

# The Value of Federal Data for Puerto Rico GDP

## Federal Committee on Statistical Methodology

Amy Filipek

October 26, 2023



# Outline

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- A Bit of History
- Overview of BEA's Puerto Rico Data
- Behind the Scenes in Estimating GDP
- The Importance of Federal Data for BEA's Puerto Rico GDP statistics

## Who we are

The U.S. Bureau of Economic Analysis is your source of **accurate and objective** data about the nation's economy.

## What we do

BEA's economists produce some of the world's most closely watched statistics, including U.S. gross domestic product, better known as **GDP**. We do **state and local** numbers, too, plus **foreign trade and investment** stats and **industry** data.

## Why we do it

Governments of all levels, businesses big and small, and Americans everywhere rely on our numbers. BEA's work underpins decisions about interest rates and trade policy, taxes and spending, hiring and investing, and more.

All from a source that's **nonpartisan, nonpolitical and neutral** on policy.

## About our numbers

- *Independently produced*
- *Publicly released on a set schedule*
- *Free to all at **bea.gov***

## BEA Data

To find a statistic, or to explore BEA's data, start with one of the groupings below.

Browse

### Data by Topic

- Gross Domestic Product (GDP)
- Consumer Spending
- Income & Saving
- Industries
- International Trade & Investment
- Prices & Inflation
- Investment in Fixed Assets
- Employment
- Government
- Special Topics

Browse

### Data by Place

- United States
- United States & the World
- States and Territories
- County, Metro, and Other Local Areas

Browse

### Data by Economic Accounts

- National
- Regional
- Industry
- International



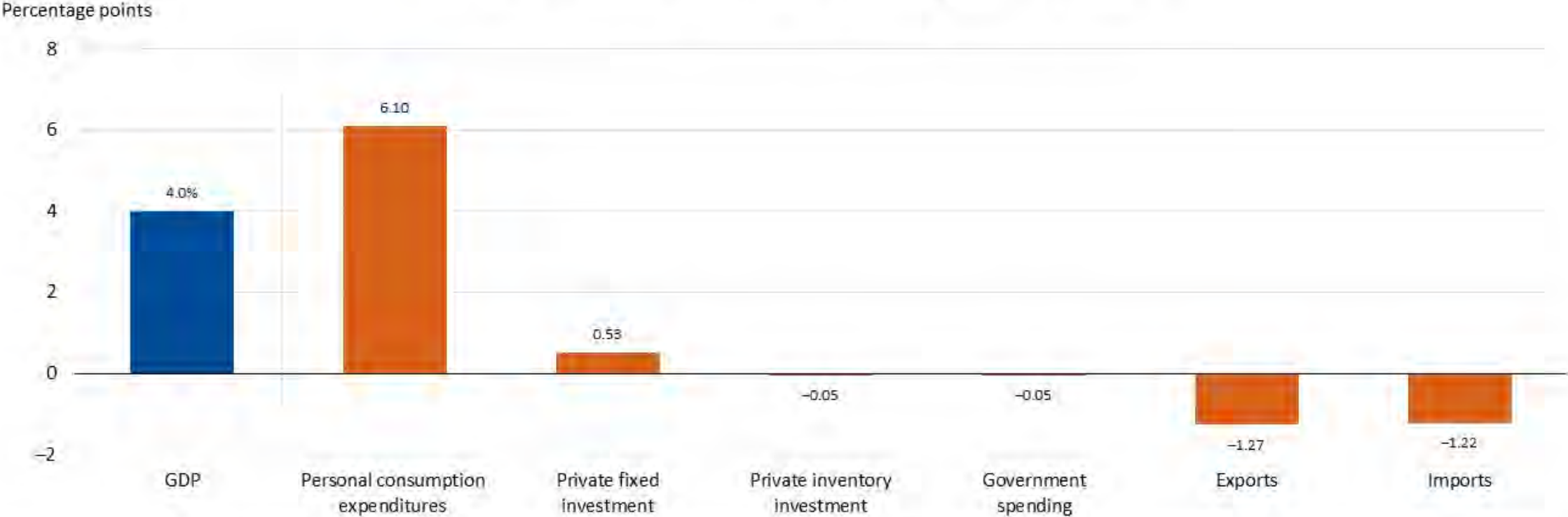
## Description:

- Produce estimates of nominal and inflation-adjusted (or real) GDP using modern statistical techniques
- Produce annual estimates for 2012 forward
- Use data sources produced by the federal government, the Puerto Rico government, and the private sector

## History:

- Began as a special project in late 2018; now funded in BEA's budget
- Prototype estimates published in early phases of project
- In September 2021, BEA published its first official statistics of Puerto Rico GDP

### Puerto Rico: Contributions to the Percent Change in Real GDP, 2021

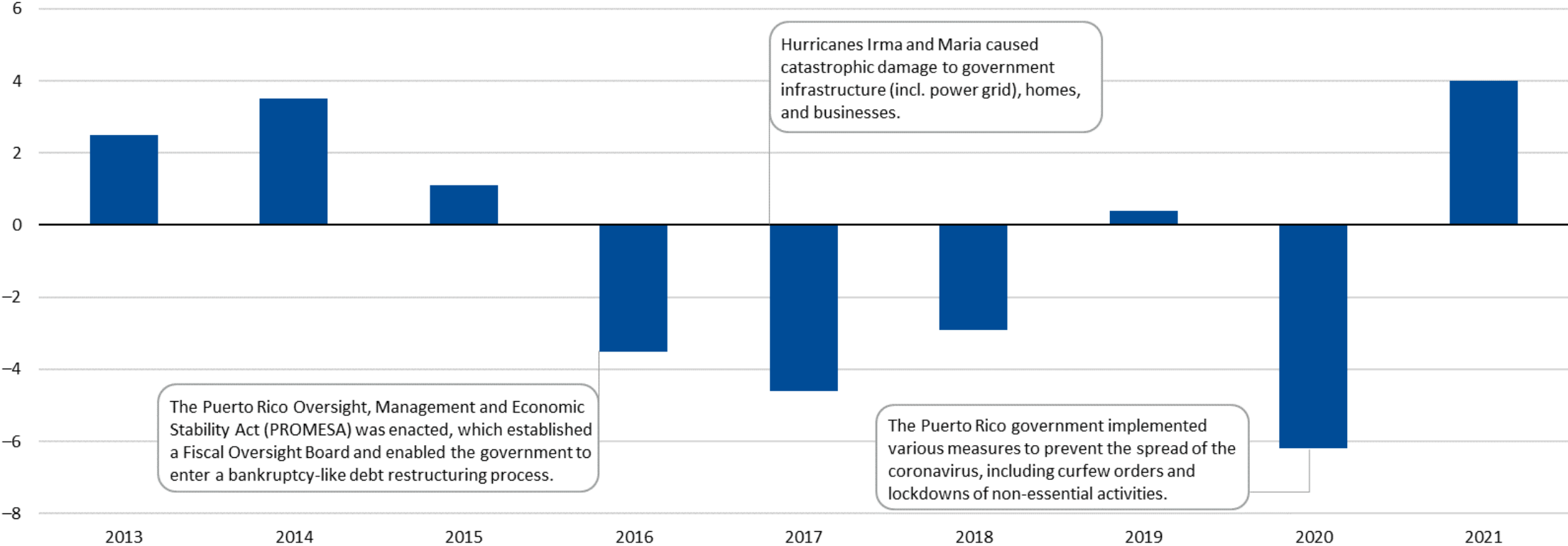


Note. The chart shows the percent change of total real GDP and the contributions (in percentage points) of each major component to that change. For example, personal consumption expenditures accounted for 6.10 percentage points of the 4.0 percent increase in real GDP in 2021. Imports are a subtraction item; thus, an increase in imports results in a negative contribution to GDP.

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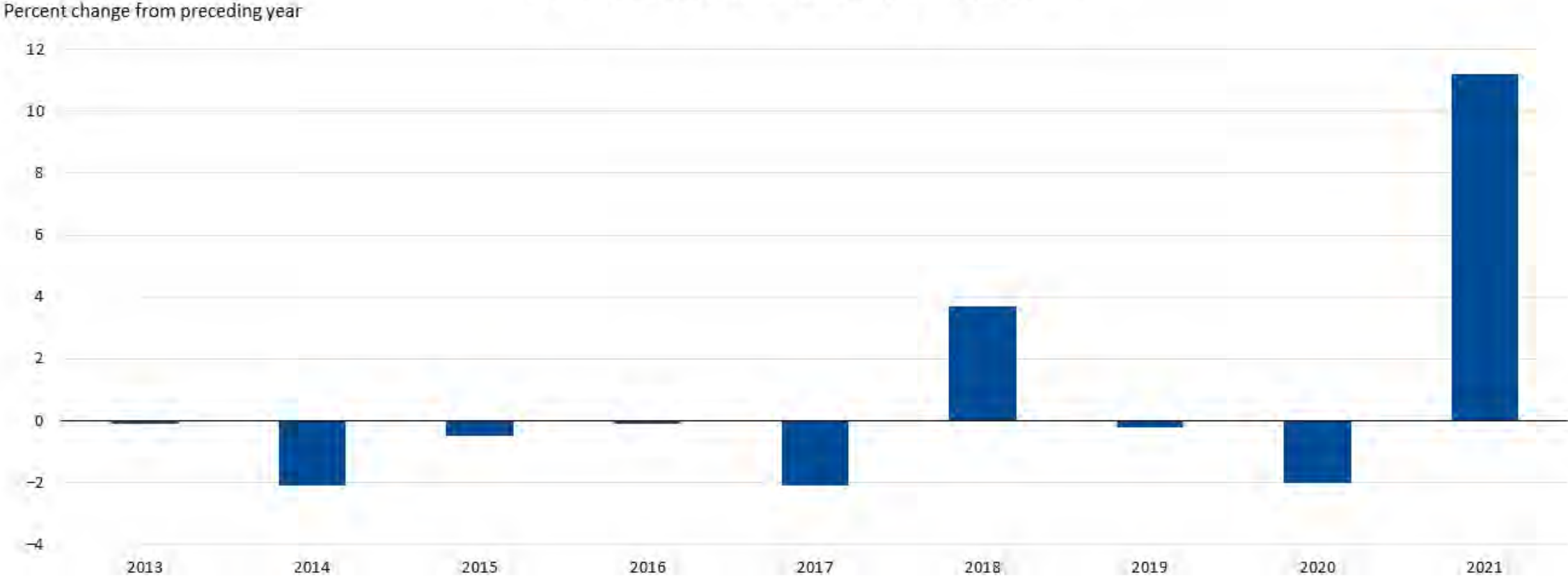
## Puerto Rico: Real Gross Domestic Product

Percent change from preceding year



# Puerto Rico: Personal Consumption Expenditures

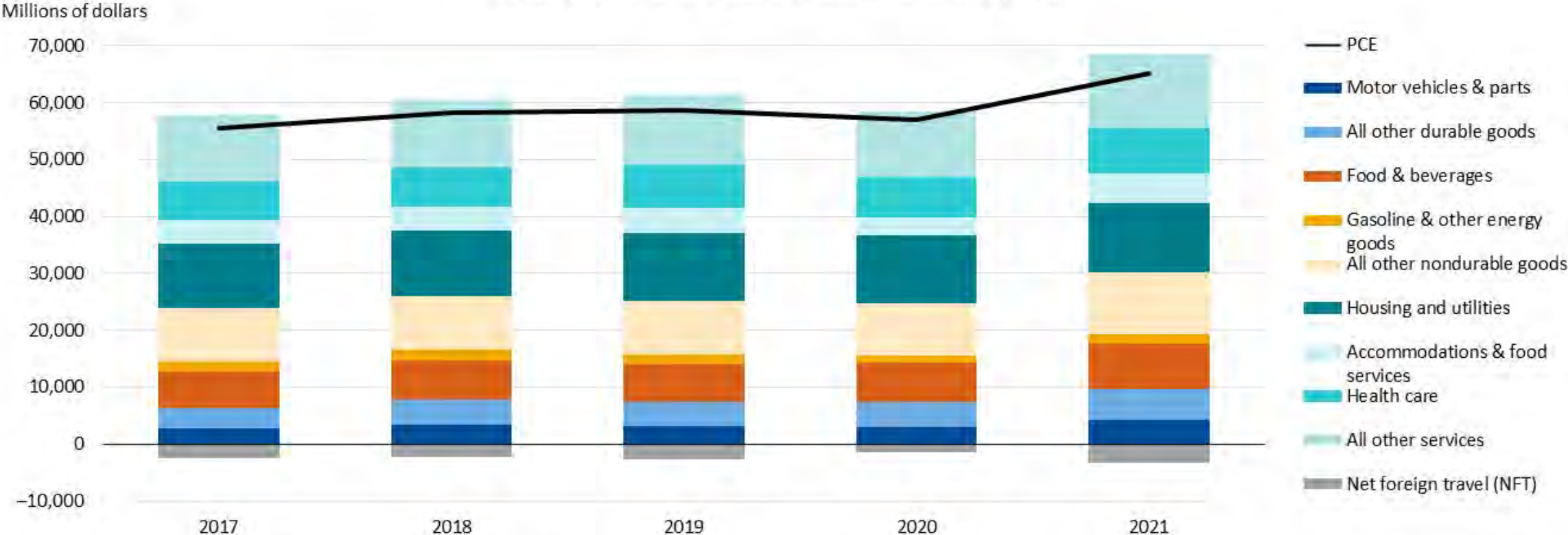
### Puerto Rico: Real Personal Consumption Expenditures



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# Puerto Rico: Personal Consumption Expenditures

**Puerto Rico: Personal Consumption Expenditures by Type**

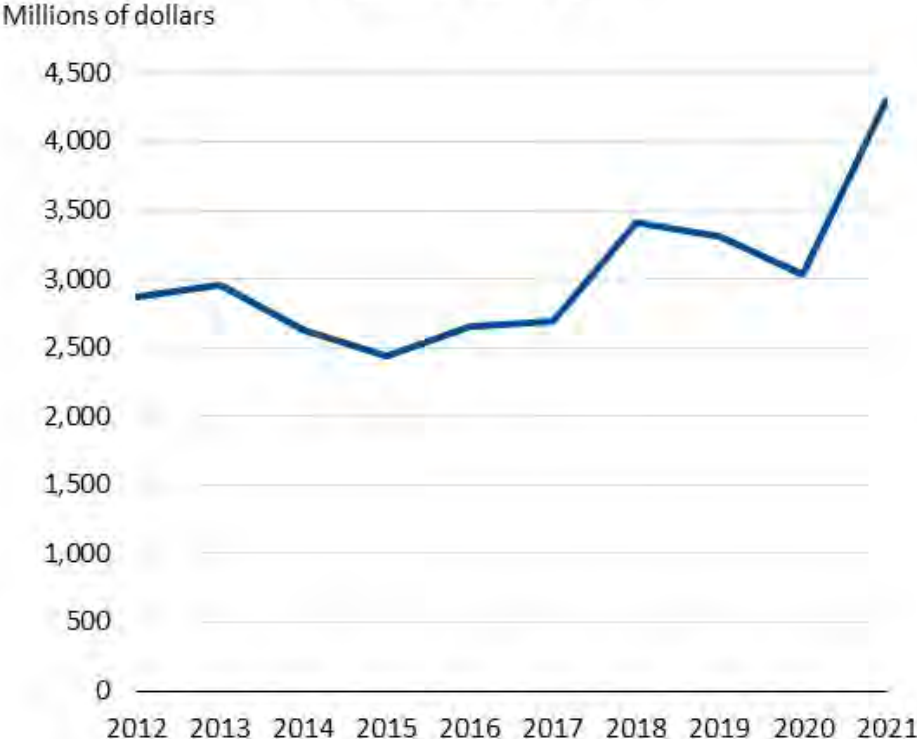


Note. Net foreign travel (NFT) is equal to foreign travel expenditures by residents less expenditures by nonresidents. NFT is negative for Puerto Rico because nonresident spending in Puerto Rico is greater than resident spending outside of Puerto Rico.

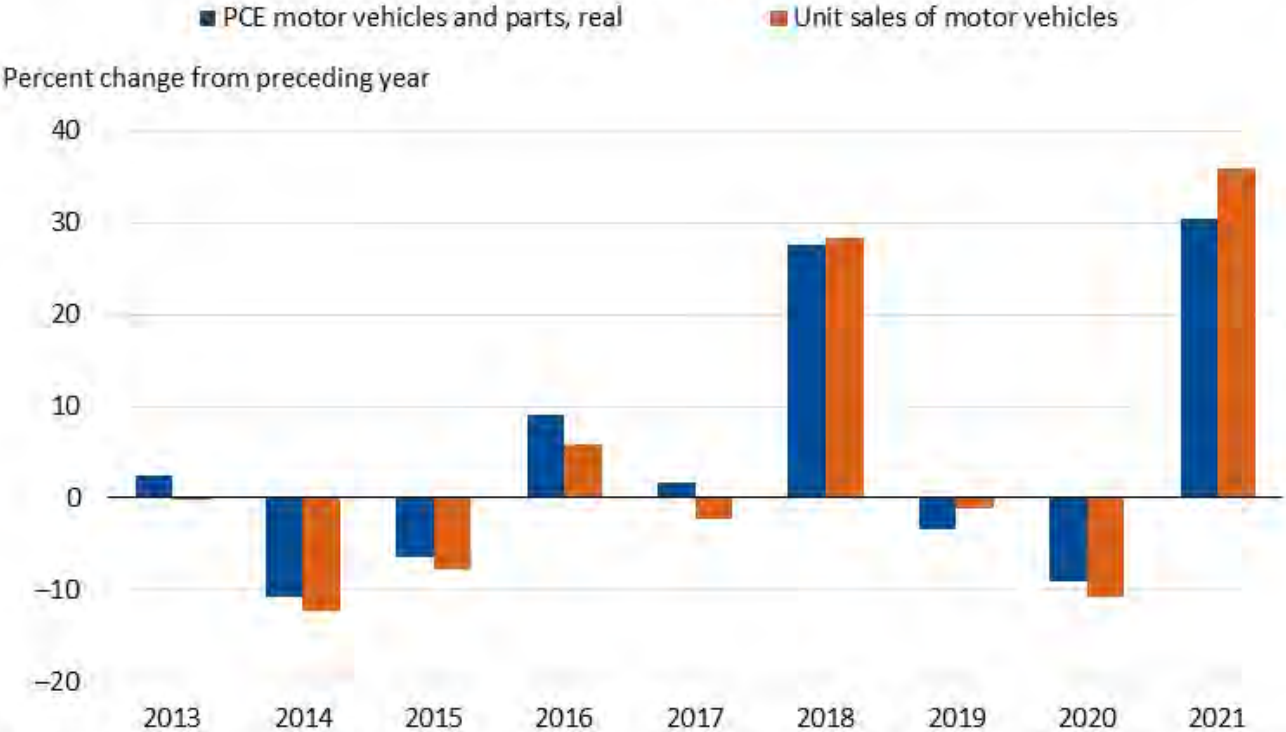


# Puerto Rico: Personal Consumption Expenditures

**Puerto Rico: Personal Consumption Expenditures of Motor Vehicles and Parts**



**Puerto Rico: Real Personal Consumption Expenditures (PCE) of Motor Vehicles and Parts, and Unit Sales of Motor Vehicles**



Note. Unit sales of motor vehicles are from the United Automotive Importers Group (GUIA in Spanish) as reported by the Economic Development Bank for Puerto Rico.

Sources: U.S. Bureau of Economic Analysis; Economic Development Bank for Puerto Rico.

## Summary of Methodologies: Puerto Rico Gross Domestic Product – Resumen de metodologías: Producto interior bruto de Puerto Rico

This guide summarizes the methods and data sources used by the Regional Product Division of the Bureau of Economic Analysis (BEA) to estimate annual measures of gross domestic product for Puerto Rico.

[Download PDF](#)

Esta guía resume los métodos y las fuentes de datos utilizados por la División de Producto Regional del Negociado de Análisis Económico (BEA por sus siglas en inglés) para estimar las medidas anuales del producto interior bruto de Puerto Rico.

[Descargar PDF](#)

Available on BEA's website:

<https://www.bea.gov/resources/methodologies/summary-of-methodologies-puerto-rico-gross-domestic-product>

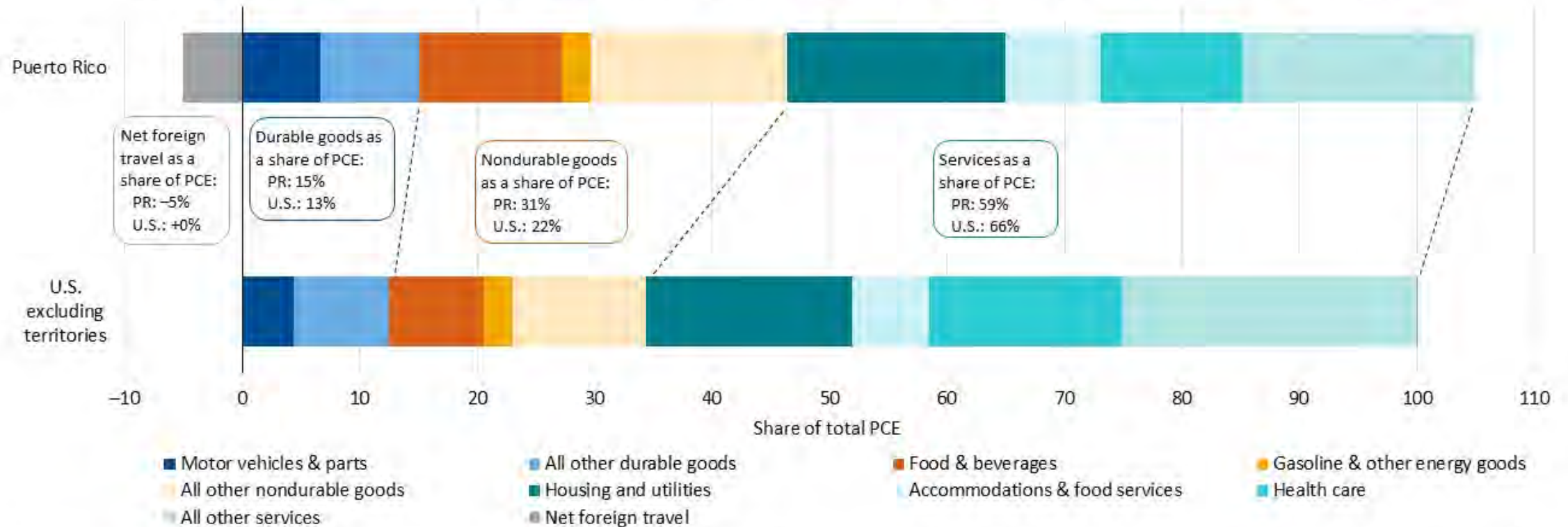
**Table A. Source Data for Current-Dollar Gross Domestic Product**

Component	Annual estimates: key source data used to prepare an extrapolator or interpolator
<b>Personal consumption expenditures</b>	
<b>Goods</b>	
<b>Durable goods</b>	
Motor vehicles and parts	For motor vehicles, Puerto Rico United Automobile Importers' Group (GUIA) data for unit sales and U.S. Bureau of Labor Statistics (BLS) U.S. CPIs for new and used vehicles; for parts, Puerto Rico Economic Development Bank data for retail sales of automotive parts, accessories, and tire stores and Puerto Rico Department of Treasury tabulations of declared sales by industry from the Sales and Use Tax Return.
Other durable goods	U.S. Census Bureau data for equipment imports other than motor vehicles and parts, BLS Quarterly Census of Employment and Wages (QCEW) wages for retail industries and selected manufacturing industries, and Puerto Rico Department of Treasury tabulations of declared sales by industry from the Sales and Use Tax Return.
<b>Nondurable goods</b>	
Food and beverages	Census Bureau County Business Patterns (CBP) and QCEW wages for food and beverage manufacturing establishments and Census Bureau data for food and beverage imports.
Gasoline and other energy goods	Puerto Rico Economic Development Bank data on gasoline consumption and Puerto Rico Department of Consumer Affairs data on gasoline average prices.
Other nondurable goods	For apparel and footwear, Census Bureau data for imports of these goods; for all other goods, QCEW wages for retail stores.

Table continues

# Puerto Rico: Personal Consumption Expenditures

Components of Personal Consumption Expenditures (PCE) as a Share of Total PCE for Puerto Rico and the United States in 2021



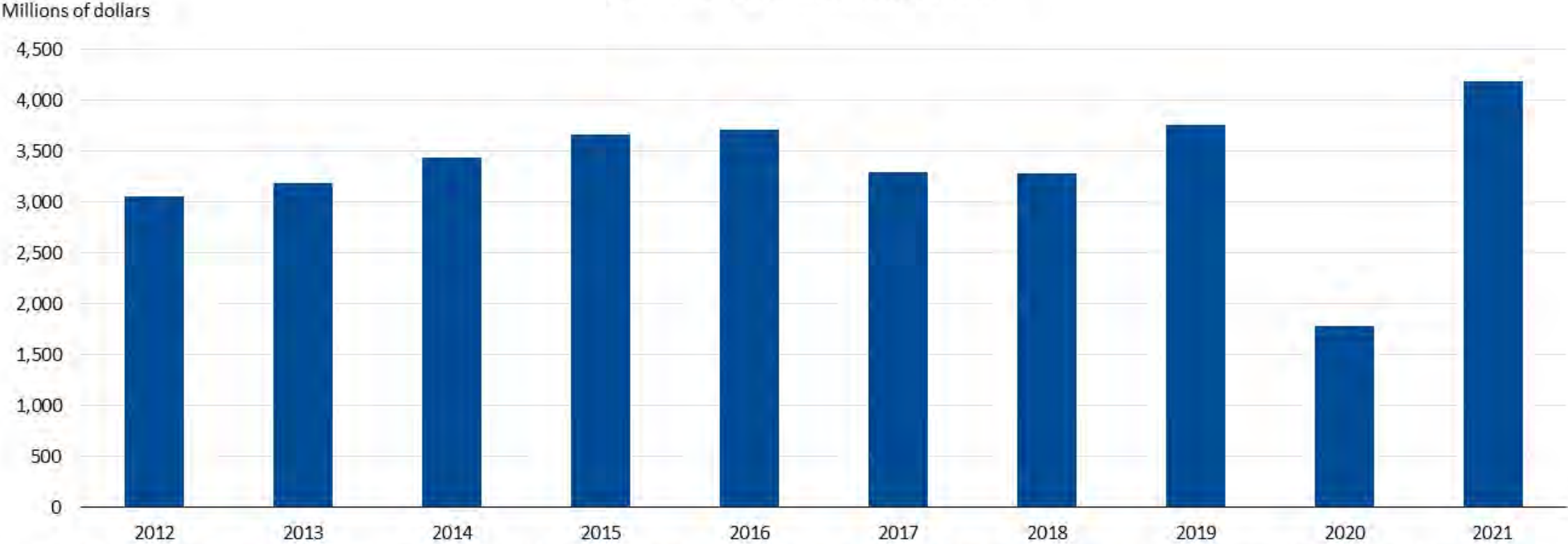
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# Puerto Rico: Personal Consumption Expenditures



**Puerto Rico: Exports of Travel Services**

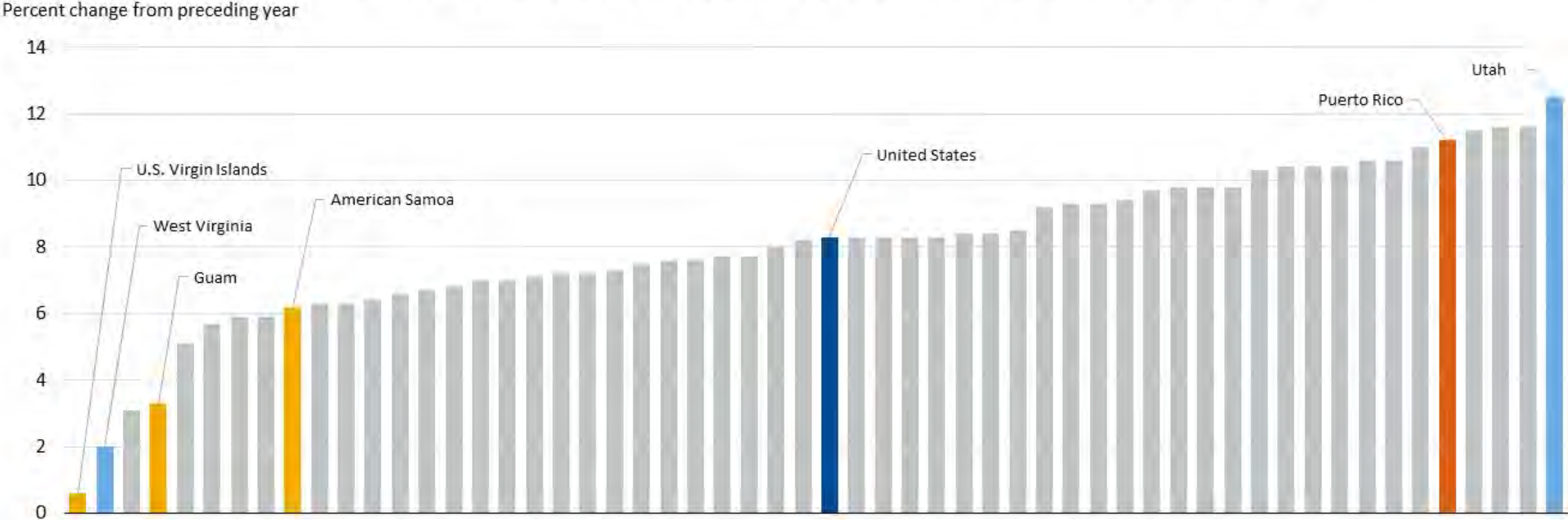


Note. Travel (for all purposes including education, business, and medical) includes spending by nonresidents on travel and tourism, including passenger transportation services provided by domestic establishments. Other transportation services, such as freight charges on goods, are included in "other" exports of services.

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# Puerto Rico: Personal Consumption Expenditures

**Real Personal Consumption Expenditures for U.S. States, District of Columbia, & Selected U.S. Territories, 2021**



Notes. Personal consumption expenditures (PCE) estimates for the United States include the 50 states and the District of Columbia. 2021 PCE estimates for the Commonwealth of the Northern Mariana Islands were not available as of August 2023. Chart reflects BEA's published estimates as of August 2023.

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## Common Assumption

U.S. Territories methodology is like GDP by state

- It is currently **not possible to estimate territorial GDP using the GDP by State methods**
- National GDP is the **starting point** for the methodology used to estimate GDP by state
- BEA uses the income-based approach for GDP by state estimates
- The territories are:
  - **Not included** in national GDP
  - **Not included** in many of the data sources used to construct national and state GDP



## Reality

U.S. Territories methodology is like national GDP

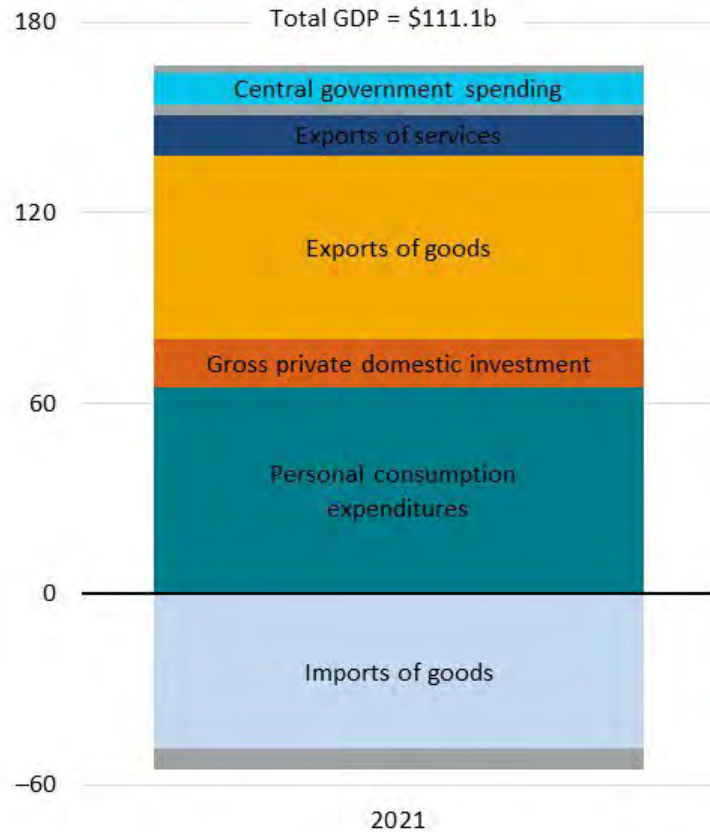
- BEA estimates each territory using currently available data, much of its administrative data from territorial governments
- BEA uses an expenditure-based methodology, which aggregates consumer spending, business investment spending, government spending, and net exports

# Available Key Data Sources For Puerto Rico GDP

## Puerto Rico: GDP by Component and Annual Data Sources

Major annual data sources required for GDP, by provider

Billions of dollars



### Commonwealth Government

Audited financial statements of central government and independent agencies (various)  
 Government intermediate purchases (Planning Board)  
 Hotel registrations (Tourism Company)  
 Ship passenger arrivals (Ports Authority)  
 Industry sales (Planning Board)  
 Balance of payments (Planning Board)  
 Construction survey data (Planning Board)  
 Auto sales (GUIA)  
 Tabulations of income tax return data (Hacienda)  
 Company financial statements (Department of State)  
 Selected financial data on corporations (DDEC)  
 Housing units sold and value of units sold (OCIF)  
 Gasoline consumption (EDB)  
 Gasoline average prices (Consumer Affairs)  
 Auto sales (GUIA)  
 Room nights rented (Tourism Company)  
 Consumer price index (DLHR)  
 Audited financial statements of public hospitals and utilities  
 Tabulations of Sales and Use Tax return data (Hacienda)  
 Insurance premiums and expenses (OCIF)  
 Enrollment and tuition for private K-12 (CEPR)

### Federal Agency

Wages by industry (BLS QCEW)  
 Public assistance grants (FEMA)  
 Air carrier statistics, T-100 (BTS)  
 Origin and destination survey (BTS)  
 Employment by industry (BLS QCEW)  
 FT-895 report (Census)  
 FT-900 report (Census)  
 FT-895 report (Census)  
 FT-900 report (Census)  
 Wages by industry (BLS QCEW)  
 Individual assistance grants (FEMA)  
 R&D performed by higher education institutions (NSF)  
 Population (Census)  
 American Community Survey (Census)  
 FT-895 report (Census)  
 FT-900 report (Census)  
 Wages by industry (BLS QCEW)  
 Residential revenues of electric utilities (EIA)  
 Hospital net patient revenues (CMS)  
 Bank call report statistics (FDIC)  
 Postsecondary tuition revenues (NCES)  
 FT-895 report (Census)  
 FT-900 report (Census)

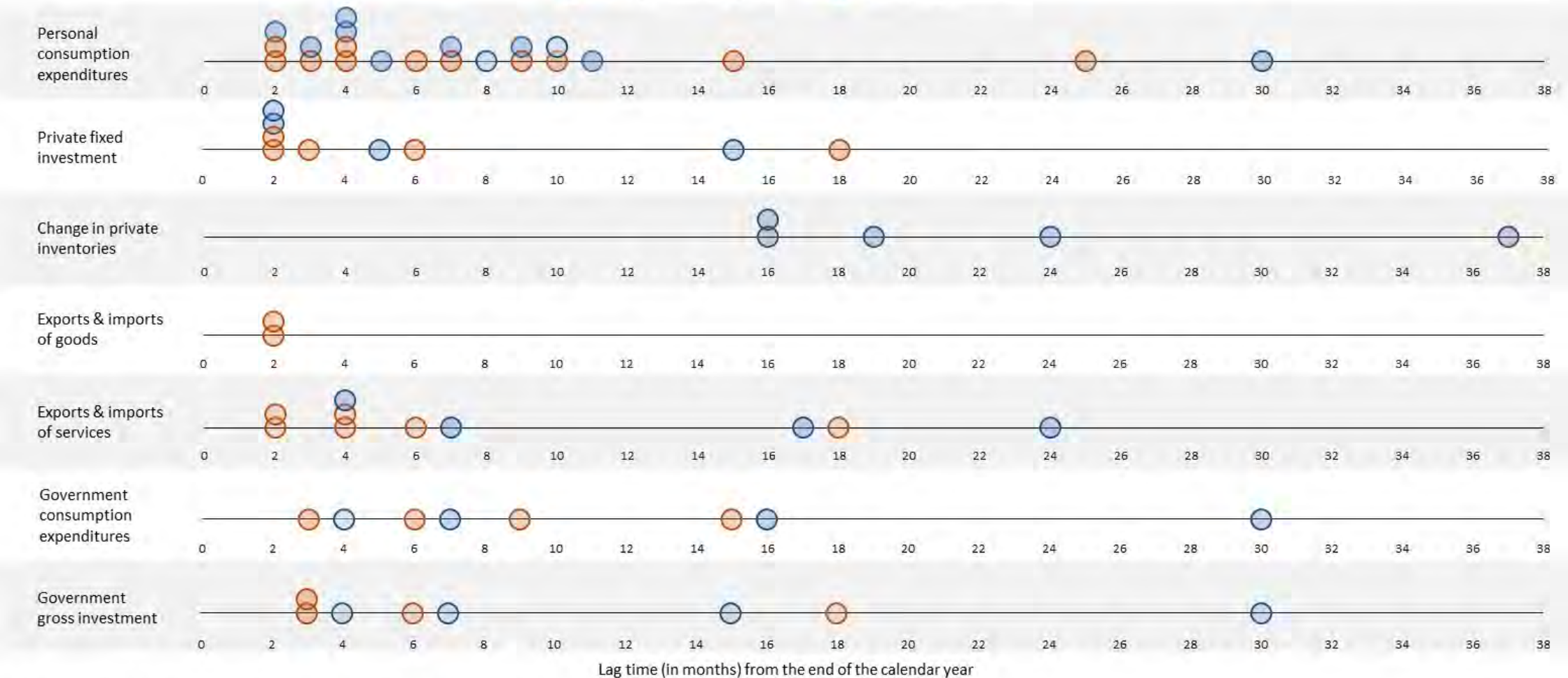
Note: Smaller components shown in gray are: municipal government spending, federal government spending, and imports of services. Not all data sources used in the estimation of GDP are listed. For a comprehensive listing of annual data sources used, as well as information on data sources for smaller GDP components, see <https://www.bea.gov/system/files/methodologies/summary-of-methodologies-puerto-rico-gross-domestic-product.pdf>.  
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# Lags in Availability of Key Data Sources For Puerto Rico GDP



Lag Time (in Months) of Data Sources Used to Estimate Puerto Rico GDP, by Data Provider

Federal government agency (orange circle) Puerto Rico government (blue circle)



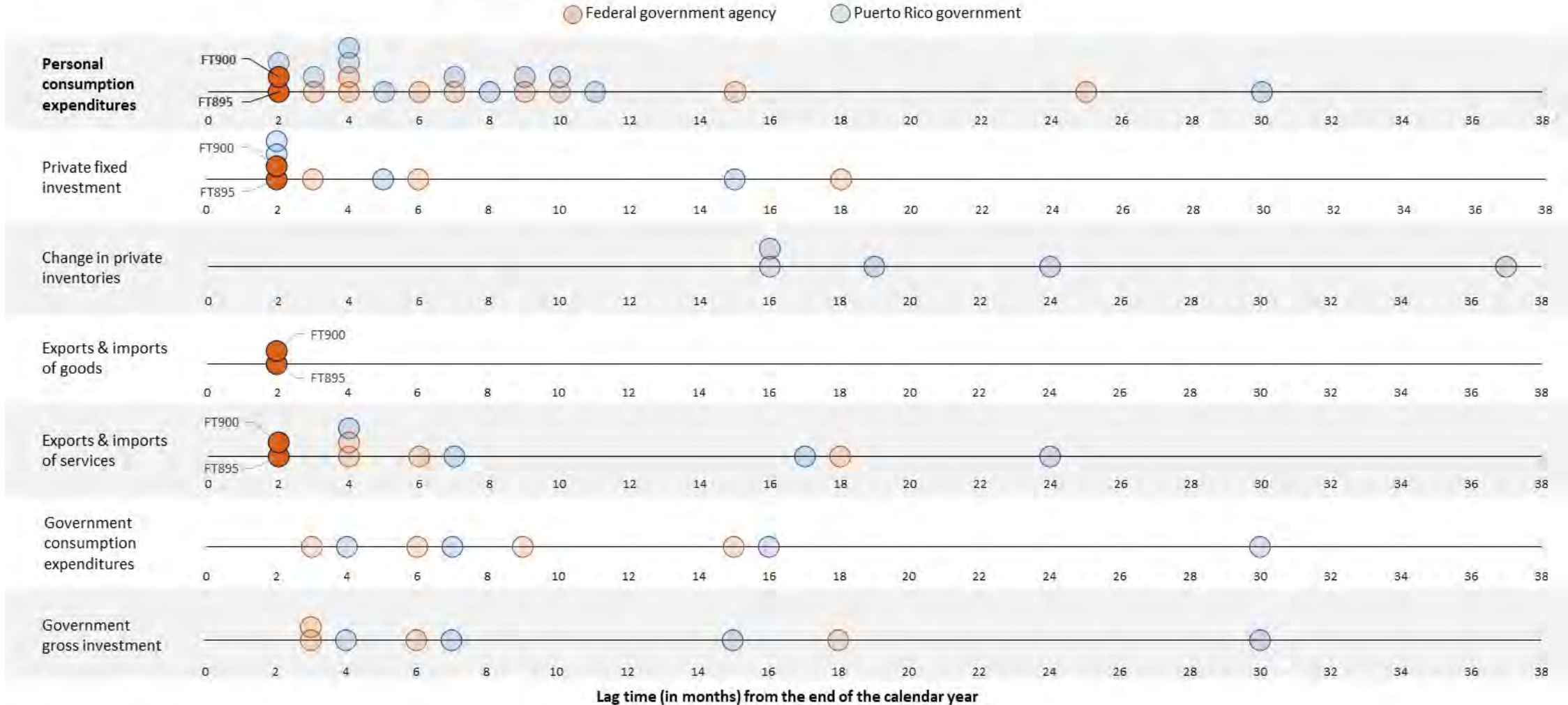
Note. Lag times are usually estimated based on the latest release that BEA has estimated. Time frames may vary significantly from year-to-year for unpublished data. U.S. Bureau of Economic Analysis



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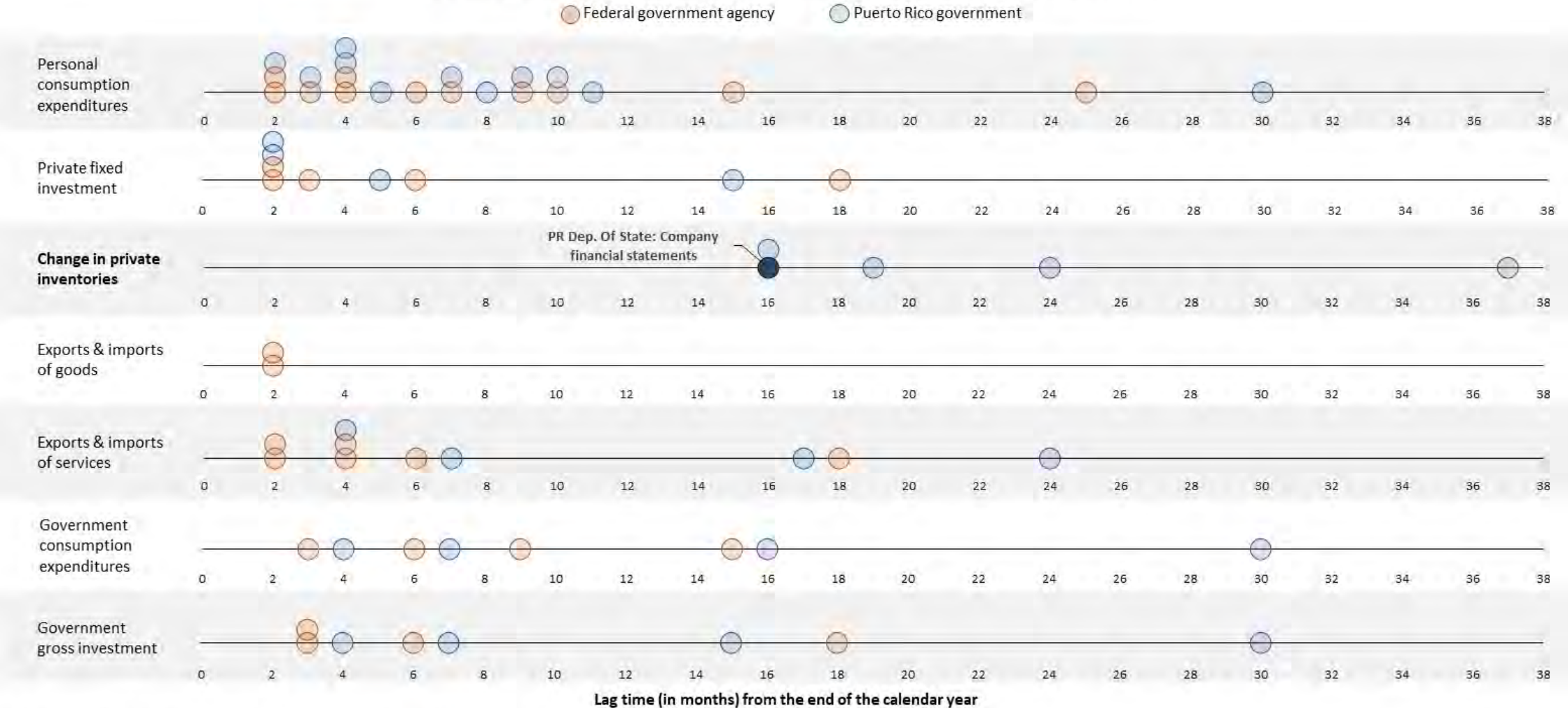
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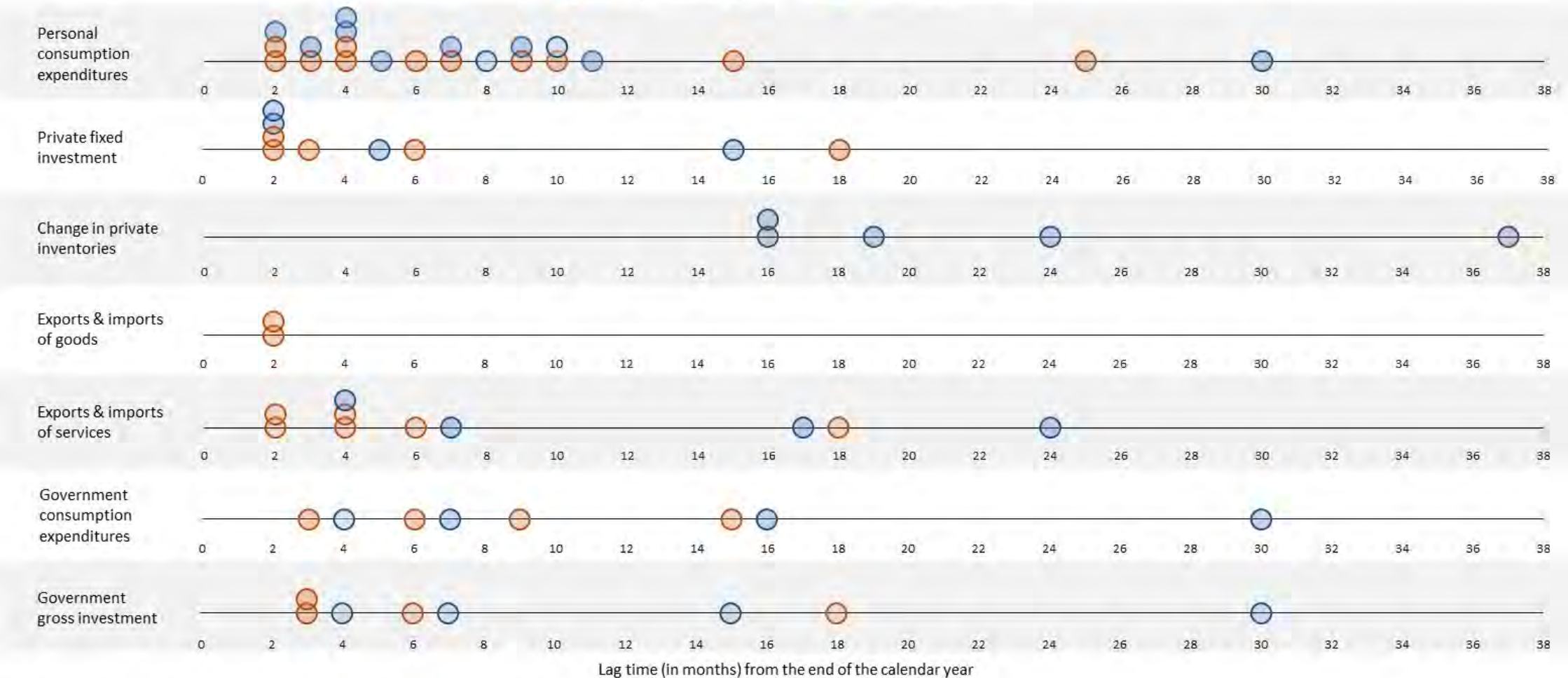
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U.S. Bureau of Economic Analysis

BEA strongly supports the inclusion of Puerto Rico in more federal government data sources.

The inclusion of Puerto Rico in more Census Bureau data would:

- result in **improved annual GDP statistics for Puerto Rico** by BEA
- enable the production of **more timely annual GDP statistics for Puerto Rico** by BEA

# Top 5 Census Bureau Products That Would Benefit Puerto Rico GDP Estimates



	Census Bureau annual survey	Improved source data for Puerto Rico GDP component
1	Annual Survey of Manufactures	Private inventory investment
2	Government Finances Survey	Central government spending; municipal government spending; consumer spending
3	Services Annual Survey	Private inventory investment; consumer spending; exports of services
4	Annual Retail Trade Survey	Private inventory investment; consumer spending
5	Annual Wholesale Trade Survey	Private fixed investment in equipment

Email us about BEA's Puerto Rico GDP statistics at [Territories@bea.gov](mailto:Territories@bea.gov).

Learn more about BEA's Puerto Rico GDP statistics at

- [www.bea.gov/data/gdp/gdp-puerto-rico](http://www.bea.gov/data/gdp/gdp-puerto-rico) (English) or
- [www.bea.gov/data/gdp/pib-de-puerto-rico](http://www.bea.gov/data/gdp/pib-de-puerto-rico) (Spanish).