

Tipping Point: The Efficiency and Sufficiency of the Tax Structure in Belize

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Outline

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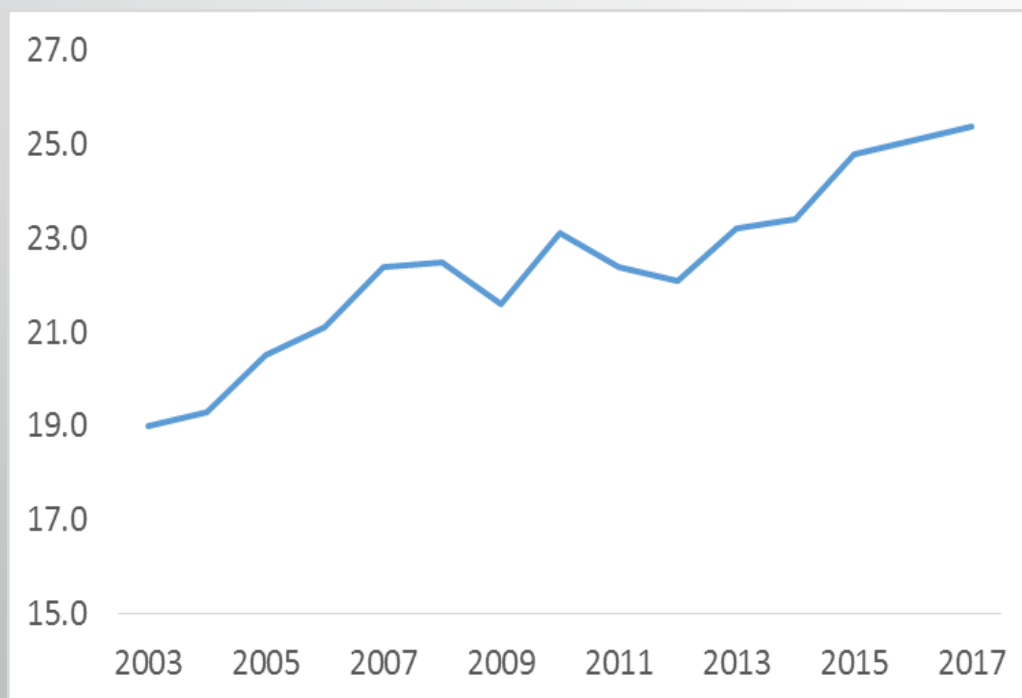
Belize



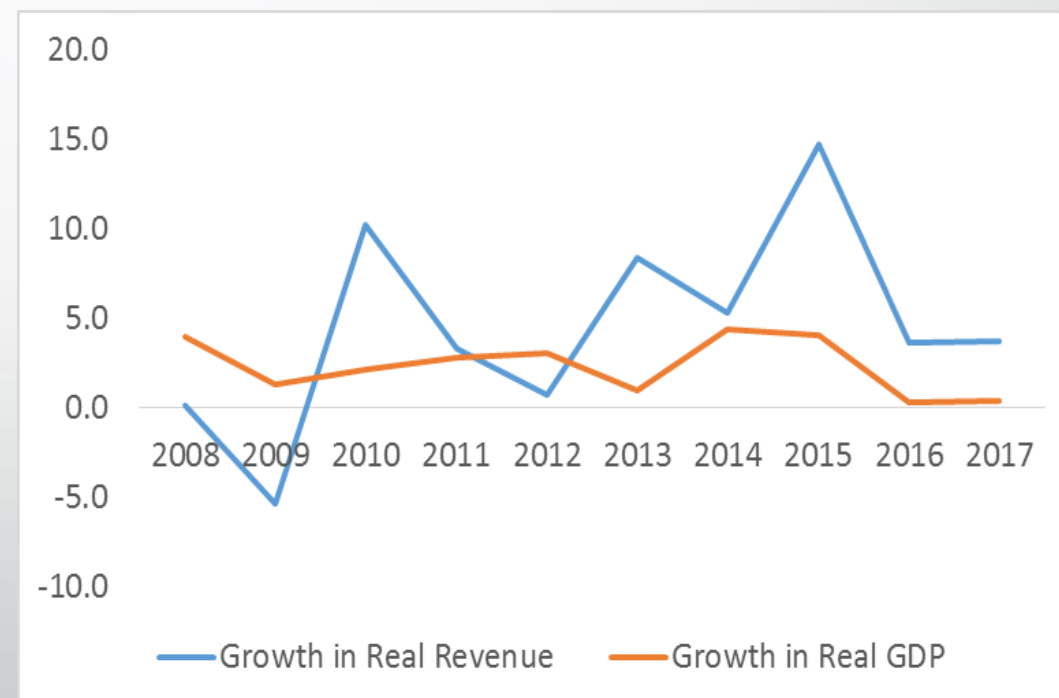
Real GDP:	US\$1.4 billion
Per Capita GDP	US\$4,831.55
Real GDP Growth Rate:	1.2%
Inflation Rate:	1.1%
Population:	385,766
Employed Population	149,994
Unemployment Rate	9.7%

Trends in Taxation

Tax Revenue as % of GDP

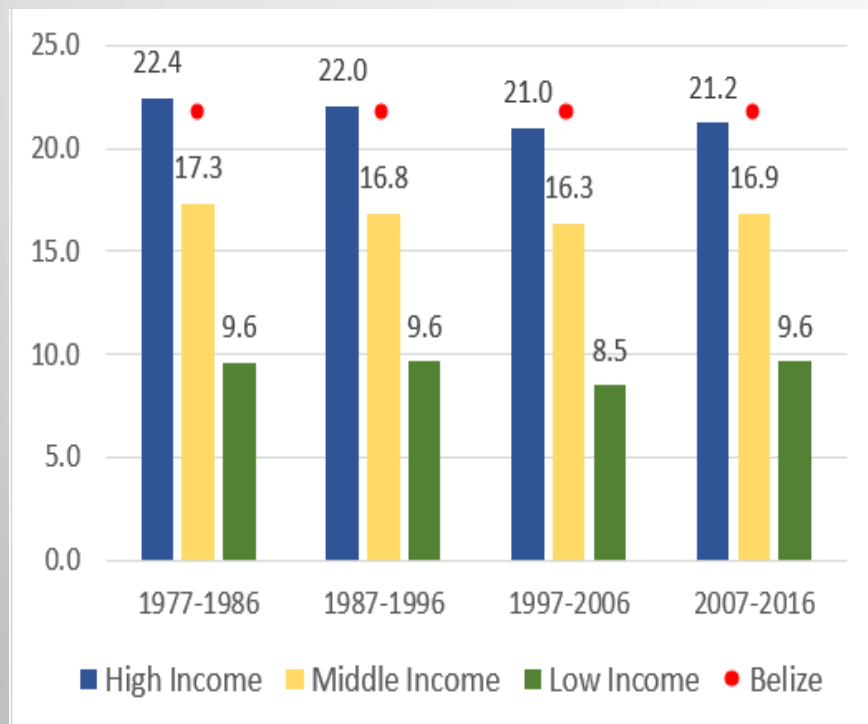


Growth in Real Tax Revenue and Real GDP

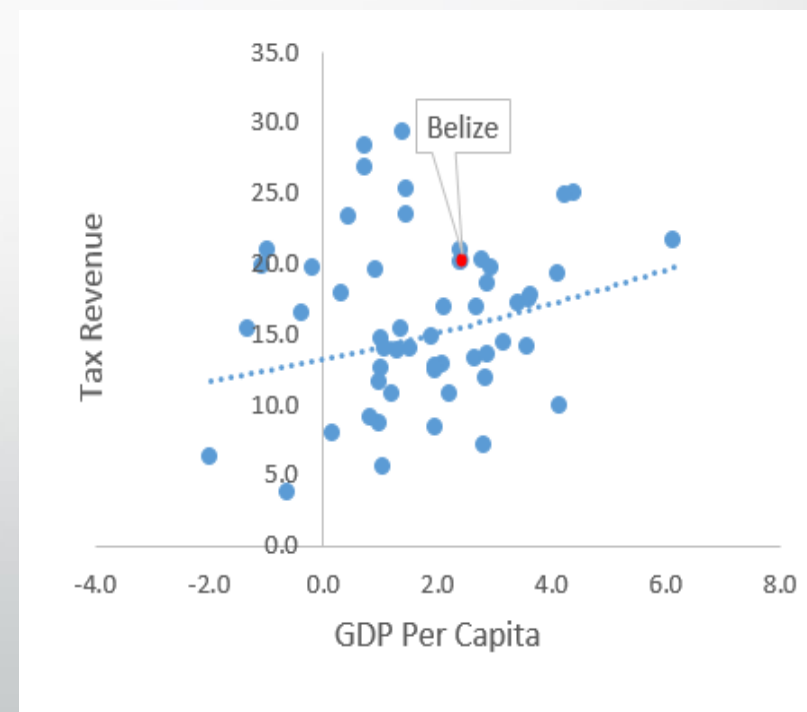


Trends in Taxation

Tax Revenue (as % of GDP) by Income Groups



Tax Revenue (as % of GDP) and Income Levels

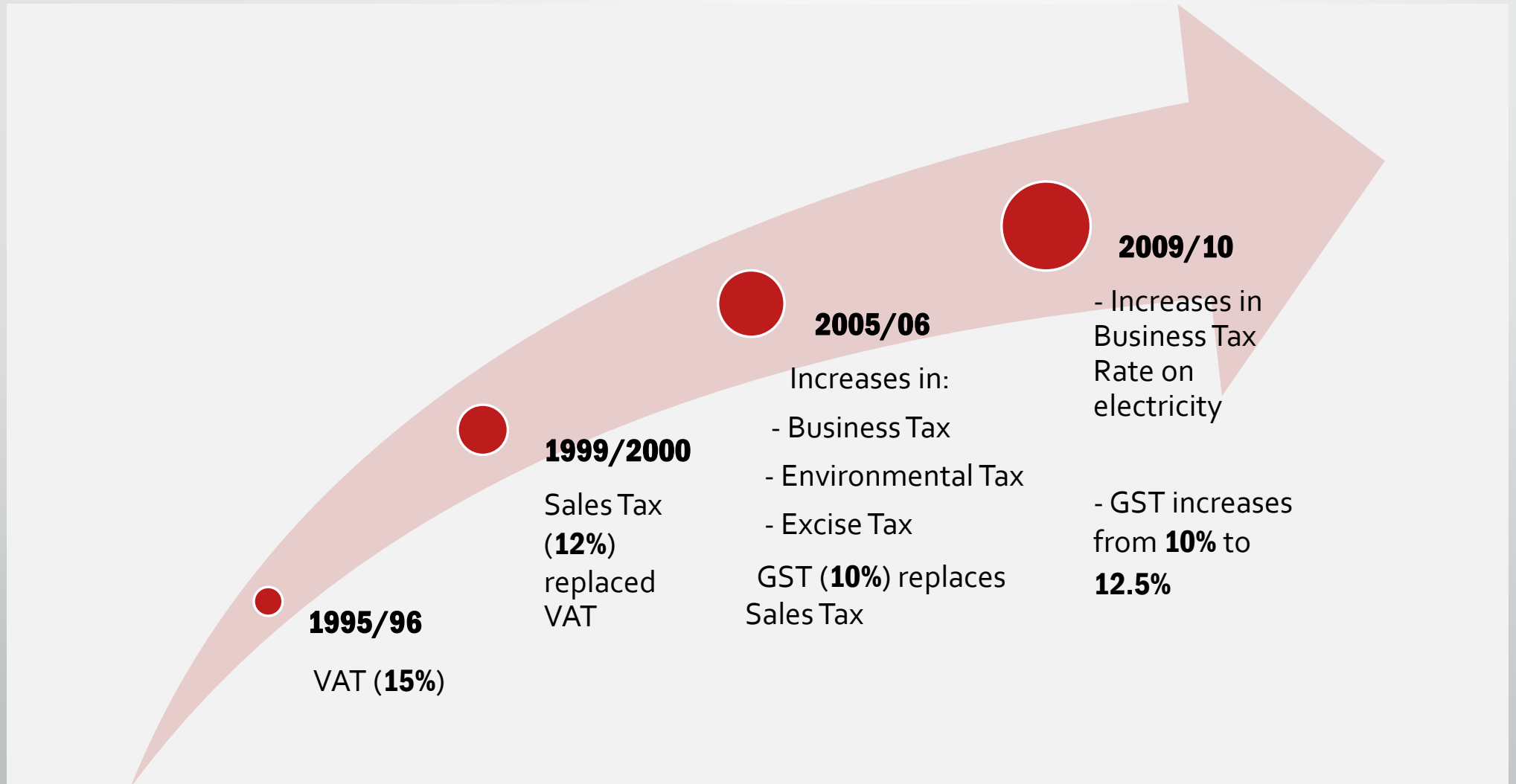


Revenue Top Performers

- Personal Income Tax (PAYE) - 9.2%
- Import Duty - 17.1%
- Business Tax – 18.6%
- General Sales Tax (GST) – 31.3%

These taxes accounted for 76.1% of total tax revenue

Summary of Major Tax Reforms



Motivation of Study

- Does Belize's "respectable" tax performance come from an economy that can increase revenue on its own, independently and therefore support fiscal sustainability, or does it depend on discretionary measures to provide that constant boost?
- Is more effort required to keep tax mobilization in line with economic growth?
- In the pursuit of our short term goals we have been increasing tax rates intermittently through the years.....But do we know if Belize has reached its tipping point—can we increase our overall tax revenue by raising current tax rates—or have we reached our tax capacity?

Tax Buoyancy

- Definition:
 - an estimate of the responsiveness of tax receipts to economic growth.
 - reflects both discretionary changes and automatic revenue growth but does not distinguish between the two.
- Model Specification: Dynamic OLS
 - Long run: $\ln(\text{rev}_{t,i}) = \alpha + \beta \ln(\text{base}_{t,i}) + \sum \gamma_l \Delta \ln \text{base}_{t+l} + \epsilon_t$

Tax Elasticity

Definition:

- the automatic response of revenue to income changes exclusive of the effects of discretionary changes.
- calculates what the revenue would have been if there were no changes in the tax law or tax rates.
- Model Specification: Divisia Index Approach

Results - Belize

Tax	Relevant Base	Total Growth	Discretionary Growth	Automatic Growth	Long run Buoyancy	Long run Elasticity
Total Tax Revenue	GDP at market prices	1.2	0.5	0.7	1.65	1.77
Indirect Taxes	GDP at market prices	1.2	0.5	0.7	1.25	1.37
Direct Taxes	GDP at market prices	1.3	0.7	0.6	1.94	1.89
Business Tax	GDP at basic prices	1.0	0.8	0.2	1.40	1.21
PAYE	Non-agriculture GDP	1.9	0.9	1.0	1.95	1.77
Sales Tax	Non-agriculture GDP	1.3	0.8	0.5	1.70	1.63
Sales Tax	Imports	1.3	0.8	0.5	1.23	1.08
Import duties	Imports	0.4	0.0	0.4	0.99	1.36

Tax Capacity

- Definition:
 - the predicted tax-to-GDP ratio that can be estimated empirically
 - represents the maximum tax revenue that a country can collect, given its economic, social, institutional, and demographic characteristics
- Model Specification: Fixed Effects Model
 - $TC_{i,t} = \beta_0 + \beta_1 * GDPPCG_{i,t} + \beta_2 * TRADE_{i,t} + \beta_3 * AGR_{i,t} + \beta_4 * MANU_{i,t} + \beta_5 * POP_{i,t} + \beta_6 * EXPEN_{i,t} + \beta_7 * DEBT_{i,t} + \beta_8 * GINI_{i,t} + \eta_{i,t} + \varepsilon_{i,t}$
- Panel Data for **60** developing countries from **1977-2016**

Tax Effort

- Definition:
 - an index of the ratio between the share of the actual tax collection in GDP and taxable capacity
 - the relation between the actual revenue and tax capacity
- Model Specification: Ratio
 - **Effort = Actual Tax Revenues/ Predicted Taxes**
 - *High Effort → Above **1**
 - *Low Effort → Below **1**

Results – Developing Countries

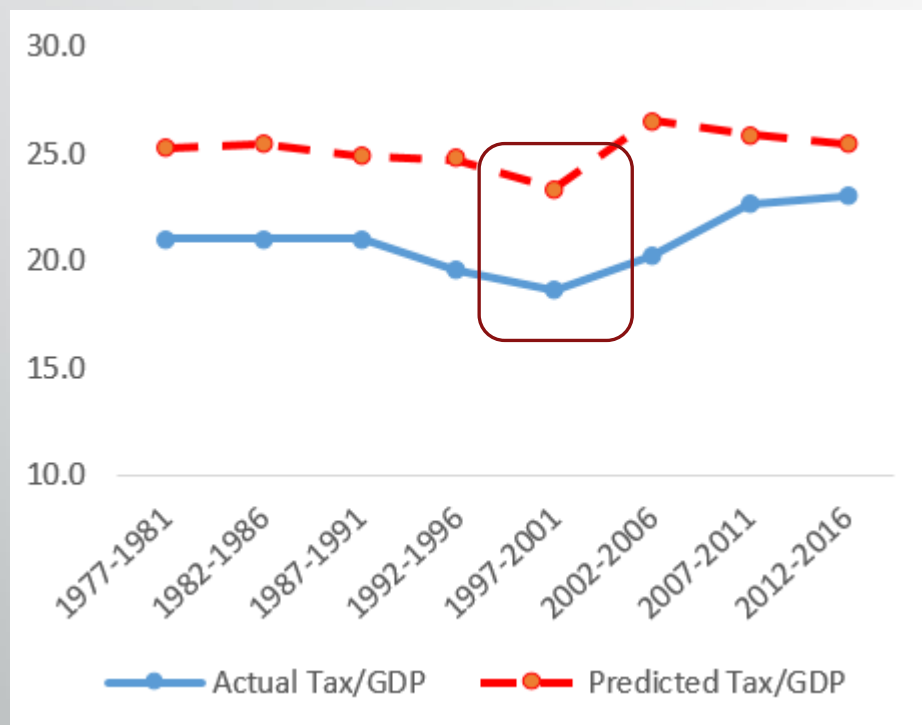
Determinants of Tax Revenues	Fixed Effects	Outcome	Significance
GDP Per Capita Growth	0.0858^{***}	↑ 9%	1%
Government Debt	0.0662^{***}	↑ 7%	1%
Trade	-0.0058^{**}	↓ 0.5%	5%
Inequality	-0.5310^{***}	↓ 50%	1%
Dependent Variable: Tax Revenue (% of GDP)			Adj. R ² : 0.601

Results – Belize

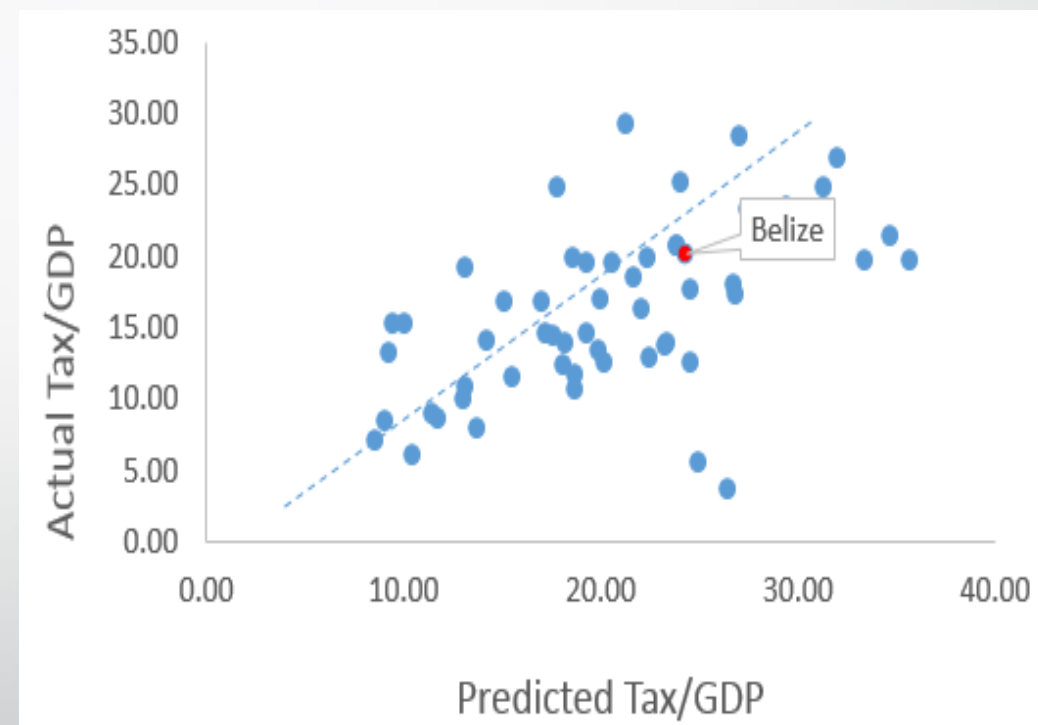
- Actual Tax Collection: **20.9%** of GDP (*HIGH*)
 - Median tax/GDP ratio: **15.4%**
- Tax Capacity (Predicted Taxes): **23.9%** of GDP
- Tax Effort: **0.83** (*LOW*)
 - Benchmark: **1**

Results - Belize

Actual and Predicted Tax

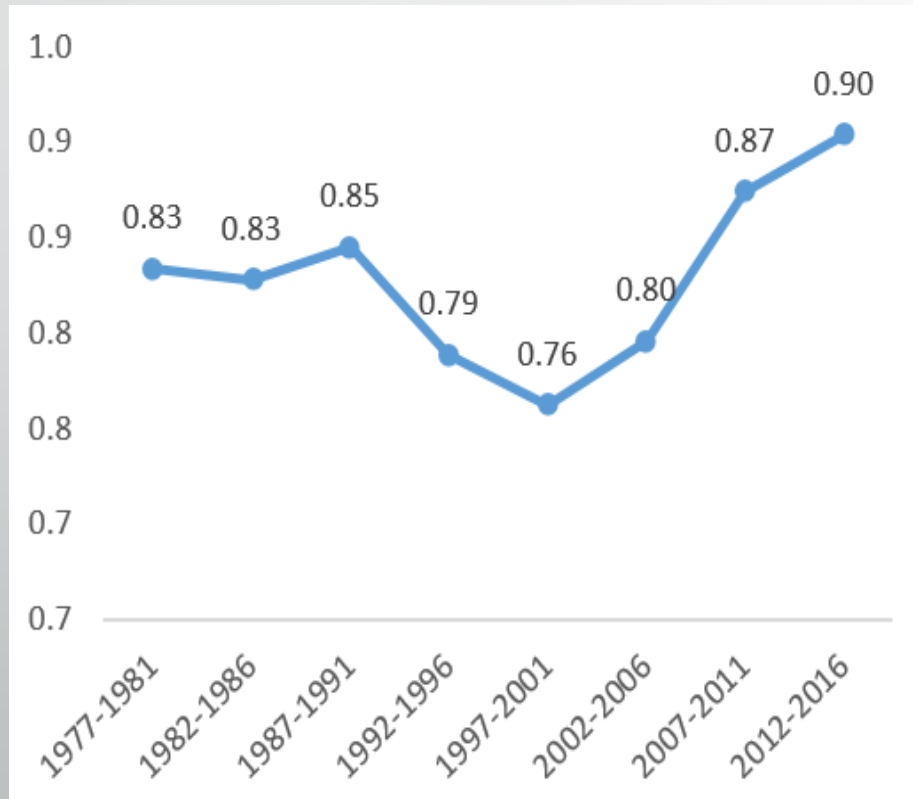


Tax Effort



Possible Improvements?

Tax Effort



How?

- Broadened the tax base
- Increased efficiency of tax administration
- Reduced tax evasion practices

The Way Forward

- Increase tax rates or Implement new taxes?
 - Absolutely **NOT!**
- Encourage investment
- Strengthen tax collection
- Reduce tax distortions
 - Fiscal Incentives, Tax Concessions
- Moderate government expenditure
- Implement Tax reforms
 - Balance Efficiency/ Effectiveness, Create Equity, Simplify Administrative Process
- Reduce compliance costs and tax evasion/ avoidance
 - Base Erosion and Profit Sharing project

THANK YOU!

