



## About This Dashboard

This dashboard uses **artificial intelligence and data analysis** to provide transparent insights into Philippine government budget allocations based on the **General Appropriations Act (GAA)**.

- Predict future budget needs using historical trends
- Identify unusual spending patterns for public oversight
- Group agencies by spending behavior for comparison

 **Why Transparency Matters:** Your tax money, your right to know. This data empowers citizens to engage in informed discussions about public finances.



## Budget Forecast for 2026

### 💡 How We Made This Prediction

Our computer model analyzed **years of historical budget data** to identify patterns in government spending. The prediction for 2026 is based on:

- **Historical Trends:** Budget growth/decline patterns
- **Department Patterns:** Typical spending behavior
- **YoY Changes:** Rate of budget increases
- **Economic Indicators:** Spending vs total budget

**Technology:** XGBoost Machine Learning Algorithm

TOTAL PREDICTED BUDGET

**₱4.24 Trillion**

AGENCIES ANALYZED

**398**

CONFIDENCE LEVEL

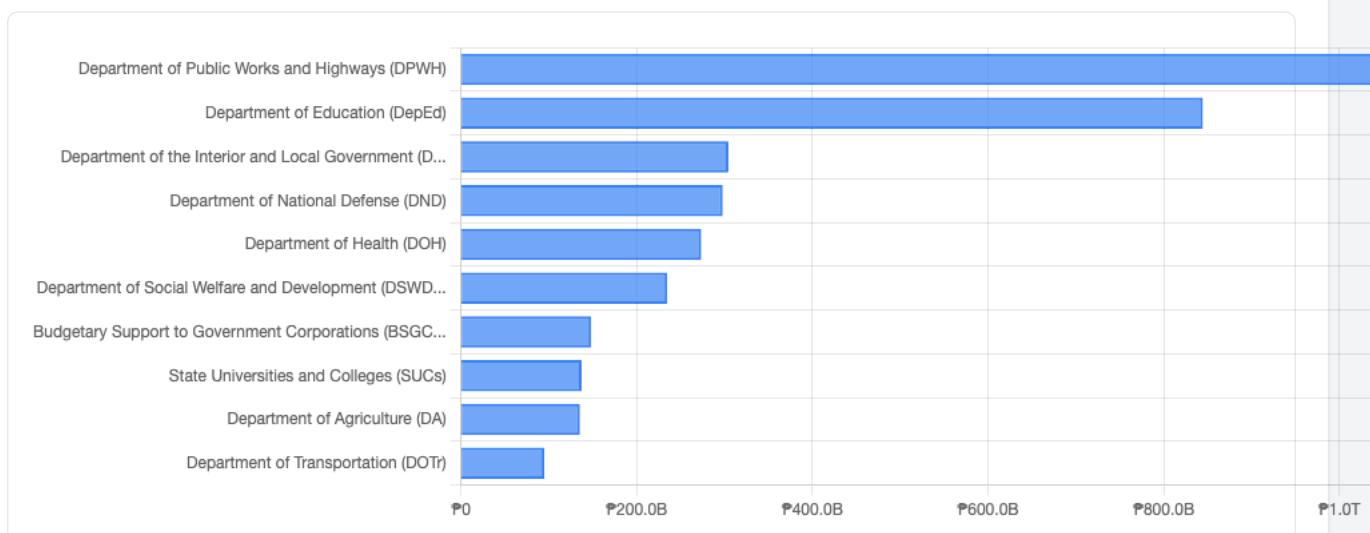
**High**

### 📈 Budget Trend: History vs Prediction

**What you're seeing:** This chart shows actual government budgets from previous years (in black) and our prediction for 2026 (in gray). The trend line helps visualize how the budget has changed over time.

## 🏛️ Top 10 Departments by Predicted Budget

**Why this matters:** These are the government departments expected to receive the most funding. This shows where the government plans to focus its resources - whether on education, infrastructure, healthcare, defense, or other priorities.



## 🔍 Unusual Budget Allocations Found

Q. How We Detected Anomalies

Our system uses two powerful detection methods to find unusual budget patterns:

#### 1. Machine Learning (Isolation Forest)

AI algorithm that learns normal budget patterns and identifies significant deviations.

#### 2. Statistical Analysis (Z-Score)

Mathematical analysis flagging items more than 3 standard deviations from average.

**Note:** An anomaly indicates unusual patterns, not necessarily wrongdoing.

UNUSUAL ALLOCATIONS

**99**

ANOMALY RATE

**0.0%**

### Types of Unusual Patterns

**What each pattern means:** These categories help classify why a budget item was flagged.

#### Other

**71**

Other unusual patterns detected

71.7% of all anomalies

#### High Growth

**12**

Budget increased by more than 100% from previous year

12.1% of all anomalies

#### High Concentration

**12**

Department received more than 10% of total budget

12.1% of all anomalies

#### Decline

**4**

Budget decreased by more than 50% from previous year

4.0% of all anomalies

### Complete List of Anomalies

**Interactive Table:** Browse all 99 detected anomalies. Click column headers to sort, or use the search box to filter by department or agency name.

Search by department or agency name...

All Types



All Years



YEAR ↑	DEPARTMENT ↓	AGENCY ↑	AMOUNT ↓	TYPE ↓	SCORE ↓
2025	Department of Public Works and Highways (DPWH)	Office of the Secretary	₱1.09 Trillion	High Concentration	-0.826
2024	Department of Public Works and Highways (DPWH)	Office of the Secretary	₱997.88 Billion	High Concentration	-0.826
2023	Department of Public Works and Highways (DPWH)	Office of the Secretary	₱894.17 Billion	High Concentration	-0.824
2022	Department of Public Works and Highways (DPWH)	Office of the Secretary	₱786.60 Billion	High Concentration	-0.811
2021	Department of Public Works and Highways (DPWH)	Office of the Secretary	₱695.67 Billion	High Concentration	-0.810
2023	Department of Education (DepEd)	Office of the Secretary	₱719.59 Billion	High Concentration	-0.798
2025	Department of Education (DepEd)	Office of the Secretary	₱779.24 Billion	High Concentration	-0.786
2024	Department of Education (DepEd)	Office of the Secretary	₱759.70 Billion	High Concentration	-0.785
2020	Department of Public Works and Highways (DPWH)	Office of the Secretary	₱581.67 Billion	High Concentration	-0.773
2021	Department of Education (DepEd)	Office of the Secretary	₱594.11 Billion	High Concentration	-0.771
2022	Department of Education (DepEd)	Office of the Secretary	₱631.77 Billion	High Concentration	-0.770
2020	Department of Education (DepEd)	Office of the Secretary	₱552.98 Billion	High Concentration	-0.769
2024	Department of Social Welfare and Development (DSWD)	Office of the Secretary	₱245.20 Billion	Other	-0.743
2024	Department of Health (DOH)	Office of the Secretary	₱246.22 Billion	Other	-0.731
2025	Department of Social Welfare and Development (DSWD)	Office of the Secretary	₱215.98 Billion	Other	-0.719
2022	Department of Health (DOH)	Office of the Secretary	₱187.84 Billion	Other	-0.719
2023	Department of Health (DOH)	Office of the Secretary	₱213.96 Billion	Other	-0.711
2022	Department of Social Welfare and Development (DSWD)	Office of the Secretary	₱202.60 Billion	Other	-0.706
2024	Commission on Elections (COMELEC)	Commission on Elections (COMELEC)	₱40.34 Billion	High Growth	-0.706
2025	Department of the Interior and Local Government (DILG)	Philippine National Police	₱206.02 Billion	Other	-0.705
2021	Department of Health (DOH)	Office of the Secretary	₱138.39 Billion	Other	-0.702
2025	Department of Health (DOH)	Office of the Secretary	₱252.99 Billion	Other	-0.701
2021	Department of Social Welfare and Development (DSWD)	Office of the Secretary	₱174.86 Billion	Other	-0.688

YEAR ↓	DEPARTMENT ↑	AGENCY ↑	AMOUNT ↑	TYPE ↑	SCORE ↓
2025	Department of National Defense (DND)	Philippine Army ( Land Forces )	₱138.27 Billion	Other	-0.685
2020	Department of Social Welfare and Development (DSWD)	Office of the Secretary	₱162.09 Billion	Other	-0.683
2024	Department of the Interior and Local Government (DILG)	Philippine National Police	₱198.26 Billion	Other	-0.678
2024	Budgetary Support to Government Corporations (BSGC)	National Irrigation Administration	₱70.22 Billion	Other	-0.676
2023	Department of Social Welfare and Development (DSWD)	Office of the Secretary	₱196.67 Billion	Other	-0.675
2025	Budgetary Support to Government Corporations (BSGC)	Philippine Health Insurance Corporation	₱0.00	Decline	-0.671
2021	Department of the Interior and Local Government (DILG)	Philippine National Police	₱191.47 Billion	Other	-0.664
2020	Department of the Interior and Local Government (DILG)	Philippine National Police	₱187.62 Billion	Other	-0.664
2022	Department of the Interior and Local Government (DILG)	Philippine National Police	₱191.03 Billion	Other	-0.661
2023	Department of the Interior and Local Government (DILG)	Philippine National Police	₱193.59 Billion	Other	-0.661
2024	Department of National Defense (DND)	Philippine Army ( Land Forces )	₱123.23 Billion	Other	-0.654
2023	Department of Agriculture (DA)	Office of the Secretary	₱88.01 Billion	Other	-0.653
2024	Department of Transportation (DOTr)	Office of the Secretary	₱41.49 Billion	Other	-0.653
2020	Department of Health (DOH)	Office of the Secretary	₱104.03 Billion	Other	-0.652
2023	Budgetary Support to Government Corporations (BSGC)	Philippine Health Insurance Corporation	₱100.23 Billion	Other	-0.649
2025	Department of Agriculture (DA)	Office of the Secretary	₱108.46 Billion	Other	-0.647
2023	Department of Transportation (DOTr)	Office of the Secretary	₱82.34 Billion	Other	-0.645
2024	Budgetary Support to Government Corporations (BSGC)	Philippine Health Insurance Corporation	₱61.51 Billion	Other	-0.640
2025	Other Executive Offices (OEOs)	National Commission of Senior Citizens	₱3.20 Billion	High Growth	-0.640
2024	Department of Agriculture (DA)	Office of the Secretary	₱98.39 Billion	Other	-0.629
2022	Budgetary Support to Government Corporations (BSGC)	Land Bank of the Philippines	₱0.00	Decline	-0.627
2023	Department of National Defense (DND)	Philippine Army ( Land Forces )	₱110.38 Billion	Other	-0.623
2023	Commission on Elections (COMELEC)	Commission on Elections (COMELEC)	₱5.97 Billion	Decline	-0.622

YEAR ↓	DEPARTMENT ↑	AGENCY ↑	AMOUNT ↑	TYPE ↑	SCORE ↓
2022	Department of National Defense (DND)	Philippine Army ( Land Forces )	₱103.14 Billion	Other	-0.620
2022	Department of Transportation (DOTr)	Office of the Secretary	₱54.69 Billion	Other	-0.617
2021	Commission on Elections (COMELEC)	Commission on Elections (COMELEC)	₱14.82 Billion	High Growth	-0.616
2023	Department of National Defense (DND)	General Headquarters, AFP and AFP-Wide Service Sup...	₱16.39 Billion	Decline	-0.613
2025	Office of the President (OP)	The President's Offices	₱15.91 Billion	Other	-0.612
2025	Department of National Defense (DND)	Philippine Navy ( Naval Forces )	₱51.08 Billion	Other	-0.611
2021	Department of National Defense (DND)	Philippine Army ( Land Forces )	₱97.67 Billion	Other	-0.609
2021	Department of Transportation (DOTr)	Office of the Secretary	₱73.12 Billion	Other	-0.608
2023	Office of the Vice-President (OVP)	Office of the Vice-President (OVP)	₱2.36 Billion	High Growth	-0.605
2020	Department of National Defense (DND)	Philippine Army ( Land Forces )	₱92.55 Billion	Other	-0.605
2022	Other Executive Offices (OEOs)	Commission on Higher Education	₱32.75 Billion	Other	-0.603
2020	Department of Transportation (DOTr)	Office of the Secretary	₱83.28 Billion	Other	-0.603
2022	Commission on Elections (COMELEC)	Commission on Elections (COMELEC)	₱26.93 Billion	Other	-0.602
2025	Allocations to Local Government Units (ALGU)	Metropolitan Manila Development Authority	₱8.86 Billion	Other	-0.600
2021	Other Executive Offices (OEOs)	Commission on Higher Education	₱51.84 Billion	Other	-0.599
2020	Budgetary Support to Government Corporations (BSGC)	Philippine Health Insurance Corporation	₱71.35 Billion	Other	-0.598
2025	Budgetary Support to Government Corporations (BSGC)	National Irrigation Administration	₱69.37 Billion	Other	-0.598
2021	Department of Labor and Employment (DOLE)	Office of the Secretary	₱25.27 Billion	High Growth	-0.596
2021	Budgetary Support to Government Corporations (BSGC)	Philippine Health Insurance Corporation	₱71.35 Billion	Other	-0.594
2022	Budgetary Support to Government Corporations (BSGC)	Philippine Health Insurance Corporation	₱79.99 Billion	Other	-0.592
2021	Department of Labor and Employment (DOLE)	Overseas Workers Welfare Administration	₱7.63 Billion	High Growth	-0.592
2021	Department of Agriculture (DA)	Office of the Secretary	₱60.87 Billion	Other	-0.587
2020	Budgetary Support to Government Corporations (BSGC)	Land Bank of the Philippines	₱36.49 Billion	Other	-0.586

YEAR ↓	DEPARTMENT ↓	AGENCY ↓	AMOUNT ↓	TYPE ↓	SCORE ↓
2025	The Judiciary (JUD)	Supreme Court of the Philippines and the Lower Cou...	₱55.23 Billion	Other	-0.586
2024	The Judiciary (JUD)	Supreme Court of the Philippines and the Lower Cou...	₱51.99 Billion	Other	-0.585
2024	State Universities and Colleges (SUCs)	Romblon State University	₱2.86 Billion	High Growth	-0.581
2025	Department of Foreign Affairs (DFA)	Office of the Secretary	₱27.61 Billion	Other	-0.577
2025	Department of National Defense (DND)	Philippine Air Force ( Air Forces )	₱51.62 Billion	Other	-0.577
2024	Other Executive Offices (OEOs)	Office of the Presidential Adviser on Peace, Recon...	₱7.00 Billion	High Growth	-0.576
2025	Department of Transportation (DOTr)	Office of the Secretary	₱50.95 Billion	Other	-0.573
2025	Commission on Elections (COMELEC)	Commission on Elections (COMELEC)	₱35.50 Billion	Other	-0.573
2024	State Universities and Colleges (SUCs)	Mindanao State University	₱12.68 Billion	Other	-0.572
2024	Department of Labor and Employment (DOLE)	Office of the Secretary	₱36.31 Billion	Other	-0.569
2025	Department of Information and Communications Technology (DIC...)	Office of the Secretary	₱12.83 Billion	Other	-0.568
2024	State Universities and Colleges (SUCs)	Marinduque State College	₱2.04 Billion	High Growth	-0.567
2020	Other Executive Offices (OEOs)	Commission on Higher Education	₱47.91 Billion	Other	-0.566
2022	Department of Labor and Employment (DOLE)	Overseas Workers Welfare Administration	₱13.04 Billion	Other	-0.565
2022	Department of Agriculture (DA)	Office of the Secretary	₱61.03 Billion	Other	-0.563
2024	Budgetary Support to Government Corporations (BSGC)	Local Water Utilities Administration	₱864.43 Million	High Growth	-0.561
2022	State Universities and Colleges (SUCs)	Marikina Polytechnic College	₱1.16 Billion	High Growth	-0.559
2023	Budgetary Support to Government Corporations (BSGC)	National Irrigation Administration	₱40.86 Billion	Other	-0.559
2022	Department of Information and Communications Technology (DIC...)	Cybercrime Investigation and Coordination Center	₱366.53 Million	High Growth	-0.558
2025	Department of the Interior and Local Government (DILG)	Bureau of Jail Management and Penology	₱29.36 Billion	Other	-0.555
2021	The Judiciary (JUD)	Supreme Court of the Philippines and the Lower Cou...	₱39.77 Billion	Other	-0.554
2020	State Universities and Colleges (SUCs)	University of the Philippines System	₱19.70 Billion	Other	-0.532
2024	Other Executive Offices (OEOs)	Commission on Higher Education	₱38.00 Billion	Other	-0.531

YEAR ↑	DEPARTMENT ↑	AGENCY ↑	AMOUNT ↑	TYPE ↑	SCORE ↑
2025	Other Executive Offices (OEOs)	Commission on Higher Education	₱34.88 Billion	Other	-0.515
2023	Other Executive Offices (OEOs)	Commission on Higher Education	₱31.73 Billion	Other	-0.507
2022	State Universities and Colleges (SUCs)	University of the Philippines System	₱25.60 Billion	Other	-0.484
2021	State Universities and Colleges (SUCs)	University of the Philippines System	₱22.65 Billion	Other	-0.481
2023	State Universities and Colleges (SUCs)	University of the Philippines System	₱25.52 Billion	Other	-0.475
2025	State Universities and Colleges (SUCs)	University of the Philippines System	₱24.02 Billion	Other	-0.471
2024	State Universities and Colleges (SUCs)	University of the Philippines System	₱26.07 Billion	Other	-0.469

Showing top 1,000 most significant anomalies. Lower anomaly scores indicate more unusual patterns.

## 📈 Spending Pattern Groups

### 💸 How We Grouped Agencies

We used a machine learning technique called **K-means Clustering** to group government agencies based on their spending behavior. The analysis considered:

- **Total Budget Size:** How much each agency typically receives
- **Growth Patterns:** Whether their budgets tend to increase, decrease, or stay stable
- **Budget Share:** What percentage of the total government budget they receive
- **Spending Stability:** Whether their allocations are consistent or vary significantly

**Why group agencies?** Grouping helps identify agencies with similar spending behavior, making it easier to compare efficiency, detect unusual patterns, and understand government priorities.

Number of Spending Groups Found

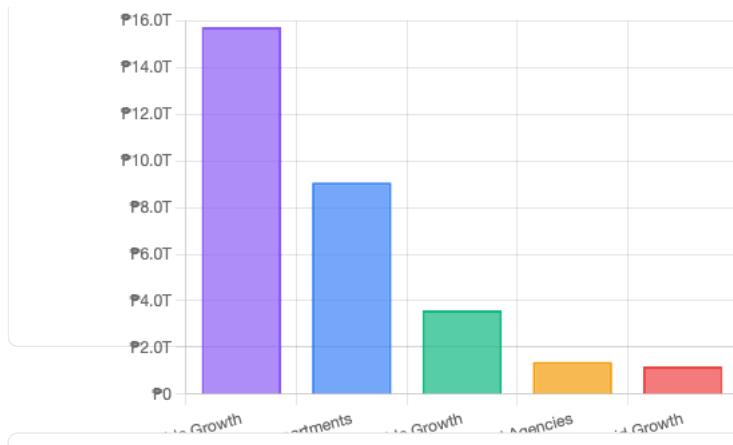
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Agencies were automatically categorized into 5 distinct groups based on their budget characteristics

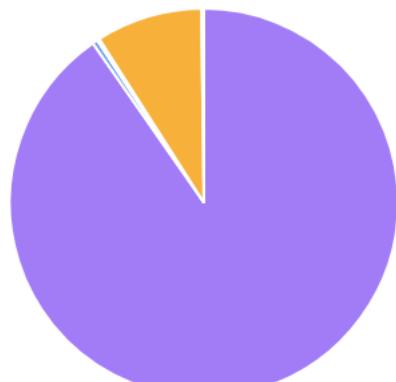
## 🏛️ Spending Groups Overview

**Understanding the groups:** Each group represents agencies that share similar budget patterns. This helps identify which agencies are comparable and can reveal insights about government structure and priorities.

Total Budget by Group



Number of Agencies per Group



█ High Budget - Stable Growth    █ Large Departments  
█ Medium Budget - Variable Growth    █ Small Specialized Agencies  
█ Low Budget - Rapid Growth

Group	Number of Agencies	Total Budget	Average per Agency
High Budget - Stable Growth	429	₱15.72 Trillion	₱36.65 Billion
Large Departments	2	₱9.08 Trillion	₱4.54 Trillion
Medium Budget - Variable Growth	1	₱3.60 Trillion	₱3.60 Trillion
Small Specialized Agencies	42	₱1.39 Trillion	₱33.12 Billion
Low Budget - Rapid Growth	1	₱1.20 Trillion	₱1.20 Trillion

## 💡 What Can You Do With This Information?

### 👤 As a Citizen

- Ask questions about government spending priorities and policy decisions
- Compare predictions with actual allocations to hold officials accountable
- Identify areas where unusual spending might need investigation
- Engage in informed public discourse about the national budget
- Share this report with your community to promote awareness



### For Journalists & Advocates

- Use anomaly detections as leads for investigative reporting
- Compare department budgets to understand policy priorities
- Track trends over time to identify shifts in government focus
- Educate the public on budget transparency and accountability
- Advocate for evidence-based policy discussions

**⚠ Important Reminder:** This analysis is a tool to promote transparency and civic engagement. It should be used alongside other information sources, official government reports, and expert analysis. The predictions and anomaly detections are based on statistical patterns and should not be taken as definitive proof of wrongdoing or inefficiency.

### Data Source

This report was generated using machine learning analysis of Philippine Government **General Appropriations Act (GAA)** data.

Technologies used: XGBoost, Isolation Forest, K-means Clustering, Python, Chart.js

For questions or feedback about this analysis, please contact your local government transparency advocates or budget oversight organizations.

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