How Data Supports Decision-Making and Accountability in Nonprofit Organizations

Executive Summary
This capstone project examines how publicly available nonprofit financial data can be used to support transparency, accountability, and data-driven decision-making. Using IRS Form 990 annual financial extracts, the study analyzes how nonprofit organizations allocate resources, manage administrative costs, and maintain financial sustainability over time.

ASK – Problem Definition

This study explores how nonprofit financial data can be transformed into meaningful indicators that inform stakeholders such as nonprofit leaders, donors, regulators, and the public. The core problem addressed is the overreliance on single metrics, such as program expense ratios, which may obscure financial risk and long-term sustainability.

PREPARE – Data Collection and Credibility

The dataset used in this analysis comes from the IRS SOI Annual Extract of Tax-Exempt Organization Financial Data, which includes Forms 990, 990-EZ, and 990-PF. This data is publicly available, authoritative, reliable, and well-documented, satisfying ROCCC standards.

PROCESS – Data Cleaning and Preparation

Data was loaded into Google BigQuery and processed using SQL. A raw data table was preserved, a cleaned analytical view was created, and a metrics view was derived to calculate key indicators. Invalid records with zero revenue or expenses were excluded to ensure analytical accuracy.

ANALYZE – Metrics and Insights

Key metrics calculated include program expense ratios, administrative and fundraising expense ratios, operating margins, and asset coverage ratios. Results show that while nonprofits strongly prioritize program spending, financial sustainability varies significantly across time periods.

SHARE – Findings and Visualization

Visual analysis reveals consistently high program expense ratios and low administrative costs. However, operating margins fluctuate and asset coverage varies, indicating differing levels of financial resilience across organizations.

ACT – Recommendations

Nonprofit leaders should monitor sustainability metrics alongside mission spending. Donors should evaluate financial resilience when making funding decisions. Regulators should promote standardized financial reporting, and analysts should use longitudinal data to identify financial risk patterns.

Conclusion

This case study demonstrates how nonprofit financial data can be leveraged to support informed decision-making and accountability. By moving beyond single-metric evaluation, stakeholders can gain a more complete understanding of nonprofit performance and sustainability.