil-price path. At minimum, the annual budget process should publish stress tests under low, central and high price assumptions, with an additional severe downside case.

The stress test should show:

- petroleum revenue;
- NRF inflow;
- permissible or planned withdrawal;
- fiscal balance;
- borrowing need;
- debt service;
- recurrent spending coverage;

- major capital-project financing;
- foreign-reserve implications;
- effect on the non-oil economy.

The objective is not to predict oil prices. It is to reveal which spending commitments remain affordable under adverse prices.

65 Natural Resource Fund Architecture and Intergenerational Economics

The NRF should be evaluated through three separate lenses: governance, macroeconomic stabilisation and intergenerational wealth.

Governance concerns the legal rules, reporting, custody, investment process and accountability of the fund.

Stabilisation concerns whether withdrawals and savings help prevent public spending from moving one-for-one with volatile petroleum revenue.

Intergenerational wealth concerns whether financial assets accumulate sufficiently to provide income after production declines.

These objectives can conflict. Large domestic development gaps create a strong case for investment now, while future generations create a strong case for saving. The optimal allocation therefore depends on the expected return on domestic public investment relative to financial saving, adjusted for execution risk, maintenance, congestion and macroeconomic overheating. [37][38]

A useful decision rule is the **marginal conversion test**. An additional dollar should be spent domestically only when the expected social return, after adjustment for implementation risk and absorptive constraints, exceeds the risk-adjusted return from retaining the dollar in financial assets. This is conceptually stronger than a fixed savings ratio because the return to domestic investment changes as infrastructure gaps close and project congestion rises.

The test also implies a sequencing rule. Early resource income might rationally finance high-return capacity-expanding investments. As basic infrastructure improves and the marginal return falls, a larger share of revenue could be saved. The correct path is therefore dynamic rather than fixed.

66 Fiscal Institutions: Building a Budget That Survives Oil Volatility

A resource-rich budget requires stronger separation between permanent and temporary revenue. Four fiscal anchors deserve study.

66.1 Anchor 1: Structural Non-Oil Primary Balance

This measures the fiscal position excluding petroleum revenue and interest. It reveals how much the non-oil economy would need to finance if petroleum receipts disappeared.

66.2 Anchor 2: Permanent-Income Benchmark

This converts expected petroleum wealth and financial assets into a sustainable annual spending amount. It is conservative but sensitive to assumptions about reserves, prices, discount rates and population.

66.3 Anchor 3: Expenditure-Growth Rule

This limits the annual growth of primary spending to an estimate of long-run non-oil growth plus a policy margin. It is easier to communicate but can be too rigid during major infrastructure catch-up.

66.4 Anchor 4: Debt-and-Asset Rule

This treats gross debt and sovereign financial assets together, with limits on net debt and explicit rules for borrowing when the NRF is large.

No single anchor is sufficient. A combined framework could use a structural non-oil balance for transparency, an expenditure-growth ceiling for operational control and a sovereign balance-sheet indicator for intergenerational sustainability.

67 Debt Strategy in a Resource-Rich Economy

Low debt distress risk does not eliminate the need for debt strategy. Borrowing can be economically rational when long-term infrastructure yields returns above financing cost and when project execution is strong. It can also become inefficient if public institutions borrow while large financial assets accumulate without a clear asset-liability rationale.

A 2030 debt strategy should disclose:

- currency composition;
- fixed versus floating interest exposure;
- average maturity;
- refinancing profile;
- debt-service-to-revenue ratio;
- external versus domestic debt;
- guaranteed debt and state-owned enterprise obligations;
- debt-financed project performance;
- net debt after liquid sovereign financial assets.

Foreign-currency borrowing deserves particular attention. Petroleum exports generate foreign exchange, but future non-oil revenues are mainly domestic. Debt sustainability therefore should be stress-tested against both oil-price declines and exchange-rate changes.

68 Monetary Policy, Exchange-Rate Management and Competitiveness

The Bank of Guyana reported end-2025 inflation of 2.5 percent and a weighted market mid-rate of G\$218.30 per US dollar compared with G\$214.92 in 2024, while the Bank of Guyana mid-rate remained G\$208.50. [6] The distinction between an official reference rate and rates observed across banks and cambios matters for firms facing foreign-exchange demand. These observations illustrate why nominal stability and competitiveness are different questions.

A resource boom can produce real appreciation even with a stable nominal exchange rate. Domestic wages and prices rise relative to trading partners, making non-oil exports less competitive. The real effective exchange rate therefore matters more for diversification than the bilateral nominal rate alone.

Monetary analysis should also distinguish consumer-price inflation from asset inflation. Housing, land and construction costs can rise rapidly while the CPI remains contained. Credit conditions can amplify these asset-price channels.

By 2030, the macro dashboard should include a published real effective exchange rate, property-price index, construction-cost index, wage index and unit-labour-cost measure alongside CPI inflation.

69 The External Account and Foreign-Exchange Liquidity

Large oil exports create headline current-account surpluses, but the petroleum sector also imports capital equipment, services and financial flows. The balance of payments therefore needs sector decomposition.

The first half of 2026 illustrates the point: a large current-account surplus coexisted with an overall balance-of-payments deficit and official reserves near US\$1.06 billion at end-June. [36]

For resilience, policymakers should monitor:

- current-account balance excluding petroleum;
- non-oil import cover;
- official reserves relative to short-term external liabilities;
- profit repatriation;
- FDI by sector and project stage;
- private external debt;
- petroleum-sector imports;
- service-import dependence;
- export receipts retained or converted domestically.

A current-account surplus created by oil exports does not automatically imply abundant foreign-exchange liquidity across the domestic banking system. Institutional channels matter.

70 Banking, Insurance and Systemic Risk Under Rapid Asset Growth

Rapid growth changes financial risk faster than annual supervisory ratios can reveal. Property values rise, collateral becomes more valuable, borrower incomes increase and default rates can remain low during the upswing. These conditions can make leverage appear safer than it will be after growth normalises.

Macroprudential monitoring should therefore include forward-looking stress tests for:

- commercial real estate;
- residential mortgages;
- construction companies;
- consumer lending;
- government contractors;
- foreign-currency exposures;
- insurance catastrophe risk;
- concentration in a small number of large borrowers.

Stress tests should examine a combined shock where oil prices fall, public capital spending slows, construction activity weakens and property prices correct. This compound scenario is more informative than an isolated interest-rate shock.

71 Ports, Maritime Services and Offshore-Sector Spillovers

The offshore petroleum industry is creating marine demand in logistics, fabrication, supply vessels, warehousing, inspection, catering, environmental services and technical support. These activities can become an exportable capability if firms move beyond a single domestic customer base.

The 2030 test is whether Guyana becomes a regional marine-services hub or remains primarily a consumption point for imported offshore services.

A marine-economy scorecard should track local technical employment, port throughput, vessel turn-around, fabrication capability, certification, dry-dock or repair capacity, service exports, safety performance and regional contracts won by Guyanese firms.

The sector also raises land-use and environmental questions along river corridors. Port expansion, housing, road traffic and industrial sites need integrated planning to avoid congestion and ecological damage.

72 Construction: Managing the Boom and the Eventual Normalisation

Construction is one of the most visible beneficiaries of petroleum-era demand. Public roads, bridges, housing, hospitals, schools, energy infrastructure, private offices, hotels and industrial sites all compete for labour and materials.

This creates a classic boom-cycle risk. Firms expand equipment fleets and payrolls to meet peak demand. If the public investment cycle moderates after major projects are completed, capacity utilisation can fall sharply.

The policy goal should therefore be to convert construction capability into an infrastructure-services industry. Firms should develop engineering, maintenance, project management, surveying, digital design and regional contracting capabilities transferable beyond the domestic building boom.

A construction normalisation strategy should monitor order books, equipment financing, sector credit, imported materials, vacancy rates, wage growth, tender participation and regional export opportunities.

73 Agriculture Deep Dive: Rice, Sugar, Livestock, Horticulture and Aquaculture

73.1 Rice

Rice remains one of Guyana's established export industries. The productivity frontier lies in seed technology, precision water management, milling efficiency, energy use, quality differentiation, logistics and market diversification. Climate resilience is inseparable from competitiveness because drainage and irrigation reliability determine yield stability.

73.2 Sugar

Sugar should be evaluated through field yield, factory recovery, labour productivity, product mix and market value rather than acreage or employment alone. Higher-value products, co-products and energy integration can improve economics, but each requires commercial validation.

73.3 Livestock

Livestock development depends on breeding, feed systems, veterinary surveillance, processing, cold chain and biosecurity. Regional market access requires sanitary and phytosanitary systems credible enough to support consistent exports.

73.4 Horticulture

High-value fruits and vegetables offer stronger income per hectare but face perishability and consistency constraints. Contract farming, aggregation, cold storage, grading and air or sea logistics become decisive.

73.5 Aquaculture and Fisheries

Aquaculture can diversify protein production and exports, but water quality, feed cost, disease, hatchery quality and processing standards determine competitiveness. Wild fisheries require sustainable stock management.

The cross-cutting lesson is that agriculture is a logistics and standards business as much as a farming business.

74 Mining Deep Dive: Gold, Bauxite and Critical-Mineral Optionality

Gold and bauxite provide a non-petroleum export base, but the development objective should extend beyond extraction volume.

For gold, formalisation, recovery efficiency, mercury reduction, geological data, safety, reclamation and transparency are key productivity and governance variables. For bauxite, transport, energy, processing economics and market demand determine whether additional value addition is feasible.

Guyana should also maintain a modern geological-information system for broader mineral potential. The policy objective is not to rush into every possible mineral. It is to reduce geological uncertainty, strengthen licensing transparency and position the country to evaluate future opportunities on economic and environmental merit.

75 Forest Economy Deep Dive: Carbon, Timber, Biodiversity and Community Enterprise

The forest economy has four distinct revenue models.

Carbon services reward avoided emissions or verified forest stewardship.

Sustainable timber monetises renewable material under managed harvesting.

Biodiversity and ecosystem finance may create future revenue streams, although standards and markets are less mature.

Community enterprise and tourism convert intact ecosystems into local income through services and products.

These models should not be aggregated without care. Carbon credits create contingent contractual revenue. Timber creates commodity revenue. Biodiversity markets remain experimental. Tourism depends on visitor demand and access. Each has a different risk profile.

LCDS 2030 reports substantial carbon payments and a dedicated share for Indigenous villages and communities. [41] Future research should focus on project outcomes from these transfers: enterprise survival, household income, infrastructure quality, education, resilience and environmental performance.

76 The Hinterland Economy and Inclusive Spatial Transformation

The hinterland should not be evaluated as a smaller version of the coast. Distance, density, cultural institutions, land tenure and ecosystem dependence make its development economics different.

High fixed costs make conventional grid infrastructure, specialist health services and large schools harder to provide at urban unit cost. Digital public services, telemedicine, distributed energy, satellite connectivity, air transport and mobile service delivery therefore have higher relative value.

Development should also preserve local decision-making and cultural institutions. Community-managed carbon revenue under the LCDS offers a natural research laboratory for decentralised development finance. [41]

A hinterland prosperity index could combine household income, travel time to essential services, digital connectivity, school attendance, health outcomes, local enterprise, food security and environmental condition.

77 Gender, Youth and Labour-Force Participation

Aggregate employment data can conceal unequal access to opportunity. A comprehensive 2030 framework should therefore track employment, wages, entrepreneurship and skills outcomes by sex and age.

Policies that expand childcare, transport safety, flexible work, digital employment and professional training can raise labour-force participation while also relieving economy-wide labour shortages.

Youth policy should focus on transition from education to work. Apprenticeships, internships, technical certification and first-job programmes should publish placement and earnings outcomes. A rapidly growing economy should reduce the time young people spend disconnected from both education and employment.

78 Diaspora Economics

Guyana's diaspora is a potential source of skills, capital, market access and institutional knowledge. Remittances are only one channel.

A 2030 diaspora strategy could include:

- temporary return fellowships for doctors, engineers, academics and public-sector specialists;
- diaspora investment vehicles with strong governance;
- export-market mentoring for Guyanese firms;
- recognition of overseas qualifications;
- research partnerships;
- entrepreneurship programmes;
- structured public-service secondments.

The key is to lower the transaction cost of engagement. Diaspora programmes should be measured by investment, skills transfer, business formation and research outputs rather than event participation.

79 Digital Government and Administrative Productivity

Digital government has economic value when it reduces time, uncertainty and compliance cost.

Priority systems include business registration, tax filing, customs, permits, land records, procurement, work permits, professional licensing, social protection and public project reporting.

The strongest metric is transaction time. A digital service that reproduces a slow manual process on a screen has limited productivity value.

By 2030, major government services should publish end-to-end processing time, rejection reasons, appeal outcomes, digital completion rates and user satisfaction. Data interoperability should reduce repeated submission of the same information across agencies.

Cybersecurity becomes more important as government systems become interconnected. Resilience therefore requires identity management, backups, incident response, network segmentation and tested continuity plans.

80 National Risk Register to 2030

The following register identifies risks that should be monitored at cabinet, central-bank, regulatory, corporate and research levels. It does not assign probabilities because public evidence is insufficient for defensible numerical estimates.

Risk	Early signal	Main transmission	Principal resilience response
Oil price collapse	sustained benchmark decline	fiscal revenue, FDI, confidence	structural budget, buffers, project reprioritisation
Offshore project delay	schedule slippage	growth and revenue timing	conservative fiscal baseline
Reservoir underperformance	lower production trend	exports and revenue	diversified revenue assumptions
Construction overheating	tender inflation, wage spikes	project cost and quality	sequencing, capacity expansion
Property-price correction	falling transactions, arrears	banks and households	macroprudential buffers
Labour shortage	vacancy duration rises	wage cost, delays	training and migration
Skills mismatch	vacancies with unemployment	productivity	employer-linked training
Power delay	project slippage, outages	industrial cost	diversified generation and grid investment
Grid bottleneck	connection delays	firm investment	transmission and distribution upgrades
Flood event	rainfall and drainage stress	households, agriculture, fiscal costs	adaptation and insurance
Drought	low water availability	agriculture and power	storage, irrigation, planning
Food-price spike	import and crop pressure	household welfare	supply response and targeted support
Exchange-market stress	widening spreads	import cost and confidence	liquidity monitoring

Risk	Early signal	Main transmission	Principal resilience response
Reserve pressure	falling reserve cover	external stability	macro adjustment and liquidity planning
Bank credit concentration	property/construction share rises	systemic risk	sector limits and stress tests
Contractor failure	delayed public projects	fiscal and infrastructure execution	due diligence and bonding
Procurement overload	tender delays	productivity loss	portfolio sequencing
Maintenance backlog	asset condition worsens		lifecycle budgeting
Health workforce shortage	vacancy and wait times	human capital	training and recruitment
Teacher shortage	class size and vacancies	learning outcomes	retention and training
Migration surge	housing and school pressure	urban congestion	population-responsive planning
Migration slowdown	vacancy pressure	project delays	productivity and automation
Export concentration	oil share rises	vulnerability	non-oil export strategy
Tourism dependence on business travel	leisure share weak	post-boom demand	destination development
Local-content stagnation	procurement share without productivity	weak capability transfer	performance metrics
Cyberattack	incident frequency	government and financial disruption	national cyber resilience
Statistical lag	outdated baselines	policy error	high-frequency data
Carbon-market weakness	lower prices or methodology change	LCDS revenue	diversified forest finance
Regional trade disruption	border or logistics interruption	exports and imports	route diversification
Institutional turnover	loss of technical staff	project and regulatory quality	professional career systems

The value of the register lies in linking observable signals to transmission channels. A risk framework that lists threats without indicators cannot support early action.

81 A 2030 Resilience Reserve-Margin Concept

Critical infrastructure systems need spare capacity. Electricity systems use reserve margins because operating exactly at expected demand leaves no room for outage or demand surprise. The same logic can be extended cautiously to economic systems.

Guyana should consider resilience margins in four areas:

- **fiscal margin:** expenditure remains affordable under conservative oil revenue;
- **labour margin:** critical occupations have training and migration pipelines larger than expected vacancies;
- **infrastructure margin:** power, ports, drainage and digital networks retain spare capacity;
- **institutional margin:** procurement and regulatory agencies are staffed above minimum steady-state workloads during the investment boom.

The objective is not wasteful excess capacity. It is to recognise that an economy undergoing structural change requires buffers because forecasts will be wrong.

82 A National Transformation Scorecard for 2030

The final evaluation should separate **scale**, **quality**, **resilience** and **distribution**.

82.1 Scale

How large are GDP, public assets, NRF assets, exports, energy supply, housing stock and infrastructure networks?

82.2 Quality

How productive are workers, firms and public assets? Are education and health outcomes improving? Do roads, hospitals and power systems perform reliably?

82.3 Resilience

How exposed is the economy to oil prices, climate events, construction cycles, import dependence, financial concentration and institutional overload?

82.4 Distribution

Who owns assets, who receives income, which regions gain access, and do poverty and inequality decline?

A country can score strongly on scale while weakly on quality or distribution. The 2030 assessment should therefore publish all four dimensions rather than compress them into one composite ranking.

83 Extended Limitations and Boundary Conditions

A comprehensive report also requires explicit boundaries.

First, the paper is not a reserve audit, petroleum engineering assessment or independent fiscal-model replication of individual production-sharing agreements. Publicly available production, project and fiscal information is used for macroeconomic analysis only.

Second, several 2026 figures are preliminary or official estimates. They should be replaced with final data in future editions.

Third, large public investment programmes create attribution problems. Non-oil growth observed during the boom cannot be cleanly separated into petroleum-linked demand, productivity improvement and autonomous private-sector expansion without firm-level and input-output data.

Fourth, household welfare cannot be inferred from GDP growth because current poverty and consumption data are incomplete. [7]

Fifth, climate risk contains deep uncertainty. Historical flood frequencies may understate future risk under changing rainfall, sea-level and land-use conditions.

Sixth, 2030 petroleum output remains dependent on project execution, reservoir performance and commercial decisions. Operator statements are scenarios, not guarantees.

Seventh, population and migration estimates remain fluid. Per-capita indicators are therefore sensitive to denominator choice. [9]

Eighth, regional output data are limited, constraining spatial productivity analysis.

Ninth, asset valuation for comprehensive wealth accounting requires assumptions that can materially change results. The report therefore recommends ranges rather than false precision.

Tenth, the political economy of reform cannot be fully represented by technical models. Rules operate through institutions, incentives and public legitimacy.

84 Regional Profiles for 2030 Research

84.1 Region 1: Barima-Waini

Region 1 combines forest resources, agriculture, fisheries, Indigenous communities, river systems and proximity to Venezuela. Its economic problem is high logistics cost rather than absence of productive opportunity. Investments in transport, digital connectivity, distributed energy, cold storage and local processing can raise the value retained from agriculture and fisheries. Tourism has potential where transport reliability, accommodation quality and environmental management improve. Research should track household travel time, freight cost, enterprise density, service access and the share of production processed within the region.

84.2 Region 2: Pomeroon-Supenaam

Region 2's agricultural base creates opportunities in rice, coconut, fisheries, agro-processing and specialised food products. Water management is a binding economic variable. Drainage failures destroy working capital and reduce the expected return on private farm investment. A 2030 strategy therefore needs to connect drainage, irrigation, farm roads, storage, processing and market access as one production system. Tourism linked to the Essequibo coast and river network adds a second service-export opportunity.

84.3 Region 3: Essequibo Islands-West Demerara

Region 3 is becoming more integrated with the national urban economy through major transport infrastructure and housing expansion. This creates substantial land-value, residential and industrial opportunity. It also creates congestion and planning risk. The region's 2030 challenge is to avoid becoming a dormitory expansion zone disconnected from employment and services. Industrial sites, logistics, agriculture, schools, health services and transport should be planned jointly with housing. Land-price and commute-time monitoring are especially important.

84.4 Region 4: Demerara-Mahaica

Region 4 is the administrative, commercial, financial and service centre of the country. Its productivity depends on the quality of urban systems. Traffic, drainage, land use, waste management, office space, ports, digital connectivity and public-service efficiency affect the national economy because so many high-value activities are concentrated here. The region should increasingly specialise in knowledge-intensive services, finance, professional services, government, technology and higher education while logistics and some industrial activities disperse to less congested areas.

84.5 Region 5: Mahaica-Berbice

Region 5's comparative strengths are tied to agriculture and food systems. Its 2030 opportunity lies in increasing productivity and processing rather than simply expanding acreage. Drainage, irrigation, storage, farm mechanisation, livestock, feed, processing and logistics should be treated

as a connected value chain. Climate adaptation has a direct economic return because the region's productive base is highly exposed to water-management performance.

84.6 Region 6: East Berbice-Corentyne

Region 6 has agricultural depth, historic industrial assets, towns with service capacity and geographic proximity to Suriname. A stronger Berbice economy would combine agriculture, agro-processing, manufacturing, regional trade, energy-related activity and logistics. Demographic renewal matters because migration and an ageing workforce can weaken local enterprise continuity. The region should be monitored for business formation, border trade, industrial investment, agricultural productivity and skilled-worker retention.

84.7 Region 7: Cuyuni-Mazaruni

Region 7's economy is strongly influenced by mining, tourism, forestry and transport services. Rapid mining-linked growth can raise incomes while increasing environmental and settlement pressures. The policy objective should be to retain more service value locally and reduce environmental damage. Technical mining services, equipment maintenance, environmental monitoring, hospitality and transport can create a broader regional economy. Research should link mining activity to water quality, health, housing, enterprise formation and rehabilitation outcomes.

84.8 Region 8: Potaro-Siparuni

Region 8 has low population density, mineral activity, significant natural assets and tourism potential. Conventional infrastructure is expensive per resident, making digital connectivity, aviation, distributed energy and mobile public services important. The region offers a strong case for evaluating development through access and welfare rather than infrastructure quantity. Travel time to healthcare, school connectivity, reliable energy, local enterprise and environmental integrity are suitable indicators.

84.9 Region 9: Upper Takutu-Upper Essequibo

Region 9 has strategic importance because of its savannah ecology, agriculture, livestock, tourism and Brazil-facing geography. Improved road connectivity can change the region's economic scale by lowering transport cost to coastal and Brazilian markets. Yet infrastructure expansion also raises land-use, biodiversity and settlement questions. Water availability, livestock systems, farm productivity, customs efficiency and freight volume should be monitored together.

84.10 Region 10: Upper Demerara-Berbice

Region 10 possesses a mining and industrial heritage centred on Linden and surrounding communities. Its 2030 challenge is industrial renewal. Lower-cost reliable energy, logistics improvements, skills, manufacturing, mining services and digital activity can support diversification. The region also has a role in national transport corridors. Successful renewal should be measured by private investment, employment productivity, new firm formation and exportable services rather than public projects alone.

85 Scenario Quantification Framework

The existing scenarios in this study are qualitative by design. Future editions should progressively quantify them through a transparent macro-fiscal model. The following framework sets out the minimum variables required.

85.1 Exogenous Variables

- Brent or realised Guyana crude price;
- petroleum production volume;
- petroleum project start dates;
- global growth;
- import prices;
- global interest rates;
- major climate-shock assumptions.

85.2 Policy Variables

- NRF withdrawal;
- public capital expenditure;
- public wage growth;
- tax policy;
- borrowing;
- migration policy;
- energy pricing;
- social transfers.

85.3 Endogenous Outcomes

- real oil and non-oil GDP;
- inflation;
- construction cost;
- labour demand and wages;
- imports;
- current account;
- official reserves;
- fiscal balance;
- public debt;
- NRF balance;
- household disposable income;
- poverty under alternative distributional assumptions.

A model should explicitly include capacity constraints. If public investment rises beyond available construction capacity, the model should allow a higher share of spending to appear as cost inflation and imports rather than real capital formation.

86 Four 2030 Macro-Fiscal Reference Cases

The following cases are deliberately stylised. They show how the same petroleum endowment can produce different national outcomes.

86.1 Reference Case A: High Oil, High Conversion

Oil prices remain supportive, projects broadly follow planned schedules, and public investment execution improves. Electricity and transport constraints ease, non-oil exports expand, and part of the resource windfall accumulates in financial assets. This produces the strongest national balance sheet but still requires restraint because high oil income can intensify wage and land-price pressure.

86.2 Reference Case B: High Oil, Low Conversion

Petroleum revenue is high, but public projects experience cost escalation, maintenance is weak and domestic tradable productivity lags. GDP and consumption remain high through 2030, yet the economy becomes more dependent on imports and petroleum-linked services. This is the clearest example of why headline prosperity can coexist with weak structural transformation.

86.3 Reference Case C: Lower Oil, Strong Institutions

Oil prices fall below central expectations, but the budget is based on conservative assumptions, investment is reprioritised, the NRF preserves buffers, and non-oil reforms continue. Growth slows, yet macro stability is maintained. This case tests institutional resilience rather than boom maximisation.

86.4 Reference Case D: Lower Oil, Rigid Spending

Oil prices weaken while recurrent commitments and capital plans remain difficult to adjust. Borrowing increases, project arrears emerge, private contractors face delayed payments and the financial system experiences stress. This case demonstrates why fiscal flexibility needs to be built before a shock.

87 Public Investment Portfolio Taxonomy

Not all capital spending has the same macroeconomic function. A comprehensive portfolio should classify projects into five categories.

Capacity-expanding infrastructure: power, transmission, ports, drainage, major transport and digital networks. These raise the economy's ability to absorb later investment.

Human-capital infrastructure: schools, universities, hospitals, laboratories and training facilities. Returns depend heavily on staffing and operating systems.

Productivity infrastructure: farm roads, cold chains, industrial sites, logistics facilities, water systems and research infrastructure tied to productive sectors.

Social and spatial infrastructure: housing, community facilities, urban renewal and regional service access.

Administrative infrastructure: digital government, public data systems, regulatory platforms and state capacity.

The portfolio should be evaluated for balance. A country can overinvest in visible physical assets while underinvesting in the operating systems that make them productive.

88 Maintenance and Lifecycle Economics

The first generation of petroleum-financed infrastructure will still require maintenance after the petroleum boom matures. Maintenance therefore creates a hidden recurrent liability.

Every major asset should have a lifecycle-cost estimate at approval. This includes routine maintenance, periodic rehabilitation, staffing, energy use, spare parts and eventual replacement. The capital budget should not treat construction cost as the full fiscal cost.

A national maintenance ratio could compare annual preventive-maintenance expenditure with the estimated replacement value of public assets. The correct ratio differs by asset class, but publishing the measure would expose systematic underfunding.

89 Procurement and Local Industry Interaction

Public procurement can develop domestic firms, but only when capability and competition are preserved. Excessive fragmentation of contracts can reduce efficiency, while excessive concentration can prevent local firms from progressing.

A procurement-development framework should identify which contract packages are suitable for domestic supplier development, which require international expertise, and where joint ventures offer genuine technology transfer. Contract performance data should feed back into future qualification decisions.

90 Household Balance Sheets and Financial Security

Household prosperity should be measured through assets and liabilities as well as income.

A household balance-sheet survey would record housing, land, savings, pensions, business ownership, vehicles, financial assets, mortgages, consumer debt and informal obligations. This would reveal whether petroleum-era income gains are being converted into household wealth or offset by rising debt and housing costs.

Wealth distribution can differ sharply from income distribution. A family with moderate wages but valuable land may be wealthier than a higher-income renter. Public policy needs both measures.

91 Cost of Living and the Real Wage Test

Nominal wage growth is not sufficient evidence of improved welfare. Real wages should be adjusted for the consumption basket faced by different household types.

Housing, food, transport, electricity, education and healthcare costs can move differently from the headline CPI. A low-income household has a different inflation experience from a high-income household if food and rent rise faster than discretionary services.

Guyana should therefore consider household-specific cost-of-living indices and regional price monitoring. The strongest social test is whether median disposable income after housing and essential costs rises in real terms.

92 Productivity of the Public Service

The public service itself is a major production system. Its outputs are permits, security, education, health, regulation, procurement, tax administration and public policy.

Rapid fiscal expansion can increase staffing and salaries without automatically increasing productivity. Digitalisation, process redesign, management systems and performance measurement should therefore accompany workforce growth.

A public-service productivity programme could publish service volumes and processing times per employee for selected high-volume functions, while recognising that complex regulatory and social services cannot be reduced to simple output counts.

93 A Research Protocol for 2030 Retrospective Evaluation

When 2030 arrives, the transformation should be evaluated against pre-specified questions rather than retrospective narratives.

Researchers should compare 2026 baselines with 2030 outcomes for:

- real non-oil GDP per capita;
- non-oil exports per capita;
- real median household disposable income;
- poverty and inequality;
- labour productivity;
- public asset condition;
- electricity cost and reliability;
- logistics time and cost;
- education and health outcomes;
- NRF assets per capita;
- net public debt;
- firm survival and export persistence;
- regional service gaps;
- forest cover and climate resilience.

Where data permit, counterfactual methods should estimate how much improvement reflects resource-financed policy rather than global conditions or pre-existing trends. Synthetic controls, difference-in-differences, firm panels and project-level cost-benefit evaluation may all contribute.

The 2030 review should also publish failures. Development learning requires identifying projects, policies and assumptions that did not perform as expected.

94 Scenario Architecture for 2030

Forecasting a resource-rich economy four years ahead with a single point estimate creates false precision. This paper instead uses a scenario architecture. Each scenario isolates a mechanism. Compound scenarios then combine mechanisms likely to interact.

94.1 Scenario 1: Balanced Transformation

Oil production expands broadly in line with announced project schedules. Oil prices remain neither depressed nor unusually high. Public investment remains large but becomes more selective as major infrastructure gaps close. Electricity costs fall, logistics improve and skills supply rises through training and migration. Non-oil real growth averages around 7 percent from 2026 to 2030, consistent with the broad medium-term order of magnitude identified by IMF staff in 2026. [40]

In this scenario, construction growth normalises gradually rather than collapsing. Manufacturing and agriculture gain from lower utility and logistics costs. Tourism expands through better air-lift and room stock. Service exports rise. NRF assets continue to accumulate despite significant withdrawals. Inflation remains manageable because supply capacity expands alongside demand.

The main success indicator is not headline GDP. It is a steady rise in non-oil exports, labour productivity, financial assets, infrastructure quality and human-development outcomes.

94.2 Scenario 2: Oil-Rich, Capacity-Constrained

Petroleum receipts remain strong, but the economy struggles to absorb public and private investment. Construction labour, engineering services, aggregate, cement, equipment and project-management capacity become scarce. Wages and project costs rise faster than productivity. Import demand increases. Public projects experience delays and cost escalation.

Non-oil GDP still grows because spending remains high, yet tradable sectors lose competitiveness. Agriculture and manufacturing face labour competition from construction and services. The nominal exchange rate stays stable while the real exchange rate appreciates through domestic wages and prices.

This scenario produces high measured income without equivalent structural transformation. The warning signs are rising construction-cost indices, widening project delays, falling non-oil export shares and persistent vacancies in technical occupations.

94.3 Scenario 3: Diversification Breakthrough

Energy, transport, digital systems and workforce policies begin to reinforce each other. Lower electricity cost improves agro-processing, manufacturing, cold storage and digital services. Better ports and transport corridors reduce export friction. Guyanese firms that entered petroleum supply chains expand into regional markets. Tourism develops higher-value segments. Agriculture shifts toward greater processing and contract-based regional sales.

Non-oil growth becomes less dependent on government construction. Export complexity rises. Private investment increasingly targets sectors with external markets rather than sectors serving domestic resource-driven demand.

This is the highest-quality growth scenario because the economy develops additional engines before petroleum output reaches maturity.

94.4 Scenario 4: Low Oil Price, Strong Institutions

Oil averages around US\$45 per barrel for a sustained period. Petroleum export value falls sharply relative to a US\$65 or US\$85 environment. NRF inflows and fiscal space weaken. The government responds through expenditure prioritisation, protects high-return capital projects, limits growth in permanent recurrent commitments and uses buffers rather than abrupt procyclical cuts.

The economy slows, but financial stability and core development programmes remain intact. This scenario tests whether fiscal institutions are stronger than the commodity cycle.

The key lesson is that resilience is visible during stress rather than during a boom.

94.5 Scenario 5: Low Oil Price, Rigid Expenditure

The same oil-price shock occurs, but recurrent commitments and large projects remain difficult to adjust. Borrowing rises, payment delays increase or capital spending is cut indiscriminately. Private confidence weakens. Construction contracts abruptly. Banks face weaker borrowers in sectors dependent on public spending.

This is the classic procyclical resource-state risk. The solution lies in medium-term expenditure rules, project ranking, fiscal buffers and clear distinction between temporary resource income and permanent spending obligations.

94.6 Scenario 6: High Oil Price and Overheating

Oil prices remain above the planning baseline and revenue rises faster than expected. The immediate temptation is faster expenditure. Yet the economy's supply response is limited by labour and infrastructure. Imports surge, wage competition intensifies and housing costs rise. Additional nominal spending produces progressively smaller real gains.

The appropriate response in this scenario is not austerity. It is greater saving at the margin, faster capacity-building and stricter project sequencing. The IMF's 2026 mission made a related point by advising that a larger share of unexpectedly high oil revenue be saved when absorptive capacity is constrained. [40]

94.7 Scenario 7: Oil Project Delay

A major offshore development is delayed by technical, regulatory, supply-chain or market factors. Export and fiscal assumptions shift by one or two years. A well-designed medium-term fiscal framework absorbs the timing shock without destabilising essential programmes.

This scenario demonstrates why expenditure plans should not rely mechanically on a single production timetable.

94.8 Scenario 8: Accelerated Petroleum Development

Additional sanctioned developments raise production faster than conservative institutional baselines. GDP, exports and NRF inflows exceed earlier projections. The upside also intensifies labour, import, infrastructure and governance pressure.

The development challenge therefore becomes harder, not easier. More revenue increases the value of disciplined prioritisation.

94.9 Scenario 9: Construction Normalisation

After several years of exceptional public and private building activity, major projects move from construction into operation. Construction growth slows toward a more normal pace. A weaker

headline non-oil growth number might look negative even if the economy is becoming healthier.

The key question is where workers, firms and capital migrate next. If construction capability shifts toward housing, maintenance, industrial facilities and regional contracting, normalisation becomes structural maturation rather than recession.

94.10 Scenario 10: Housing and Land Price Surge

Income growth, migration and infrastructure improvements raise urban and peri-urban land values sharply. Mortgage credit expands. House prices rise faster than household earnings.

This scenario creates wealth for owners but raises affordability risks for younger households and workers entering the economy. Banks face larger property exposure. The policy response requires better housing supply, property data, infrastructure sequencing and prudential monitoring rather than blunt credit suppression.

94.11 Scenario 11: Labour Scarcity and Wage Spiral

Demand for skilled labour exceeds domestic supply. Firms bid workers away from each other and from government. Wage growth exceeds productivity. Project costs rise, and service quality in health, education or regulation suffers as public institutions lose experienced staff.

Migration and training moderate the constraint, but housing and service capacity need to adjust. The critical metric is wage growth per unit of productivity rather than wage growth alone.

94.12 Scenario 12: Migration-Led Capacity Expansion

Net inward migration rises in response to labour demand. The workforce expands, easing skill shortages and supporting business growth. New residents also increase demand for housing, transport, schools, healthcare and utilities.

Under effective planning, migration expands supply capacity faster than it expands bottlenecks. Under poor planning, congestion and housing costs rise. Population data therefore become an economic planning instrument rather than a demographic afterthought.

94.13 Scenario 13: Electricity Competitiveness Shock

Gas-to-Energy and grid investments reduce delivered power costs and outage frequency materially. Firms invest in cold storage, fabrication, processing, digital operations and larger commercial facilities. Household disposable income rises as electricity becomes more affordable.

The multiplier depends on tariff transmission. If lower generation cost does not reach firms through reliable networks and transparent tariffs, the productivity gain is smaller.

94.14 Scenario 14: Grid Bottleneck

Generation expands but transmission and distribution lag demand. New housing, industry and data-intensive services face connection delays. Diesel self-generation remains common. Power reliability limits manufacturing and services growth.

This scenario shows why energy policy must be evaluated at the point of delivery, not only at the plant gate.

94.15 Scenario 15: Agricultural Export Take-Off

Drainage, new lands, mechanisation, crop science, cold storage, processing and regional logistics improve together. Guyana becomes a larger supplier of rice, animal feed, livestock products, fruits, vegetables and processed foods to CARICOM and selected extra-regional markets.

The main test is value per worker and value per hectare. Production tonnage alone does not measure productivity.

94.16 Scenario 16: Climate Shock

Severe rainfall, flooding or coastal events damage agriculture, housing and transport. Public spending shifts toward response and reconstruction. Food prices rise. Project schedules slip.

Resilience investments reduce losses relative to a counterfactual without drainage, sea defences and resilient infrastructure. The economic return on resilience therefore appears partly as damage that never occurs.

94.17 Scenario 17: Regional Logistics Hub

Port, road, air and digital infrastructure position Guyana as a logistics and service node between northern South America, the Caribbean and Atlantic markets. Warehousing, cold chain, transshipment, professional services and regional headquarters activity expand.

Success depends on customs efficiency, reliability and scale. Infrastructure without trade volume produces low utilisation.

94.18 Scenario 18: Digital Services Expansion

A larger pool of trained workers, stable broadband, improved cybersecurity and better digital public infrastructure support BPO, financial services, software and remote professional exports. Service exports grow faster than the domestic market.

This scenario reduces dependence on physical freight and offers employment pathways for young workers. Education quality becomes the binding input.

94.19 Scenario 19: Governance and Execution Stress

Budget growth outpaces institutional capability. Procurement workloads rise, project supervision becomes uneven, audit backlogs expand and public-enterprise reporting weakens. The economic cost appears through delays, cost overruns, poor maintenance and lower confidence.

Institutional strengthening produces a high return in this scenario because small improvements affect large expenditure flows.

94.20 Scenario 20: Data Blindness

Economic activity expands faster than the national statistical system. Household income, poverty, housing prices, migration, firm productivity and regional cost data remain incomplete or delayed. Policy therefore relies on proxies and anecdotal evidence.

This is a hidden risk. Weak data do not stop decisions. They make decisions less precise.

95 Compound Shock Scenarios

Single shocks rarely arrive alone. The following combinations deserve explicit stress testing.

95.1 Compound Shock A: Oil Price Fall + Construction Slowdown + Credit Stress

A sustained oil-price decline reduces public revenue expectations. Major public projects are re-prioritised. Construction cash flow weakens and some contractors delay payments. Banks face higher arrears in construction, mortgages and supplier credit.

Stress testing should examine bank capital, government payment cycles, contractor concentration and the speed at which fiscal buffers enter the economy.

95.2 Compound Shock B: High Oil Price + Labour Scarcity + Inflation

Petroleum receipts surge while the domestic economy is already operating near labour and construction capacity. Additional public spending pushes wages and rents higher. The real exchange rate appreciates and non-oil exporters lose margin.

The stabilising response is higher marginal saving, targeted supply expansion and productivity investment.

95.3 Compound Shock C: Climate Event + Food Inflation + Infrastructure Delay

A major flood or drought reduces agricultural output, damages transport and delays public works. Imported food prices are also elevated. Household cost-of-living pressure rises.

This scenario links climate adaptation, food security, social protection and fiscal contingency planning.

95.4 Compound Shock D: Oil Project Delay + Global Recession + Tourism Weakness

A petroleum project starts later than expected while global demand slows. Tourism and non-oil exports weaken. Private investment becomes more cautious.

The value of diversified domestic and regional demand rises in this case, along with the NRF's stabilisation function.

95.5 Compound Shock E: Cyber Incident + Financial Disruption + Digital Government Outage

As banking, payments and government services digitise, cyber resilience becomes part of macroeconomic resilience. A major incident affecting payment systems, banking or public identity infrastructure would impose real economic costs through interrupted transactions and confidence effects.

95.6 Compound Shock F: Border or Geopolitical Escalation + Risk Premium + Project Delay

Regional security uncertainty increases insurance and financing costs, affects investment sentiment and delays projects. The World Bank identifies the border controversy with Venezuela among risks facing the outlook. [8]

Economic resilience in this scenario depends on fiscal buffers, diversified investors, strong institutions and continuity planning.

96 2030 Structural Outcomes: What Should Success Look Like?

A successful 2030 should not be defined by a single GDP figure. This paper proposes twelve outcome tests.

Outcome	2030 direction of travel
Non-oil export capability	Rising materially from the 2025 base
Electricity	Lower delivered cost, higher reliability, faster connections
Infrastructure	Shorter travel and freight times, lower flood disruption
Human capital	Better learning, health, technical and managerial capability
Labour productivity	Wage gains supported by output gains
Private sector	More firms exporting, scaling and financing investment
Financial resilience	Strong bank capital, deeper capital markets, broader insurance
Fiscal resilience	Large buffers, sustainable debt, disciplined recurrent commitments
NRF	Rising long-term financial assets under transparent rules
Natural capital	Forest and ecosystem value protected within development planning
Household welfare	Higher real disposable income, better services, housing access
Institutions and data	Faster execution, stronger audit, better statistics

The table deliberately avoids arbitrary numerical targets where evidence is insufficient. A research programme should establish baselines and annual targets for each indicator.

97 A Resource Conversion Scorecard

The proposed Resource Conversion Scorecard translates the seven-capital model into measurable indicators.

Capital	Example indicators	Failure signal
Financial	NRF assets per capita, debt service, reserves	Spending rises while net financial buffers fall
Physical	Travel time, outages, port dwell, flood loss	High capital spending with weak service improvement
Human	Learning, health outcomes, skills, productivity	Wages rise without productivity or service quality
Enterprise	Exporting firms, standards, productivity	Local firms remain dependent on protected demand
Institutional	Procurement time, audit quality, project variance	Budget grows faster than execution quality

Capital	Example indicators	Failure signal
Natural	Forest integrity, water, flood resilience	Growth depletes high-value ecosystem assets
Social-spatial	Housing, congestion, regional access, poverty	National income rises while access gaps widen

A composite index should not replace the underlying data. Aggregation is useful for communication, but policy decisions require domain-level diagnosis.

98 Early-Warning Dashboard, 48 Indicators

The following indicators form a practical monitoring system. Thresholds should be calibrated statistically over time.

98.1 Macro and Fiscal

1. Overall real GDP growth.
2. Non-oil real GDP growth.
3. Non-oil primary fiscal balance relative to non-oil GDP.
4. Overall fiscal balance.
5. NRF inflows.
6. NRF withdrawals.
7. NRF balance relative to non-oil GDP.
8. Public debt relative to GDP and non-oil GDP.
9. Debt-service ratio.
10. Share of recurrent expenditure in total spending.
11. Capital-project cost variance.
12. Capital-project completion delay.

98.2 Prices and Competitiveness

13. CPI inflation.
14. Food inflation.
15. Rent and housing-price growth.
16. Construction-cost index.
17. Average wage growth.
18. Labour productivity growth.
19. Unit labour cost.
20. Real effective exchange-rate indicator.

98.3 External Sector

21. Crude oil share of exports.
22. Non-oil export value.
23. Service exports.
24. Current-account balance excluding oil.
25. Foreign reserves.
26. FDI inflows by sector.
27. Import share of public capital projects.
28. Number of persistent non-oil exporters.

98.4 Labour and Population

- 29. Unemployment rate.
- 30. Labour-force participation.
- 31. Skilled vacancy duration.
- 32. Net migration.
- 33. Construction employment share.
- 34. Public-sector attrition in critical skills.
- 35. Technical certification completions.
- 36. Youth employment and training transitions.

98.5 Financial System

- 37. Private credit growth.
- 38. Credit relative to non-oil GDP.
- 39. Mortgage credit growth.
- 40. Non-performing loans.
- 41. Sectoral loan concentration.
- 42. Deposit growth.

98.6 Infrastructure and Resilience

- 43. Grid outage duration.
- 44. Industrial electricity cost.
- 45. Port dwell time.
- 46. Major-corridor travel time.
- 47. Flood-related economic loss.
- 48. Maintenance spending relative to public infrastructure stock.

99 Research Hypotheses for Universities and Policy Institutions

The Guyana transformation offers a rich empirical research programme. The following hypotheses are framed for testing rather than acceptance.

- H1.** Public capital spending has a positive but nonlinear relationship with non-oil productivity. Returns decline when annual project volume exceeds institutional and construction capacity.
- H2.** Non-oil export growth provides a better measure of structural diversification than non-oil GDP growth during the petroleum investment phase.
- H3.** Reductions in delivered electricity cost produce larger productivity effects in manufacturing and agro-processing than equivalent general business tax reductions.
- H4.** Real wage growth above labour-productivity growth predicts deterioration in non-oil export competitiveness with a lag.
- H5.** Migration reduces wage bottlenecks but raises housing inflation unless residential supply responds rapidly.
- H6.** Public infrastructure produces larger growth effects when projects are network complements rather than isolated assets.
- H7.** Firms participating in petroleum local-content supply chains experience faster adoption of international quality and safety systems than observationally similar firms outside the sector.

H8. Local-content firms with export sales show higher productivity persistence than firms dependent only on domestic protected procurement.

H9. NRF accumulation reduces fiscal volatility when expenditure planning is anchored to a structural non-oil balance rather than current petroleum revenue.

H10. Household welfare correlates more strongly with real disposable income, housing cost and service quality than with petroleum GDP per capita.

H11. Regions receiving improved all-weather transport links experience faster land-price appreciation, business formation and labour mobility than matched regions without similar upgrades.

H12. Drainage and coastal-resilience investment generates measurable avoided-loss returns during extreme rainfall events.

H13. Agricultural export growth depends more on logistics reliability, standards and cold-chain infrastructure than on acreage expansion alone.

H14. Tourism expenditure per visitor rises with destination differentiation and service quality more than with total room stock.

H15. Digital public-service adoption reduces firm compliance time and increases formalisation.

H16. Financial-sector concentration risk increases during rapid construction and mortgage expansion unless credit growth is matched by stronger borrower and property data.

H17. Greater publication of project-level cost and outcome data improves procurement competition and reduces cost variance.

H18. Comprehensive wealth per capita provides a stronger indicator of sustainable development than GDP per capita in the petroleum expansion period.

100 Competing Hypotheses and Empirical Adjudication

A scrutiny-grade research programme should not only search for evidence supporting the transformation thesis. It should define rival explanations and the observations that distinguish them.

Question	Hypothesis A	Hypothesis B	Evidence that discriminates between them
Why is non-oil GDP growing?	Independent productive diversification	Petroleum-linked demand spillovers dominate	Non-oil export persistence, firm productivity, private investment and sector performance after construction growth normalises
Is rapid public investment raising capacity?	Infrastructure is lowering economy-wide costs	Absorptive constraints are reducing marginal returns	Project cost and time variance, asset utilisation, travel time, outage rates, flood losses and post-completion evaluations

Question	Hypothesis A	Hypothesis B	Evidence that discriminates between them
Is the labour market becoming more productive?	Scarcity is inducing training and capital deepening	Wage pressure is outrunning productivity	Wage-productivity gaps, vacancy duration, output per worker, unit labour cost and tradable-sector employment
Is local content building capability?	Supplier participation transfers standards and know-how	Protected procurement creates domestic rents without durable competitiveness	Export sales, external clients, certification, productivity, survival after preference support and unit-cost convergence
Does inward migration expand capacity?	Labour supply reduces bottlenecks and broadens skills	Housing and service demand offsets much of the capacity gain	Rent-to-income ratios, school and health congestion, labour participation, wage pressure and residential completions
Are petroleum revenues stabilising the fiscal system?	NRF accumulation and rules smooth volatility	Expenditure remains procyclical with oil income	Structural non-oil primary balance, spending response to oil-price surprises, buffer accumulation and expenditure rigidity
Is export concentration falling structurally?	New tradables are scaling	Oil growth masks weak external diversification	Non-oil export value, destination diversity, product complexity and foreign-exchange earnings after petroleum-linked services are separated

The purpose of this framework is not to force a binary answer. Several mechanisms can operate at the same time. The research task is to estimate their relative importance and how it changes through 2030.

101 A 2027-2030 Policy Sequencing Logic

This paper does not prescribe electoral choices or political preferences. The sequencing framework below identifies economic dependencies between policy areas.

101.1 First: Capacity-Expanding Infrastructure

Electricity, transmission, ports, drainage, transport corridors and digital systems raise the return on later private investment. Where network bottlenecks are binding, these projects have system-wide effects.

101.2 Second: Human Capital and Labour Supply

Training, education, health workforce planning and managed labour mobility need to move in parallel with infrastructure. Physical assets without operators and technicians produce weak returns.

101.3 Third: Enterprise Productivity

Credit, standards, export support, technology adoption, competition, management training and supplier-development programmes should focus on productive capability rather than firm count.

101.4 Fourth: Export Platforms

Agro-processing zones, logistics hubs, digital-service ecosystems, tourism clusters and selected manufacturing platforms should be connected to real external demand.

101.5 Fifth: Fiscal and Institutional Deepening

Medium-term fiscal anchors, project evaluation, public-enterprise reporting, audit capacity, procurement systems and statistical modernisation protect gains as budgets increase.

101.6 Sixth: Maintenance and Asset Management

By 2030, maintenance will become a larger issue than new construction for some infrastructure classes. Asset registers, condition monitoring and lifecycle budgets should therefore be built before major project waves finish.

102 A 2030 Economic Balance Sheet

A useful way to judge the transformation is to ask what assets and liabilities Guyana should possess at the end of the decade.

On the asset side, a stronger 2030 balance sheet would contain a large NRF, higher official reserves, modern transport and energy networks, better schools and hospitals, a more skilled workforce, stronger firms, export relationships, functioning digital systems, resilient drainage and protected natural assets.

On the liability side, the country will carry public debt, infrastructure maintenance obligations, pensions, public-enterprise commitments, environmental liabilities and expectations created by social programmes. Private households and firms will also hold more debt.

The national objective is therefore not maximum asset accumulation in any one category. The objective is a portfolio of assets whose long-run returns exceed the direct and contingent liabilities created during the boom.

103 What Not to Infer from High GDP per Capita

The IMF's 2025 baseline projected per-capita GDP above US\$50,000 by 2030 under its assumptions. [3] Such a figure would place Guyana in an unusual statistical position relative to many economies in the region. Yet GDP per capita in an oil economy has clear limitations.

First, petroleum GDP includes income accruing to foreign investors and cost recovery, so domestic household income is not equal to GDP divided by population. Second, averages reveal little about distribution. Third, high output can coexist with housing, education, health or infrastructure constraints. Fourth, resource depletion is not deducted from GDP. Fifth, imported capital goods can produce large fluctuations in external accounts without equivalent changes in household welfare.

The stronger dashboard therefore pairs GDP per capita with household consumption, median income, poverty, wealth, housing cost, human development and public-service outcomes.

104 Regional and Global Context

Guyana's growth changes its relationship with the Caribbean. The country is becoming a larger source of investment, food, energy-linked services, tourism demand and potentially capital. Regional market scale also becomes more important for Guyanese firms.

At the global level, Guyana remains exposed to oil prices, interest rates, construction inputs, shipping, food prices and investor risk appetite. The Mid-Year Report 2026 itself illustrates this exposure through the effect of Middle East conflict on oil, freight and commodity prices. [1]

The country is therefore not insulated by petroleum wealth. Greater integration with global capital and commodity markets creates new transmission channels for external shocks.

105 Distribution, Inclusion and the Meaning of Broad-Based Growth

The economic transformation should be evaluated across households and regions rather than only national aggregates. Higher wages, transfers, housing investment and public services may spread resource income. At the same time, inflation in rent, land, food and services can offset part of nominal income gains.

A distributional framework should answer four questions annually:

1. Are lower-income households experiencing real income gains after housing and food costs?
2. Are hinterland and rural regions receiving improved access to services and markets?
3. Are young people moving from education into productive employment at higher rates?
4. Are business opportunities broadening beyond firms already connected to public procurement or petroleum supply chains?

These questions require current household and firm data. The World Bank's identification of poverty-data gaps reinforces the urgency of updated household surveys. [7]

106 The 2030 Thesis

Guyana does not face a choice between saving and spending, or between petroleum and diversification. The economic problem is allocation across time and capacity.

Too little investment would preserve financial assets while leaving infrastructure and human-capital gaps unresolved. Too much investment delivered too quickly would raise costs, strain institutions

and reduce project quality. Excessive recurrent commitments would make the budget vulnerable to future revenue swings. Excessive saving during a period of high-return development needs would also carry opportunity costs.

The optimal path is dynamic. When absorptive capacity is tight, the marginal resource dollar should lean more toward saving or capacity-expanding investments. When bottlenecks ease and project quality improves, productive investment can rise. When oil prices exceed structural assumptions, a larger share of the windfall should strengthen buffers. When shocks occur, those buffers should protect essential investment and households.

This is the core of resource conversion economics.

107 Empirical Research Programme, 2026-2030

A high-quality national research programme should move beyond descriptive reporting and build datasets suitable for causal and comparative analysis.

107.1 Household Panel

A longitudinal household panel would track income, employment, housing cost, migration, education, health, transfers and consumption over time. Repeated observations of the same households would reveal who gains, who moves, and which shocks have lasting effects.

107.2 Firm Dynamics Database

A linked firm dataset should combine business registration, tax, customs, employment, credit and procurement records under strict privacy safeguards. The objective would be to study firm entry, survival, productivity, export behaviour, local-content participation and access to finance.

107.3 Public Investment Outcomes Database

Every major capital project should receive a unique identifier linking budget, procurement, contractor, completion date, cost variance, maintenance plan and measurable outcomes. This would permit systematic evaluation of infrastructure returns.

107.4 Labour Market Observatory

Vacancies, wages, training completion, occupation, migration, employer skill gaps and regional labour demand should be integrated into a regularly updated labour-market information system.

107.5 Housing and Land Observatory

A national property dataset should combine transaction prices, assessed values, rents, mortgages, construction permits, housing completions and land-use information. Such a system would support financial stability, tax analysis and urban planning.

107.6 Trade Competitiveness Dataset

Customs data should allow researchers to track exporters by product, destination, value, volume and persistence. The goal is to distinguish one-off shipments from durable export capability.

107.7 Climate Loss Accounting

Flood, drought, coastal and heat impacts should be recorded using standard methodologies. Resilience projects should be evaluated against avoided losses rather than only construction completion.

108 Suggested Quantitative Methods

The following methods would deepen future research.

Input-output analysis estimates how petroleum, construction and public investment affect domestic industries and imports.

Social accounting matrices trace distributional effects across households and factors of production.

Difference-in-differences methods evaluate infrastructure, training and regional-development interventions where credible comparison groups exist.

Event studies measure financial, property or firm responses around major policy or infrastructure milestones.

Panel regressions test firm productivity, exporter persistence and wage dynamics.

Survival analysis studies firm longevity, supplier development and project completion risk.

Computable general equilibrium models examine oil-price shocks, fiscal rules, migration and sector reallocation.

Monte Carlo fiscal simulations evaluate NRF, debt and expenditure paths under correlated oil-price and production uncertainty.

System dynamics models represent feedback loops among public spending, labour scarcity, wages, inflation, imports and construction capacity.

Natural-capital accounting integrates forests, coastal protection, agriculture and resource depletion with produced and human capital.

109 Falsifiability and Tests of the Main Thesis

The paper's main thesis would be weakened if the following evidence emerged by 2030:

- non-oil exports remained flat or declined despite major infrastructure investment;
- electricity costs fell without measurable productivity or investment response;
- public capital spending rose while travel time, flood resilience, logistics and service outcomes showed little improvement;
- local-content firms failed to expand productivity or external sales after several years of participation;
- real wages rose persistently above productivity without any deterioration in non-oil competitiveness;
- NRF and debt policy failed to reduce fiscal volatility during a commodity shock;
- household living standards diverged materially from the direction suggested by public investment and national income;
- comprehensive wealth indicators deteriorated despite high GDP growth.

Research value depends on the ability of evidence to reject preferred narratives. A national transformation programme should be studied with the same discipline applied to other large economic experiments.

110 Limitations

This study is designed to expose uncertainty rather than conceal it. Twelve limitations deserve explicit treatment.

- 1. Statistical revision risk.** Guyana's production structure is changing rapidly. National accounts, sector weights, price indices and external statistics can be revised as data systems and base years are updated. Historical values in this edition therefore retain their source vintage.
- 2. GDP is not identical to national disposable income.** Offshore petroleum production raises domestic GDP, but part of the associated income accrues to foreign investors and contractors. GDP per capita should not be interpreted as household income per capita or as a direct measure of domestic wealth ownership.
- 3. Population denominators are uncertain between censuses.** The Bureau of Statistics and IMF publish different population estimates for different reference dates and methods. Per-capita comparisons are sensitive to the denominator selected. [2][9]
- 4. Poverty and household-distribution evidence is incomplete.** The World Bank states that recent poverty reduction is difficult to assess because of data gaps. The report therefore avoids manufacturing a current poverty estimate from GDP growth. [7]
- 5. The paper does not contain a contract-level petroleum fiscal model.** Gross petroleum sales sensitivities are not government-take estimates. A defensible fiscal-revenue model would require project-level production, price differentials, cost recovery, royalty, profit-oil, taxation and timing assumptions under the applicable contractual and legal framework.
- 6. Petroleum schedules remain uncertain.** Operator schedules and nameplate capacity depend on approvals, technical performance, uptime, project execution, reservoir behaviour and market conditions. A 2030 production figure is therefore a planning case rather than a guaranteed outcome.
- 7. Oil prices are inherently uncertain.** Price paths react to global demand, OPEC+ decisions, geopolitics, inventories, technology and macroeconomic conditions. The price matrix in this paper is a sensitivity test.
- 8. Competitiveness is difficult to identify from the exchange rate alone.** Guyana's exchange-rate regime, large petroleum flows, import intensity and administered or segmented markets mean that real-competitiveness pressure should be assessed through wages, productivity, prices, exports, margins and labour allocation together.
- 9. Causal attribution is difficult during simultaneous transformation.** Roads, power investment, migration, oil activity, credit expansion and public expenditure move together. A simple before-and-after comparison cannot isolate each effect. The proposed empirical programme therefore recommends matched comparisons, panel methods, event studies and other identification strategies where data support them.
- 10. Climate tail risk is not captured by central scenarios.** Extreme rainfall, coastal flooding and compound climate events have nonlinear effects on infrastructure, agriculture, insurance and household welfare. Historical averages can understate future loss severity.
- 11. Announced policy is not the same as realised outcome.** Budget allocations, project approvals, training targets and investment announcements are inputs. Evaluation should focus on completion, service quality, asset use, maintenance, productivity and household outcomes.
- 12. The 2030 horizon understates long-gestation returns.** Education quality, institutional capability, research systems, urban form and maintenance culture develop over longer horizons. A weak 2030 indicator does not always imply a failed investment, while a strong short-run indicator does not guarantee durability after the petroleum investment cycle matures.

These limitations narrow the claims the report makes. They also define a future research agenda. A strong edition in 2030 should be able to replace several current proxies with direct household,

firm, productivity, public-asset and environmental datasets.

111 Executive and Academic Q&A

111.1 1. Is Guyana already a high-income economy?

Income classification and lived economic structure are different questions. Petroleum output has raised measured GDP per capita rapidly, and the IMF's 2025 baseline projected GDP per capita of US\$50,788.8 by 2030 under its assumptions. [3] Yet petroleum GDP includes income streams not identical to household earnings. A stronger assessment combines national income with household consumption, median income, poverty, service quality, infrastructure and comprehensive wealth. Guyana's challenge is therefore not only reaching a high statistical income level. It is converting national income into a durable high-income economic system.

111.2 2. What is the single biggest economic risk before 2030?

The largest domestic risk is a mismatch between the speed of spending and the economy's capacity to execute productively. Oil-price risk is large, yet financial buffers help manage price volatility. Weak absorptive capacity is harder to offset because it raises project costs, delays infrastructure, increases imports and draws scarce labour away from other sectors. The risk is not high investment itself. The risk is investment growth exceeding engineering, procurement, labour and maintenance capacity.

111.3 3. Does strong non-oil growth prove diversification is working?

Not by itself. Non-oil growth includes construction, trade, transport, finance and services supported partly by oil-related FDI and public spending. These activities are economically meaningful, but structural diversification requires earnings less dependent on the petroleum cycle. Non-oil exports, service exports, productivity, exporting-firm survival and external market share provide stronger evidence.

111.4 4. What would count as a diversification breakthrough?

A breakthrough would involve several sectors earning foreign exchange at scale outside crude petroleum and raw gold. Examples include processed food, higher-value agriculture, regional logistics, tourism, digital services, professional services, selected manufacturing and Guyanese energy-service firms winning contracts abroad. The defining feature is independent external demand.

111.5 5. Is Guyana at risk of Dutch disease?

The mechanism is relevant, but a binary label is unhelpful. The 2026 IMF mission did not identify clear signs of overheating or resource-driven competitiveness pressure in available indicators, while flagging wage growth and wage-based real exchange-rate measures for monitoring. The prudent approach is continuous measurement of wages, productivity, construction costs, non-oil exports, imports and the real exchange rate.

111.6 6. Should Guyana save more oil revenue or spend more?

The optimal split changes with absorptive capacity and development needs. High-return infrastructure and human-capital investment may increase future wealth. Financial saving protects intergenerational equity and stabilises the economy. When domestic capacity is tight, the marginal case for

saving strengthens. When high-quality projects are ready and bottlenecks are manageable, productive investment becomes more attractive.

111.7 7. Is the NRF large enough?

The answer depends on the objective. The revised official 2026 projection places the year-end balance near US\$7.6 billion. [1] Size alone is not the test. The relevant questions involve withdrawal rules, asset management, fiscal integration, transparency and whether the balance provides adequate stabilisation and intergenerational savings relative to future spending commitments.

111.8 8. Is public debt becoming dangerous?

Current multilateral assessments place Guyana at low risk of debt distress. [40][3] Rapid borrowing still deserves scrutiny because debt creates fixed future obligations while petroleum revenue is volatile. Borrowing quality matters as much as borrowing volume. Debt funding a productive bridge, grid or water system differs economically from debt funding recurrent consumption.

111.9 9. What is the best fiscal anchor for a petroleum economy?

A structural measure linked to the non-oil economy is more informative than the overall balance because oil revenue may make headline fiscal ratios appear unusually strong or weak. IMF staff has suggested the non-oil primary balance as an operational guide over time. [40] The exact anchor should reflect development needs, absorptive capacity and intergenerational objectives.

111.10 10. What happens if oil falls to US\$45 per barrel?

The effect would depend on production volume, cost recovery, fiscal rules and the duration of the shock. Gross export value would decline materially relative to a US\$65 or US\$85 environment. The economic test would be whether fiscal buffers protect priority projects and social services without forcing abrupt borrowing or expenditure cuts.

111.11 11. What happens if oil stays above US\$85?

Higher receipts strengthen the fiscal and external position but increase overheating risk. More revenue does not create more engineers, contractors or housing immediately. If spending rises faster than supply capacity, costs and wages rise. A high-price period therefore strengthens the case for saving a larger marginal share when domestic capacity is constrained.

111.12 12. Is 1.3 million barrels per day by 2030 guaranteed?

No. It is an operator expectation based on planned developments, not a guaranteed outcome. [39] Project approvals, execution, reservoir performance and market conditions affect realised production. This paper therefore treats 1.3 million barrels per day as a reference scenario rather than a certainty.

111.13 13. Why does the paper distinguish production from capacity?

An FPSO's rated capacity is the maximum design capability under specified conditions. Annual average production depends on field performance, maintenance, ramp-up, downtime and operating decisions. Mixing the two creates inflated revenue estimates.

111.14 14. Why not forecast government oil revenue directly?

Government receipts require detailed assumptions about profit oil, cost recovery, royalty, project costs, production profiles and prices. A simple production-times-price calculation estimates gross sales, not fiscal revenue. This paper avoids false precision by keeping those concepts separate.

111.15 15. What sector has the strongest non-oil export opportunity?

No single sector dominates across every criterion. Agriculture and agro-processing have land and regional food-demand advantages. Tourism has differentiated natural assets. Digital services face low freight barriers. Mining already earns foreign exchange. Energy-service firms can build from petroleum capability. The strongest portfolio combines several sectors rather than selecting one national champion.

111.16 16. Is manufacturing realistic in a small economy?

Yes, within focused niches. Small economies rarely compete across the full manufacturing spectrum. Guyana's strongest opportunities are likely tied to local inputs, regional markets or domestic scale created by infrastructure expansion. Food processing, construction materials, fabrication, packaging and selected wood products are examples. Electricity and logistics determine whether these sectors reach export competitiveness.

111.17 17. Why is electricity so central to the 2030 thesis?

Electricity is a horizontal input. Lower delivered cost and higher reliability improve manufacturing, cold storage, hotels, digital services, hospitals, households and water systems simultaneously. Energy reform therefore affects the productivity frontier of many sectors rather than one industry.

111.18 18. Will Gas-to-Energy solve the electricity problem?

Generation expansion addresses one major constraint. The full outcome depends on transmission, distribution, system losses, maintenance, dispatch and tariffs. The Gas-to-Energy Phase One design is 300 MW. [18] A plant of that scale creates less economic value if network bottlenecks prevent reliable delivery. The correct metric is service at the customer meter.

111.19 19. Will agriculture remain competitive when wages rise?

Agriculture will need to become more capital intensive and productive. Mechanisation, improved varieties, drainage, irrigation, logistics, storage, processing and farm management need to offset rising labour costs. Competing through low wages is not a durable strategy for a rising-income economy.

111.20 20. What role should immigration play?

Inward migration is an economic adjustment mechanism in a small labour market. Additional workers ease shortages and support investment, but also increase housing and service demand. Policy therefore needs skills recognition, labour standards, housing supply and population planning rather than treating migration as an isolated border issue.

111.21 21. Is rising housing value a sign of success or risk?

Both. Higher land values reflect expected income and improved infrastructure. Excessive price growth relative to incomes creates affordability and financial-stability risks. A national property-price index, transaction database and mortgage monitoring system are therefore essential.

111.22 22. What should happen to construction after the current boom?

The sector should migrate from exceptional megaproject growth toward maintenance, housing, industrial facilities, resilience and regional contracting. A slower construction growth rate after infrastructure gaps close would not automatically signal economic weakness.

111.23 23. What should local content look like by 2030?

The strongest outcome is not a larger protected procurement share alone. It is a set of Guyanese firms with technical systems, balance sheets, trained workers and management capability strong enough to win work outside the domestic petroleum sector. Exportability is the mature form of local content.

111.24 24. Does Guyana need a larger stock market?

A deeper domestic capital market would broaden financing options beyond banks and sovereign borrowing. Bonds, equities, pensions, insurance and investment funds help allocate long-term capital and distribute ownership. Market development still requires strong disclosure, governance and investor protection.

111.25 25. How should the country measure poverty during rapid growth?

Regular household surveys are essential. National accounts cannot substitute for direct measurement of household income, consumption, housing cost and access to services. The World Bank has identified current data gaps in poverty assessment. [7]

111.26 26. What does inclusive growth mean in measurable terms?

Inclusive growth means real gains across income groups and regions. Metrics include real disposable income, poverty, employment, housing affordability, learning outcomes, health access, utility reliability, regional market access and business formation. Distribution should be measured, not inferred from national averages.

111.27 27. What is the role of the hinterland economy?

Hinterland development links mining, agriculture, tourism, indigenous communities, connectivity, public services and natural capital. Infrastructure should improve access without creating unmanaged environmental loss. Region-specific planning is more useful than applying coastal economic models everywhere.

111.28 28. How should Guyana treat its forests economically?

Forests are productive assets. They provide carbon storage, biodiversity, water regulation, tourism, non-timber products and climate services. A comprehensive wealth framework values these services alongside extractive and produced capital rather than treating intact forest as economically inactive land.

111.29 29. Is tourism large enough to matter beside oil?

Tourism will remain small relative to petroleum in headline GDP, yet relative scale is the wrong test. Tourism earns foreign exchange, supports SMEs, creates regional employment and monetises natural and cultural assets. A diversified economy benefits from sectors with different demand cycles even when none approaches oil in size.

111.30 30. What is the biggest statistical need before 2030?

A modern integrated system linking updated national accounts with household, labour, business, property, trade and administrative data. The speed of economic change makes outdated weights and infrequent surveys increasingly costly for policy.

111.31 31. How should public projects be ranked?

Projects should be ranked by economic and social return, network effects, readiness, maintenance burden, climate resilience, distributional impact and absorptive-capacity demand. A project that removes a system bottleneck often deserves priority over a project with a higher standalone visibility profile.

111.32 32. What is the biggest mistake resource-rich countries make?

A recurring mistake is treating a temporary revenue flow as permanent income and converting it into rigid expenditure faster than productive capacity grows. Another is failing to replace depleted natural capital with financial, human or produced assets. The literature shows institutional quality strongly influences outcomes. [21]

111.33 33. Should Guyana pursue downstream oil refining?

Any downstream project should pass a commercial test using market size, feedstock terms, capital cost, logistics, environmental standards and alternative uses of capital. National resource ownership alone does not guarantee downstream competitiveness. Strategic value should be separated from economic return.

111.34 34. How important is regional integration?

Regional markets expand the addressable demand facing Guyanese firms. Agriculture, food processing, tourism, professional services, logistics and energy-related services all gain from deeper CARICOM trade and connectivity. Transport and standards remain practical constraints.

111.35 35. What does a resilient 2030 fiscal system look like?

It has a transparent medium-term framework, strong NRF assets, manageable debt, conservative oil assumptions, high-quality capital spending, controlled recurrent commitments, contingency buffers and credible stress tests. Resilience means a shock changes the pace of development, not the integrity of the fiscal system.

111.36 36. What does failure look like even if GDP remains high?

Failure would include high national output alongside weak non-oil exports, severe housing stress, persistent infrastructure bottlenecks, declining public-service quality, weak project execution, loss of non-oil competitiveness and insufficient savings for future generations. GDP alone would conceal those weaknesses.

111.37 37. What should universities study first?

Priority topics include resource revenue management, labour migration, construction productivity, housing prices, non-oil exports, local-content firm performance, agricultural logistics, climate-loss avoidance, learning outcomes and the distributional effects of public investment.

111.38 38. Which indicator deserves more attention than GDP?

No single measure replaces GDP. The most useful complement is comprehensive wealth per capita, supported by a dashboard of household welfare, non-oil exports, productivity, human capital, fiscal buffers and natural capital. [19]

111.39 39. What would make Guyana a regional economic hub by 2030?

Reliable electricity, efficient ports and airports, fast customs, regional shipping, strong digital systems, financial services, hotel capacity, professional talent and predictable institutions. Geography offers an opportunity, but infrastructure and execution determine whether the opportunity becomes trade volume.

111.40 40. What is the paper's final answer to the 2030 question?

Guyana has enough resource income to change its development trajectory decisively. The binding question is conversion quality. If petroleum income becomes resilient infrastructure, skills, competitive firms, institutional capacity, financial assets and protected natural capital, 2030 will mark the foundation of a durable high-income economy. If the boom mainly raises domestic demand, prices and permanent commitments, headline prosperity will overstate structural progress.

112 Research Conclusions

Guyana enters the second half of the 2020s with economic conditions few countries have experienced: exceptionally rapid output growth, large petroleum discoveries, rising public revenue, a growing sovereign fund, low assessed debt distress risk, a small population, large infrastructure needs and significant natural capital.

The combination creates historic economic opportunity and unusual execution pressure.

The 2030 objective should not be maximum GDP. It should be maximum conversion of depleting resource wealth into durable national capability.

That conversion has seven dimensions: financial, physical, human, enterprise, institutional, natural and social-spatial capital. Weakness in any one dimension lowers the return on the others. Roads need maintenance. Power needs networks. Firms need skills. Skills need health and education. Investment needs institutions. Growth needs resilience. Petroleum income needs savings and productive assets.

The strongest sign of success will appear when the non-oil economy no longer needs exceptional petroleum-linked construction and public spending to sustain competitiveness. A mature transformation will feature firms selling to external markets, agriculture producing higher value per hectare, services earning foreign exchange, infrastructure lowering real business costs, households experiencing higher living standards, and public institutions managing larger systems with greater precision.

Guyana's resource endowment gives the country unusual fiscal space. Fiscal space is not the same as development capacity. The period to 2030 is therefore a race between revenue growth and institutional, human and productive capacity.

The winning condition is simple to state and difficult to execute: build the economy faster than the boom raises its costs.

113 Headline Claim Audit Matrix

The following register identifies the evidentiary status of the claims most likely to attract scrutiny.

Claim	Evidence status and basis	Main caveat
Real GDP grew 33.3% in H1 2026	Official preliminary estimate, Ministry of Finance / DPI [36]	Subject to later national-accounts revision
Non-oil GDP grew 10.1% in H1 2026	Official preliminary estimate, Ministry of Finance / DPI [36]	Aggregate contains sectors with different oil-linkage intensity
Full-year 2026 GDP is projected at 20.8%	Government projection, Mid-Year Report [1][36]	Not an observed annual outcome
IMF country page displays 16.2% for 2026 growth	Institutional projection vintage, IMF [2]	Earlier information set than September domestic revision
2025 GDP growth was about 19.3%	Government estimate, Budget Speech 2026 [4]	Later revision remains possible
Oil was 88.4% of 2025 merchandise exports	Published Bureau of Statistics trade observation, cross-checked against the item table [10]	Merchandise measure excludes services
Oil was about 92.9% of H1 2026 merchandise exports	Author calculation from official values, Ministry of Finance / DPI [36]	Half-year ratio, sensitive to export timing
Unemployment was 6.2% in Q4 2025	Survey estimate, Bureau of Statistics [11]	Sampling and classification error apply
Poverty reduction cannot be precisely assessed with current evidence	Multilateral assessment, World Bank [7]	Data availability can improve after cut-off
Production surpassed 900,000 bpd by end-2025	Operator-reported observation, ExxonMobil [12]	Gross Stabroek production, not state entitlement
Gross production around 1.3m bpd by 2030	Operator projection, ExxonMobil [39]	Project execution and operational assumptions
Installed capacity around 1.7m bpd by 2030	Operator projection, ExxonMobil [12][39]	Capacity differs from average production
IMF 2025 baseline shows 438m barrels of crude production and GDP per capita of US\$50,788.8 in 2030	IMF staff projection, 2025 Article IV [3]	Projection excludes oil fields under development beyond Whiptail and is an earlier vintage
Uaru FPSO arrived in August 2026; first oil was scheduled for Q4 2026	Government implementation update [44]	Schedule statement, not observed Uaru production at cut-off
Public debt is assessed at low risk of distress	IMF 2025 DSA and July 2026 mission assessment [3][40]	Assessment changes with debt, production and fiscal assumptions
2026 NRF closing balance of US\$7.588bn	Official projection, Mid-Year Report [1]	Not realised balance at cut-off

Claim	Evidence status and basis	Main caveat
NRF balance at 30 June 2026 was US\$4.2942bn	Official mid-year reporting [45]	Point-in-time realised stock; subsequent deposits and withdrawals change the balance
Non-oil growth near 7% over the next five years	IMF July 2026 mission projection [40]	Medium-term projection, not baseline fact
July 2026 IMF mission observations	IMF Staff Concluding Statement [40]	Preliminary staff findings, not a final Executive Board conclusion
Public-investment returns can fall under absorptive constraints	Research-supported mechanism, Berg et al. [38]	Magnitude for Guyana requires empirical estimation
Domestic investment can be part of optimal windfall management in capital-scarce economies	Peer-reviewed theoretical result, van der Ploeg & Venables [37]	Optimal mix depends on local institutions, returns and constraints

The audit principle is simple: no claim receives a stronger evidentiary label than its source supports.

114 References

Unless a publication date is stated separately, web sources were last checked on 19 September 2026. Dynamic dashboards and landing pages should be archived by future researchers when reproducing time-sensitive values.

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115 Publication Audit Checklist

The final publication audit covers the following items:

- factual claims cross-checked against cited primary or multilateral sources;
- headline statistics recalculated where a ratio or transformation is author-derived;
- forecast vintages reconciled rather than averaged or silently substituted;
- first-half 2026 non-oil growth verified as 10.1 percent and full-year non-oil projection as 10.2 percent;
- 2025 growth attribution checked against Budget Speech 2026;
- population estimates labelled by source and reference date;
- H1 2026 export-concentration arithmetic independently recalculated;
- petroleum operator projections labelled separately from realised production and state revenue;
- 2026 IMF mission claims checked against the direct mission statement rather than the generic country landing page;
- government implementation statements separated from independently observed outcomes;
- Uaru arrival and first-oil schedule updated through the 19 September 2026 research cut-off;
- realised mid-year NRF stock separated explicitly from the projected year-end balance;
- observed data separated from estimates, projections and author scenarios;
- production capacity separated from average petroleum production;
- gross crude sales separated from government petroleum revenue;
- no single 2030 GDP forecast presented as certain;
- current 2026 Ministry of Finance data used where newer than 2025 baselines;
- tables checked for unit consistency;
- equations checked for rendering;
- citations and bibliography checked for numbering consistency;
- reference URLs and DOI identifiers spot-checked for source identity and publication metadata;
- figures exported at print-quality resolution;
- page margins, headers, footers and chapter breaks visually reviewed;
- blank-page, clipping and overflow checks completed before release;
- limitations and falsifiability tests included to support academic scrutiny;
- competing hypotheses included so future evidence can reject preferred interpretations;
- a headline claim audit matrix included to expose status, source class and caveat;
- ten-region development profiles reviewed for internal consistency and geographic neutrality;
- fiscal, monetary, financial-system, housing, demographic and post-2030 transition risks added as separate analytical modules;
- a 30-item national risk register linked to observable early signals and resilience responses;
- population and household-stock figures reconciled to the Bureau of Statistics 2022 Census preliminary results and end-2024 estimate;
- current poverty claims constrained to the World Bank's stated data limitations rather than inferred from GDP growth;
- comprehensive edition references extended to official 2026 IMF, World Bank, IDB, Bureau of Statistics, LCDS, Local Content and EITI sources.