Central Bank of Suriname

Government Expenditures in Suriname

A Stimulus or Impediment to Growth?

Jamaica, October 2013

Albert Mungroo
Gavin Ooft
Peggy Tjon Kie Sim - Balker
(Presenter)

Outline

- Introduction;
- Government Expenditures (GE) & GDP in Suriname;
- Literature Review;
- Model Specification;
- Data, Econometric Procedure & Results;
- Conclusion & Policy Recommendations.

Introduction

- Motivation:
  - Economic growth one of the main objectives of governments in Suriname;
  - Investigating whether government spending in Suriname stimulate economic growth.

- Central Question:
  - 'What is the impact of the different components of government expenditures on economic growth in Suriname?'

- Purpose:
  - Empirically test for the impact of the different components of GE on growth.
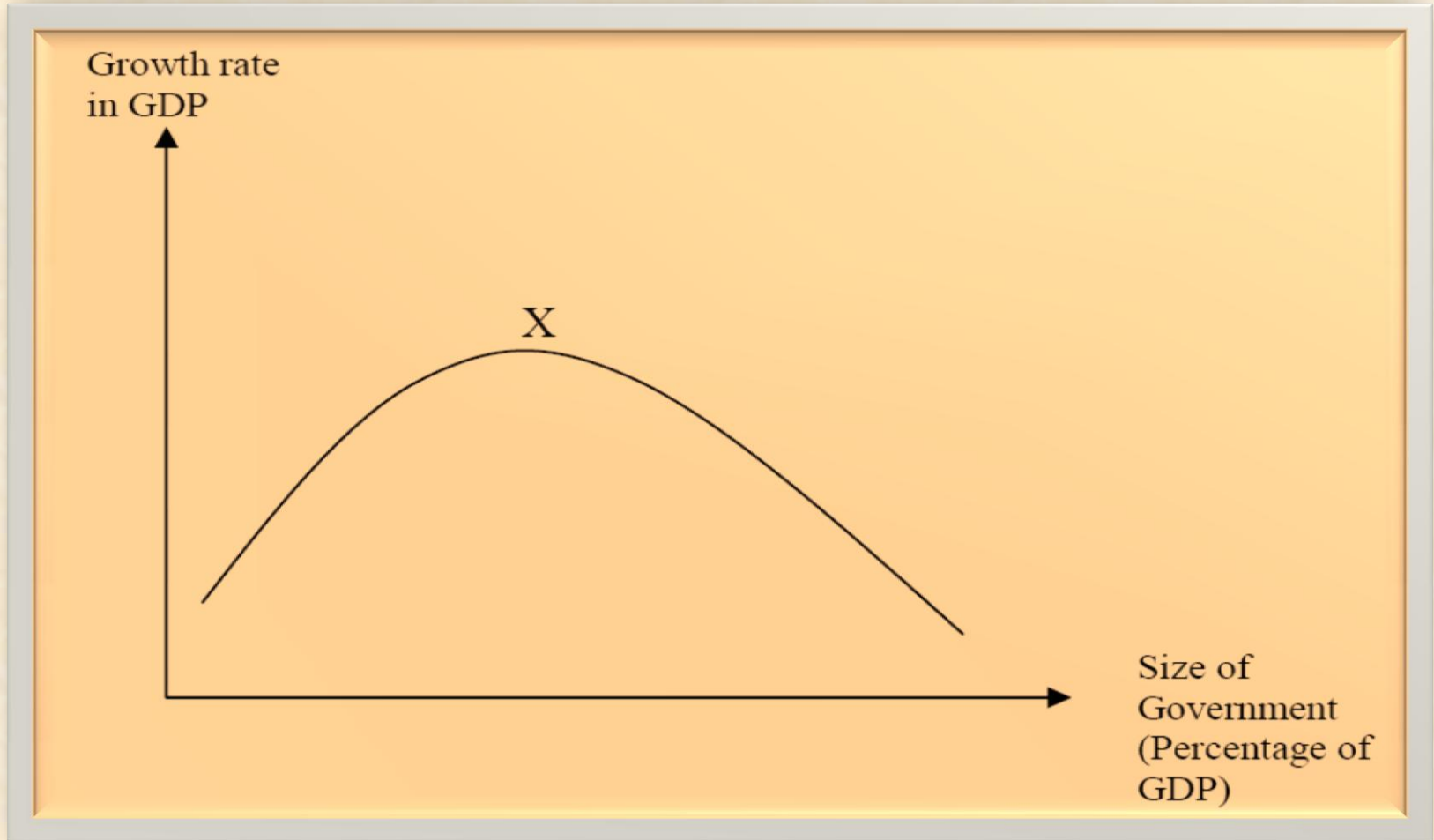
Government Expenditures & Real GDP
(in SRD million)
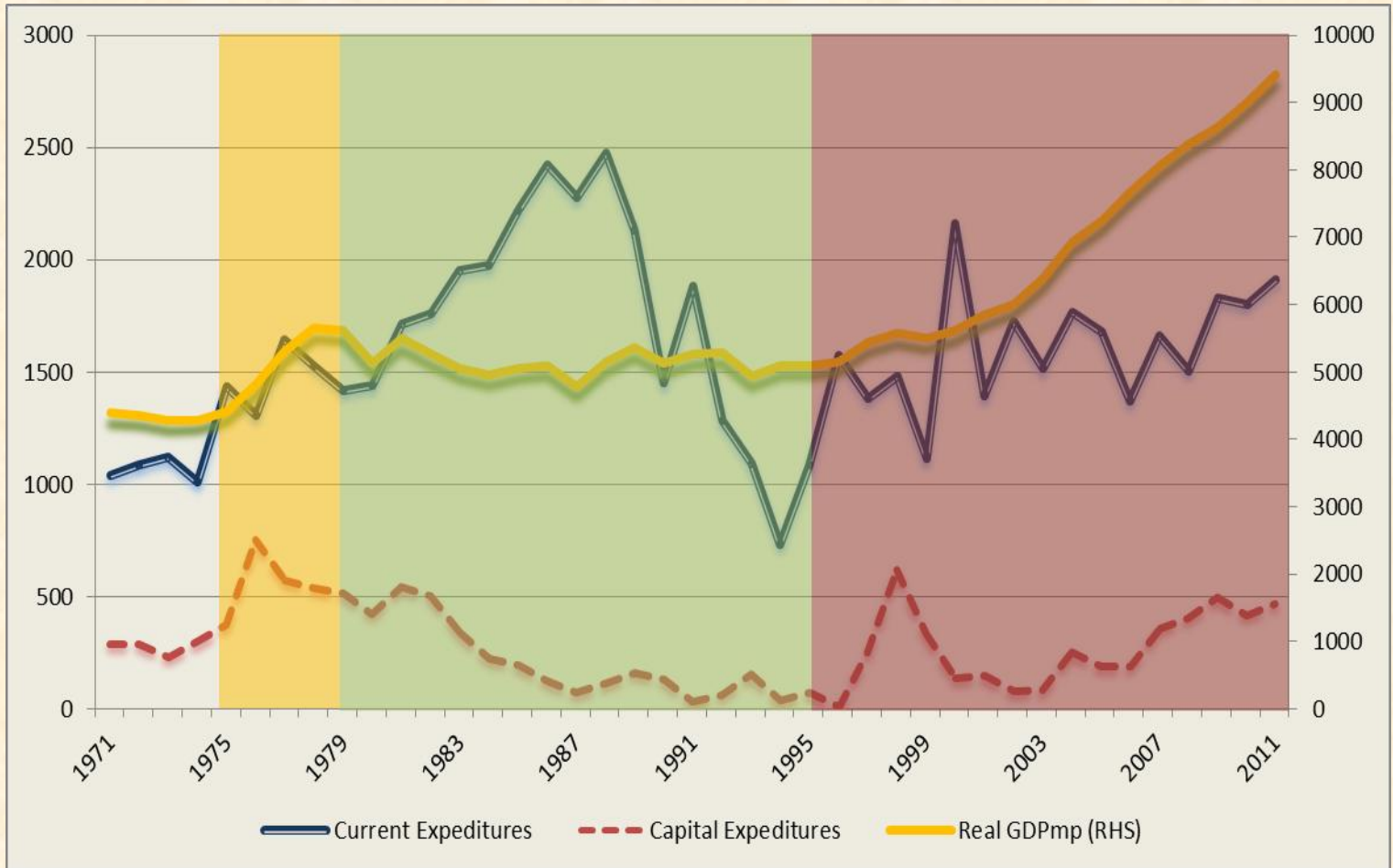
Literature Review (1)
Theoretical

Literature Review (2)
Empirical

Author (Year)	Country	Results
Aschauer (1988) Easterly & Rebelo (1993)	USA	Public investments as in infrastructure such as roads, water systems and communication increase private sector output and economic growth.
Belgrave and Craigwell (1995)	Barbados	Positive effect of government capital expenditures; Negative effect of government current expenditures.
Bose, Haque and Osborn (2007)	Panel of 30 developing countries	Government capital expenditure in especially education stimulates economic growth.
Chamorro-Narvaez (2010)	Low and middle-income countries	Government spending on education, communications and transport boosts economic growth.
Sevitenyi (2012)	Nigeria	No significant long-run impact; Government capital expenditures Granger Cause growth.

Model Specification
(Growth Variables other than Government)

- General
  - Investments
  - Human Capital,
  - Population Growth, etc.
- Small Developing Open Countries
  - Inflation
  - Trade Balance/Openness
  - Money Supply , etc.

Data

- Variables (1971 – 2011)
  - Government:
    - Capital Expenditures (CAPEX)
    - Current Expenditures:
      - Wages & Salaries (WS)
      - Goods & Services (GS)
      - Subsidies & Transfers (ST)
  - Other:
    - Trade Balance (TB)
    - School Life Expectancy (SLE)

Econometric Procedure

- ## Unit Root (ADF, PP, KPSS, UR-Br):
  - Mixed results: I(0) and I(1)
- ## Regression (Stock-Watson DOLS)
  - Choice for DOLS
    - Robust estimation in small samples
    - Mixed variables
    - Leads (endogeneity) & Lags (serial correlation)
- ## Diagnostics:
  - Normality, Serial Correlation Heteroskedasticity, Stability

Results (Long Run)

$$GDP = 0.04 \cdot CAPEX - 0.07 \cdot GS - 0.31 \cdot WS + 0.59 \cdot ST + 0.08 \cdot TB + 0.49 \cdot SLE + 6.49$$

t-stat	2.10**	-1.92*	-6.82***	9.77***	2.29**	1.81*	7.60***

Model Specifications

R-Squared: 0.88

Adjusted R-Squared: 0.82

S.E. of Regression: 0.08

F-Statistic: 16.01***

Observations: 38 after adjustments

Residual analysis

Normality: JB=0.22 | p-value = 0.89

BPG-Hetero-test: p-value = 0.47

BG-LM test: p-value = 0.08*

Durbin-Watson-Statistic: 1.34

*, ** and *** denote 10%, 5% and 1% levels of significance

Results (Short Run)

$D(GDP) =$ 0.31 · D(GDP(-1))   + 0.48 · D(GDP(-2))   + 0.02 · D(CAPEX)   + 0.03 · D(GS(-1))   + 0.08 · D(WS)

t-stat   1.89*   4.05***   1.81*   4.35***   3.19***

- 0.07 · D(WS(-1))   + 0.02 · D(TB)   - 0.31 · D(SLE(-1))   - 0.15 · EC(-1)

t-stat   -3.66***   2.51**   -2.34**   -2.88***

Model Specifications

R-Squared: 0.45

Adjusted R-Squared: 0.30

S.E. of Regression: 0.04

Observations: 38 after adjustments

Residual analysis

Normality: JB=1.06 | p-value = 0.58

BPG-Hetero-test: p-value = 0.42

BG-LM test: p-value = 0.58

Durbin-Watson-Statistic: 2.12

*, ** and *** denote 10%, 5% and 1% levels of significance

Conclusion

Different impacts of government expenditure categories on growth:

	Long Run	**Short Run**
Capital Expenditures	Positive	Positive
Subsidies & Transfers	Positive	n/a
Wages & Salaries	Negative	Positive
Goods & Services	Negative	Positive

Policy Recommendations

- Adjust composition of government expenditures
    (Shifting from consumption towards investment)

- Determine efficient levels of spending in all components
    - Implementation of budgetary mechanisms such as the Medium Term Fiscal Framework;
    - Implementation of efficient and effective procurement system

Thank You!!