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Estimating GDP for the U.S. Territories

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In 2010, the Bureau of Economic Analysis (BEA) published the first of what would become once-a-year articles in the *Survey of Current Business* describing gross domestic product (GDP) of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and the U.S. Virgin Islands (USVI). The island area GDP estimates were developed under the Statistical Improvement Program funded by the Office of Insular Affairs (OIA) of the U.S. Department of the Interior. The work continues as a project annually funded by OIA. Note that BEA's GDP statistics for Puerto Rico have been developed separately; this work is described in "BEA's Puerto Rico GDP Estimate Is on a Different Track."

The limited availability of routinely produced economic data for the territories (relative to the United States as a whole and the 50 states) means that the territories data are produced only on an annual frequency and typically lag the current period by about a year. Because of this, BEA is sometimes asked the question: what is the value of these statistics?

GDP is a comprehensive time-series measure of economic activity for a territory, specifically, of the value of the goods and services produced within its borders. It is clear that the lag in the data can make it challenging to use territorial GDP statistics for near-term tactical policy decisions without supplementing them with real-time observations and more frequent and targeted economic indicators, if they are available. Nonetheless, the territorial GDP statistics provide critical data for understanding the structure and performance of a territory's economy over time. In this strategic context, they inform territorial government decisionmakers exploring economic development opportunities, private sector investors, and federal government decisionmakers, such as OIA, the Government Accountability Office, the Federal Emergency Management Agency, and the U.S. Economic Development Administration.

BEA's Puerto Rico GDP Estimate Is on a Different Track

For over a decade, BEA has provided technical assistance to and worked collaboratively with the Commonwealth of Puerto Rico, the largest of the U.S. territories. Puerto Rico is not within OIA's responsibilities.[1] Thus, estimating Puerto Rico GDP was not part of the OIA-funded Statistical Improvement Program project to produce island area GDP estimates at BEA.

The 2015 Puerto Rico debt crisis and the September 2017 hurricanes Irma and Maria caused widespread hardship and then physical devastation on the island. These economic catastrophes highlighted the pressing need for more modern Puerto Rico GDP statistics to facilitate recovery efforts. BEA received funding, via a reprogramming, to initiate work on Puerto Rico GDP statistics in late calendar year 2018. Beginning in fiscal year 2020, BEA's appropriations have included funding to estimate Puerto Rico GDP.

BEA published components of Puerto Rico GDP in 2019 and prototype Puerto Rico GDP in 2020. In 2021, BEA plans to finalize methodology and begin publishing Puerto Rico GDP as an annual BEA data product.

1. According to the Congressional Research Service, President Kennedy transferred responsibility for federal relations with Puerto Rico from the U.S. Interior Department's Office of Territorial Affairs (now Insular Affairs) to the Executive Office of the President in July 1961. For more information, see R. Sam Garrett, "Puerto Rico's Political Status and the 2012 Plebiscite: Background and Key Questions," Congressional Research Service, CRS Report R42765, 2013.

Estimating GDP for American Samoa, Guam, the CNMI, and the USVI has unique challenges and opportunities. These are described below. We conclude with a short discussion of next steps for this joint project.

Unique Challenges and Opportunities of Estimating Territorial GDP

BEA estimates territorial GDP using an expenditure approach, which is the approach that BEA uses for its featured measure of quarterly national GDP. The expenditure approach estimates GDP as the sum of goods and services sold to final users. The methods used for the nation are adapted for each territory based on the availability of source data in that territory.

To estimate territorial GDP, BEA estimates the components of current-dollar GDP: personal consumption expenditures (that is, consumer spending), private fixed investment and change in private inventories (that is, business investment), government spending, and net exports of goods and services (that is, exports less imports). Then, BEA adjusts for inflation to produce estimates of real GDP. While this is the same basic method that BEA uses to estimate national GDP, it is different from the methodology BEA uses to estimate GDP by state. Due to current data limitations, it is not possible at this time to estimate territorial GDP using the GDP by state methods.[1]

It would not be feasible for BEA to produce these estimates without the collaboration of the territorial governments, because the territories are excluded from most federal surveys. Data are typically sourced from the administrative and survey data from each territory. In this context, it is important to keep in mind that these four territories are small. The combined populations of these four territories is less than the population of the least populated U.S. state (Wyoming). Just as any U.S. city or state would only collect the highest priority economic statistics that resources allow, these four U.S. territories typically have limited economic data collection programs. BEA uses the available data from these programs and, more often than not, relies on a variety of administrative data that is available as a by-product of territorial government functions, like issuing building permits, collecting taxes, or producing routine municipal financial statements. Because of the limited availability of economic data, BEA staff regularly explore alternative data, which sometimes are useful in validating available economic statistics. For example, satellite imagery has been useful in corroborating data on electricity usage and construction activity.

The lack of standardized data sets means it is not possible to use identical methods across all territories. In addition to each territory having a unique economic structure, each territory has different economic and administrative data available. BEA's methodology is therefore specific to that territory.

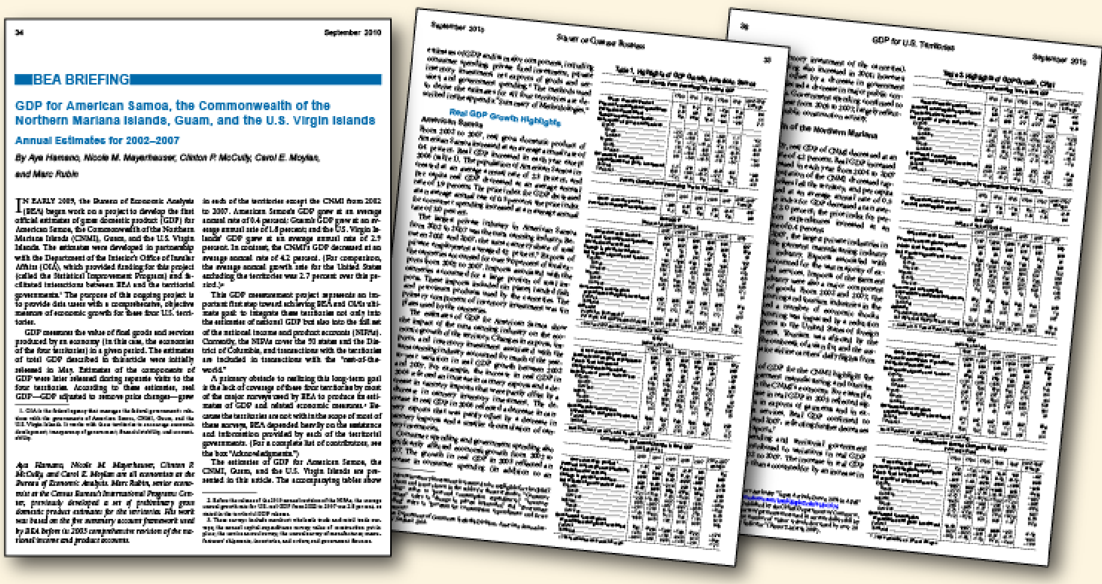
While each of these territories is unique, there are certain important commonalities across these economies that add to the challenges associated with estimating territorial GDP.

- American Samoa, Guam, the CNMI, and the USVI are all small island economies. Trade—including shipments between each territory and the rest of the United States, as well as foreign trade—has a big impact on each island's economy.
- They are nondiversified economies, often reliant on a few industries.
  - Government has a large share of the economic activity in each of these territories.
  - Tourism is a significant economic activity in three out of four of these territories.
- Key industries in these territories are dominated by multinational or stateside enterprises, such as the following:
  - Tuna canning in American Samoa
  - Garment manufacturing and then casino gambling in the CNMI
  - Petroleum refining and storage in the USVI
- Each of the four territories has faced catastrophic damage from natural disasters since BEA began estimating territorial GDP in 2009. Examples include the following:
  - Typhoon Mangkhut in 2008 in Guam that led to a federal disaster declaration.
  - A tsunami in 2009 in American Samoa that resulted in the deaths of over 30 people.
  - Hurricanes Irma and Maria in 2017 in the USVI, which caused widespread devastation.
  - Super Typhoon Yutu in 2018 in the CNMI, which was one of the strongest tropical storms ever to strike any part of the United States.
- Federal government funds, such as grants, transfer payments, and loans, are an important factor in the economies of these four territories. These funds include federal aid supporting the territories following a natural disaster. In Guam, the Department of Defense also has a large physical presence.

BEA's territorial GDP estimates, including its by-industry breakdowns of GDP, enable the development of a long-term, strategic understanding of the structure of these four territories' economies. BEA's territorial GDP estimates can be compared with each other and with BEA's national, state, regional, and local-area estimates. BEA's estimates are also internationally comparable, enabling comparisons with island nations in the Caribbean and the Pacific.

Next Steps: Targeted Efforts at Data Improvement

BEA is contributing insights from over a decade of estimating territorial GDP to OIA's efforts to identify statistical improvement opportunities. Advances that support the development of high quality, more timely economic indicators for territorial decisionmakers will also improve the data used in the GDP estimates.



Pages from the first Survey article on the GDP for the U.S. territories of American Samoa, Guam, the CNMI, and the USVI.

For more on the initial estimates of GDP for the U.S. territories of American Samoa, Guam, the CNMI, and the USVI, see the first *Survey* article on the topic, which was published in September 2010. The next installment in this series will be published later this year.

1. The methodology used to estimate GDP by state is a two-step process that requires first estimating the income components of GDP (that is, compensation of employees, taxes on production and imports less subsidies, and gross operating surplus) and then scaling these components to national totals that are derived using more comprehensive data for the nation. Because the territories are not included in most of the state- or national-level data sources, the first step is problematic, and the second step is not possible at this time.

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