When GDP Is Not Enough:
Q&A on Puerto Rico's Macroeconomic Accounts, Statistical Boundaries, and Accounting Closure

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How to read this Q&A

This document is a diagnostic companion to *When GDP Is Not Enough: Puerto Rico, Statistical Boundaries, and the Limits of National Accounting in a Regional Economy.* It asks whether Puerto Rico's published aggregates (GDP, GNP, BOP, and related tables) form a *closed and internally coherent* macroeconomic system. "Closure" here means that (i) resident vs. non-resident boundaries are consistently applied across production, income, and finance; (ii) identities such as saving–investment and external-balance relationships hold without large residual "plugs"; and (iii) major flows are observed directly (survey/administrative measurement) rather than inferred from crude proxies or residual subtraction. Each entry ends with a one-line *Policy implication* describing what users cannot do reliably when that data gap persists.

A. Published aggregates and accounting closure

Does PRPB publish GDP?

Yes, but the inputs for the production account are often compromised by low survey compliance and a reliance on rough estimations rather than observed data. The PRPB methodology admits that key components of trade and transport costs are estimated in a "crude" manner due to a lack of corporate reporting.

> "Estimates on air freight, due to lack of information, have been done in a crude/gross manner [forma burda]." (PRPB, 2018, p. 139)

> "However, since information is not being received in the JP-532 [survey], it has been necessary to modify the methodology." (PRPB, 2018, p. 138)

Policy implication: Users cannot safely treat GDP growth as evidence of better living standards or stronger local economic capacity if key costs and prices are based on rough estimates rather than observed data.

Does PRPB publish GNP?

Yes, but the measurement of *Net Primary Income from Abroad*—the key variable that distinguishes GNP from GDP—is institutionally fragile. The PRPB methodology reveals that "Parent Company Expenses" (a primary mechanism for profit shifting) are not measured through economic surveys, but inferred directly from tax deductions.

> "The sources of information used to prepare these expenses are the tax returns filed by direct investment companies... The payments allocated to them by parent companies are part of the payments deducted to establish their profits." (PRPB, 2018, p. 172)

Policy implication: Users cannot tell how much income actually belongs to Puerto Rico residents, so they cannot judge welfare, tax capacity, or local saving accurately.

Does PRPB publish a Balance of Payments (BOP)?

Yes, but it fails to close the system. The Balance of Payments is plagued by large discrepancies because the agency cannot fully track cross-border flows. The PRPB document admits that a third of external financing is effectively a "black box" labeled as unknown transactions.

> "Upon examining the movement of net external capital imports during the years 2004 to 2008... Nearly $7.6 billion or 33.2 percent, corresponded to unknown transactions." (PRPB, 2018, p. 227)

Policy implication: Users cannot tell whether Puerto Rico is financing spending through borrowing, transfers, or income leakage when a large share of external flows is unexplained.

Does PRPB publish a Rest-of-World (ROW) account?

Yes, but it relies on residual calculations rather than direct measurement for critical liabilities. The PRPB methodology confesses that the government does not actually know how much of its public debt is held by non-residents; it subtracts known local holdings from the total and assumes the remainder is external.

> "To the extent that public enterprises cannot determine what part of their debt is owned by non-residents, it becomes necessary to resort to estimates... The method used as a residual determines the part of the debt held by non-residents..." (PRPB, 2018, p. 152)

Policy implication: Users cannot know who really holds Puerto Rico's public debt, so they cannot assess exposure, leverage, or negotiation risk correctly.

Does PRPB publish Flow of Funds Accounts (FOFA)?

No. The PRPB admits it lacks the indicators necessary to measure the financial assets of residents abroad or to construct a "from-whom-to-whom" matrix. The system is one-sided (inward-looking) and blind to resident wealth accumulation outside the island.

> "The transactions recorded in this account [Puerto Rican capital invested abroad] are incomplete regarding scope and coverage... There are no indicators available to measure bank balances... held by non-residents in the long term." (PRPB, 2018, p. 203)

Policy implication: Users cannot see how income flows turn into borrowing, lending, or wealth, so debt sustainability and financial risk analysis are incomplete.

Does PRPB directly observe foreign direct investment (FDI) flows?

No (locally), and only partially (federally). The PRPB methodology documents reliance on non-statistical sources—including press clippings—to identify major investments.

> "The last [source], which cannot be considered reliable, consists of newspaper clippings that are saved throughout the year." (PRPB, 2018, p. 215)

However, BEA's modernization of Puerto Rico GDP improves measurement of *equipment investment* by shifting toward customs-based commodity-flow methods:

> "For PFI [Private Fixed Investment] in equipment, estimates are constructed using largely the same sources and methods as PCE goods. Commodity-flow estimates in the economic census years are prepared using manufacturers' shipments from the ECIA and Census Bureau data on imports and exports of goods from the FT895 and FT900 reports..." (BEA, 2023, p. 4, §2.12)

Policy implication: Users cannot measure how much investment is foreign-owned or predict future profit outflows that affect resident income.

Does PRPB directly observe remittances and migration-linked transfers?

Only partially. Key behavioral coefficients used to estimate remittances are decades old and frozen in time. Furthermore, because the U.S. Postal Service does not treat Puerto Rico as foreign, the Planning Board has no direct data on money orders leaving the island.

> "Information obtained many years ago established that of that surplus, agricultural migrants sent 42 percent to their families on the Island." (PRPB, 2018, p. 169)

> "To the extent that detailed information from the Postal Service is not available, estimates regarding personal remittances via money orders must be made using those obtained from banking samples." (PRPB, 2018, p. 183)

Policy implication: Users cannot reliably assess household income support or consumption stability tied to migration and remittances.

Does PRPB directly observe travel and other service imports/exports?

No. The PRPB methodology admits that estimates for travel expenditures (a major service import/export) are sometimes calibrated using anecdotal evidence from agency employees rather than rigorous sampling.

> "It is pertinent to mention that information from coworkers and acquaintances who have traveled abroad has also been used, as a mini-survey, to evaluate some of the averages." (PRPB, 2018, p. 148)

The same category contains structural blind spots even at the federal level. BEA explicitly states it does not have regularly collected sources for freight and insurance charges on goods imported to Puerto Rico, including from the 50 states:

> "BEA is not aware of any regularly collected data sources for freight and insurance charges on goods imported to Puerto Rico from all other locations, including from the 50 states." (BEA, 2023, p. 6, §2.28)

Policy implication: Users cannot correctly interpret the services balance or tourism effects when major flows are based on anecdotal evidence.

Does PRPB independently measure federal transfers, or import administrative totals?

Mostly administrative. The statistical system does not measure these flows independently; it acts as a recipient of U.S. administrative data. For major programs like Pell Grants and housing, PRPB adopts federal budget figures, importing any allocation errors present in the source data.

> "Information on [Pell Grants]... is verified and/or completed with information from the *Federal Expenditures by State*." (PRPB, 2018, p. 190)

BEA's methodology confirms this administrative dependence and identifies specific federal databases used for key categories:

> "Federal disaster assistance to individuals for major home repairs is estimated using data from the Federal Emergency Management Agency (FEMA)..." (BEA, 2023, p. 4, §2.10)

> "...federal contract obligations data for construction work performed on central government structures from the Federal Procurement Data System (FPDS)." (BEA, 2023, p. 8, §2.36)

Policy implication: Users cannot distinguish local economic performance from federally driven spending when transfers are taken directly from administrative totals.

Are PRPB consumption estimates cross-validated against administrative tax records?

Historically weak, but improving via modernization. PRPB's local system is constrained by survey nonresponse. BEA's Puerto Rico GDP methodology indicates an improvement for some consumption categories by referencing Sales and Use Tax (SUT) administrative tabulations:

> "[Source data used:] ...Puerto Rico Department of Treasury tabulations of declared sales by industry from the Sales and Use Tax Return." (BEA, 2023, p. 12, App. A)

Policy implication: Users cannot rely on consumption data for revenue forecasting or welfare analysis if spending is weakly tied to tax records.

Is the GDP–GNP wedge inferred from cash flows or from tax/accounting proxies?

Often proxies. The PRPB methodology confirms that the outflow of capital is frequently a construct of tax accounting rather than observed financial transactions. When data are missing, the system uses "tollgate taxes" to infer the size of profit repatriation, treating the tax payment as a transfer back to the island to balance the ledger.

> "This treatment was given... because the profits of these companies are recorded as payments to the rest of the world in the year they are generated... The tax payment is then recorded as a transfer from the parent company in the US to the government of Puerto Rico." (PRPB, 2018, p. 193)

Policy implication: Users cannot interpret the GDP–GNP gap as a real income flow if it is largely constructed from tax accounting rather than observed transactions.

B. Forensic: Production process and institutional constraints

How do staffing and turnover affect data continuity and quality?

Directly. The PRPB methodology admits that the quality of debt and interest data fluctuates based on staff turnover at reporting agencies. The system lacks institutional memory and automated enforcement to ensure consistent reporting across years.

> "In this regard, personnel changes in those companies [public corporations], and the experience and knowledge of those transactions by those filling out the form, have an influence [on data errors]." (PRPB, 2018, p. 154)

Policy implication: Users cannot trust year-to-year comparisons if data quality depends on personnel stability rather than enforced reporting rules.

Where are the single points of failure in PRPB's data pipeline?

In federal feeds and administrative systems. The PRPB system has historically relied on external federal inputs that can be cut off without warning. The PRPB document notes that when the IRS stopped sending specific excise-tax reports, the Board lost its primary source and was forced to switch to local proxies.

> "Previously, data was obtained from the report supplied by the federal Internal Revenue Service... when the federal IRS stopped sending the report of revenues in Puerto Rico, it became necessary to establish this data based on the operating expenses of that Bureau in Puerto Rico." (PRPB, 2018, p. 196)

BEA's methodology clarifies that key categories depend on FEMA and FPDS, reinforcing the administrative single-point-of-failure risk:

> "Federal disaster assistance to individuals for major home repairs is estimated using data from the Federal Emergency Management Agency (FEMA)..." (BEA, 2023, p. 4, §2.10)

> "...federal contract obligations data for construction work performed on central government structures from the Federal Procurement Data System (FPDS)." (BEA, 2023, p. 8, §2.36)

Policy implication: Users cannot assume continuity in key indicators if core data sources can disappear without warning.

Does the saving–investment identity close without large residuals?

No. In a coherent system, Gross Saving should equal Gross Investment. In Puerto Rico, they do not match. To force balance, the PRPB inserts a large "Unknown Transactions" plug that, in some years, exceeds the value of the entire construction industry.

> "[Table 6.13 Item 16] Plus: Unknown transactions, Balance of Payments... $3,987.9 million." (PRPB, 2018, p. 226)

Policy implication: Users cannot assess whether Puerto Rico is saving enough or borrowing too much when balances are forced to match using large unknown items.

How are insurance-sector dividends/outflows measured when filings differ by fiscal year?

By assumption. For life insurance companies, the PRPB does not observe actual dividend outflows on a unified calendar basis. Instead, it assumes a stable relationship between "fiscal" and "natural" year data and uses wages as a scaling proxy.

> "Wages, due to their availability, represent a more agile datum for establishing the relationship to convert natural dividends to fiscal ones..." (PRPB, 2018, p. 161)

Policy implication: Users cannot accurately assess financial-sector income flows when timing is imposed by assumption rather than observation.

How is residency of public-debt holders determined, and what happens when surveys fail?

By residual. The PRPB classification of public debt relies on voluntary surveys sent to local banks and insurance companies. If forms are returned late or filled incorrectly, debt can be misclassified as "external" because external holdings are calculated as the residual after resident holdings are tabulated.

> "The idea of tabulating previous years is to review the holdings in the hands of residents, since many of the forms sent arrive late." (PRPB, 2018, p. 210)

Policy implication: Users cannot reliably identify who bears Puerto Rico's debt when external holdings are calculated as a residual.

C. Limits of federal measurement: what BEA can and cannot fix (within GDP scope)

Does BEA observe freight and insurance charges for PR–states goods trade?

No. BEA explicitly states it is not aware of regularly collected data sources for these charges on goods imported to Puerto Rico, including from the 50 states.

> "BEA is not aware of any regularly collected data sources for freight and insurance charges on goods imported to Puerto Rico from all other locations, including from the 50 states." (BEA, 2023, p. 6, §2.28)

Policy implication: Users cannot correctly measure import costs or net exports for an island economy without freight and insurance data.

Do BEA "real" investment estimates use Puerto Rico-specific price indexes?

No. BEA acknowledges that, lacking Puerto Rico-specific capital-goods price indexes, it uses U.S. mainland price measures as proxies.

> "Currently, there are no Puerto Rico-specific price indexes covering capital goods purchased by businesses in Puerto Rico." (BEA, 2023, p. 10, §3.3)

Policy implication: Users cannot rely on real investment growth rates when prices do not reflect Puerto Rico conditions.

Does BEA observe PR service imports directly (e.g., R&D), or allocate from global data?
Often allocated. For some categories (e.g., R&D services), BEA relies on publicly filed global financial statements and allocates a Puerto Rico portion rather than using a Puerto Rico-specific survey.

> "For R&D services imported by computer service providers, [the data source is] publicly filed company financial statement data reporting global R&D expenditures..." (BEA, 2023, p. 15, App. A)

Policy implication: Users cannot tell how much growth reflects local activity versus imported services when flows are allocated rather than observed.

Does BEA's PR GDP methodology address financial-account "unknown transactions"?
No. The BEA document is scoped to the *expenditures approach* to GDP and does not provide methodology for the income account (GNP) or the financial account.

> "GDP for Puerto Rico is estimated using the expenditures approach... It is calculated by summing personal consumption expenditures, private fixed investment, change in private inventories, net exports... and government consumption." (BEA, 2023, p. 2, §2.1)

Policy implication: Users cannot expect GDP alone to explain income distribution, external dependence, or financial risk.

D. Bottom line

Puerto Rico can have published GDP, GNP, and BOP tables without having a macroeconomic *system* in the strong sense used in national accounting. The PRPB methodology documents (i) measurement gaps filled by crude estimation, (ii) key residency classifications and external positions obtained residually, and (iii) large financial-account "unknown transactions" plugs. BEA's 2023 work improves Puerto Rico GDP within the expenditures framework, but it also states explicit limits (e.g., missing freight/insurance sources and missing Puerto Rico-specific price indexes) and does not extend to a fully integrated income-and-financial-account system. The interpretive risk is therefore structural: Puerto Rico is economically external yet statistically internal to U.S. accounting architectures, so the resident/non-resident boundary is difficult to implement consistently across accounts, preventing credible closure.

References

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