

Kyle McNabb UNU-WIDER

# The Government Revenue Dataset (GRD)

14 September 2018



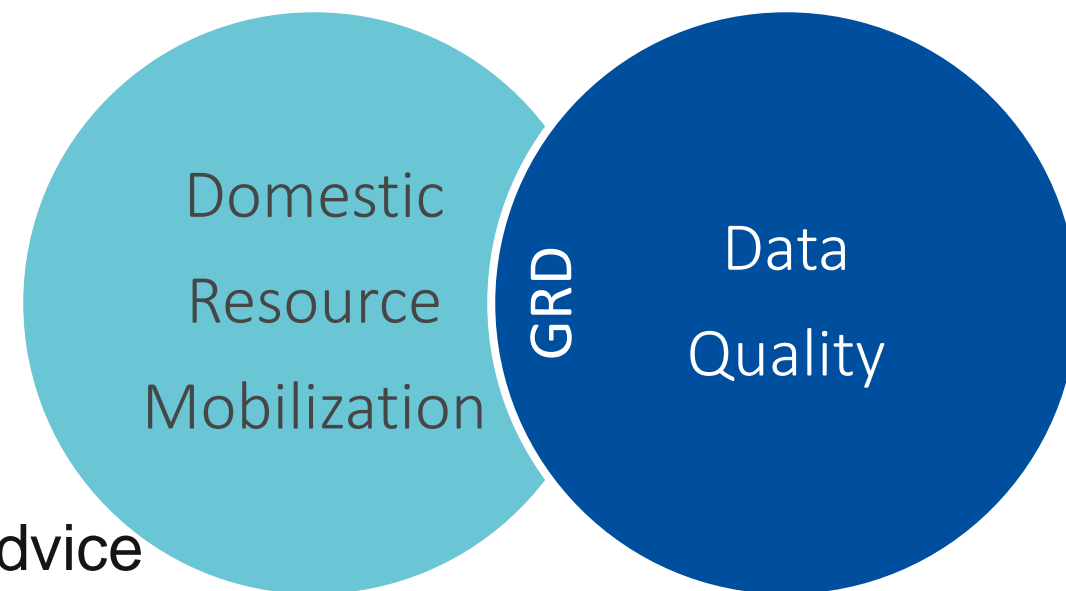
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# Overview

- The *Government Revenue Dataset*
  - Why important
  - Difficulties in using revenue data to make X-country comparisons of tax performance
  - Improvements over other sources
- Data trends and highlights : **GRD 2018**
- Research findings
  - *Fiscal Policy, State Building and Economic Development*
- Next Steps

# Taxation and Development: Cross-Country Data

- 2 motivating concerns
- Data Quality
  - Poor existing revenue data.
  - Risk of misleading research & policy advice
- Domestic Resource Mobilization
  - Embedded in SDG efforts, etc.



# Government Revenue Dataset (GRD)

- Cross-Country dataset of gov't revenues & tax subcomponents
- Partnership with ICTD
- GRD project began 2010; launched 2014; Updated **Sept. 2018**
- Why? Concerns over existing data
  - Very poor developing country coverage
  - Inconsistencies across sources and across countries
  - Differences arising from underlying GDP figures
  - Questions over accuracy / perceived shortcomings of IMF's *Government Finance Statistics*





# Government Revenue Dataset (GRD)

- GRD takes data from
  - IMF *Government Finance Statistics*
  - OECD *Revenue Statistics*
    - *Latin America, Asia, Africa*
  - CEPALSTAT / ECLAC
  - Individual Country Sources
  - IMF Article IV Consultations
- Takes all figures in LCU, then expresses as % of a 'Common' GDP figure

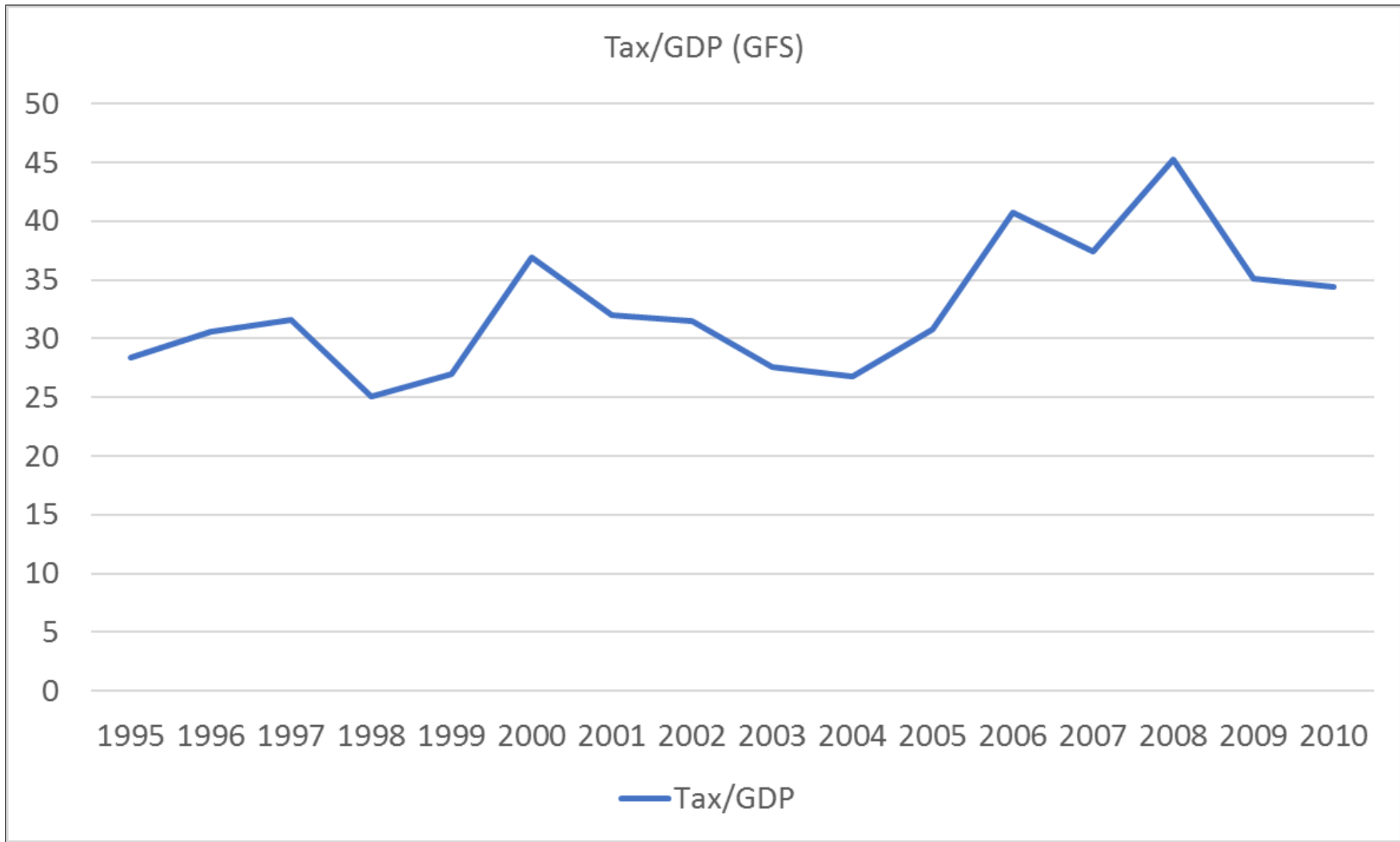


# Government Revenue Dataset (GRD)

- Improved country coverage
  - > 195 countries
  - 1980-2016
- Presents revenues *inclusive* and *exclusive* of
  - Natural Resource Revenues
  - Social Contributions
- User guidance and notes
- Available [www.wider.unu.edu](http://www.wider.unu.edu)

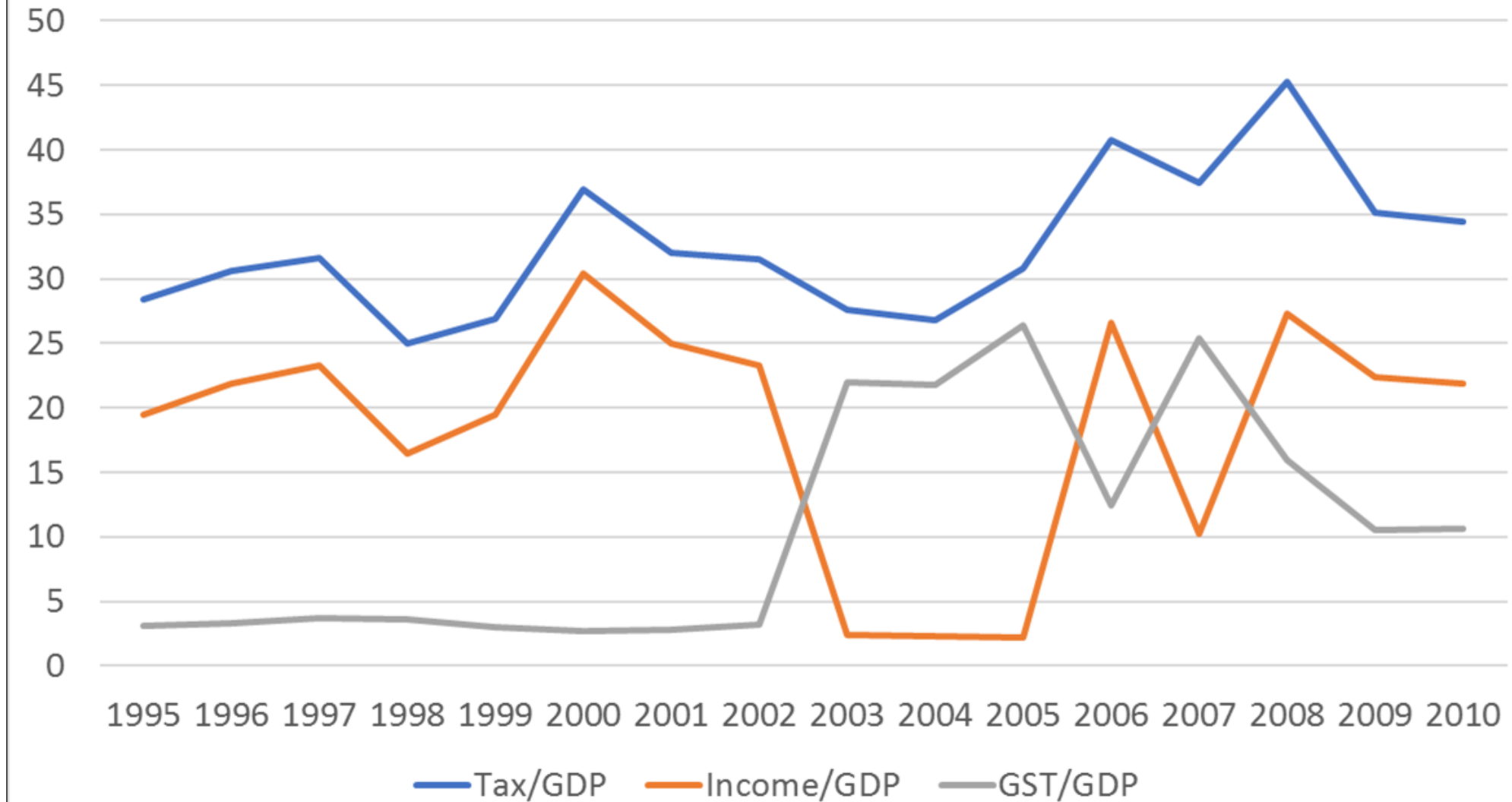
# Government Revenue Dataset (GRD)

- An example of “bad” data
  - Importance of guidance, interpretation, notes when using revenue data.
  - An (extreme, but not isolated) example...
  - Algeria’s taxes.

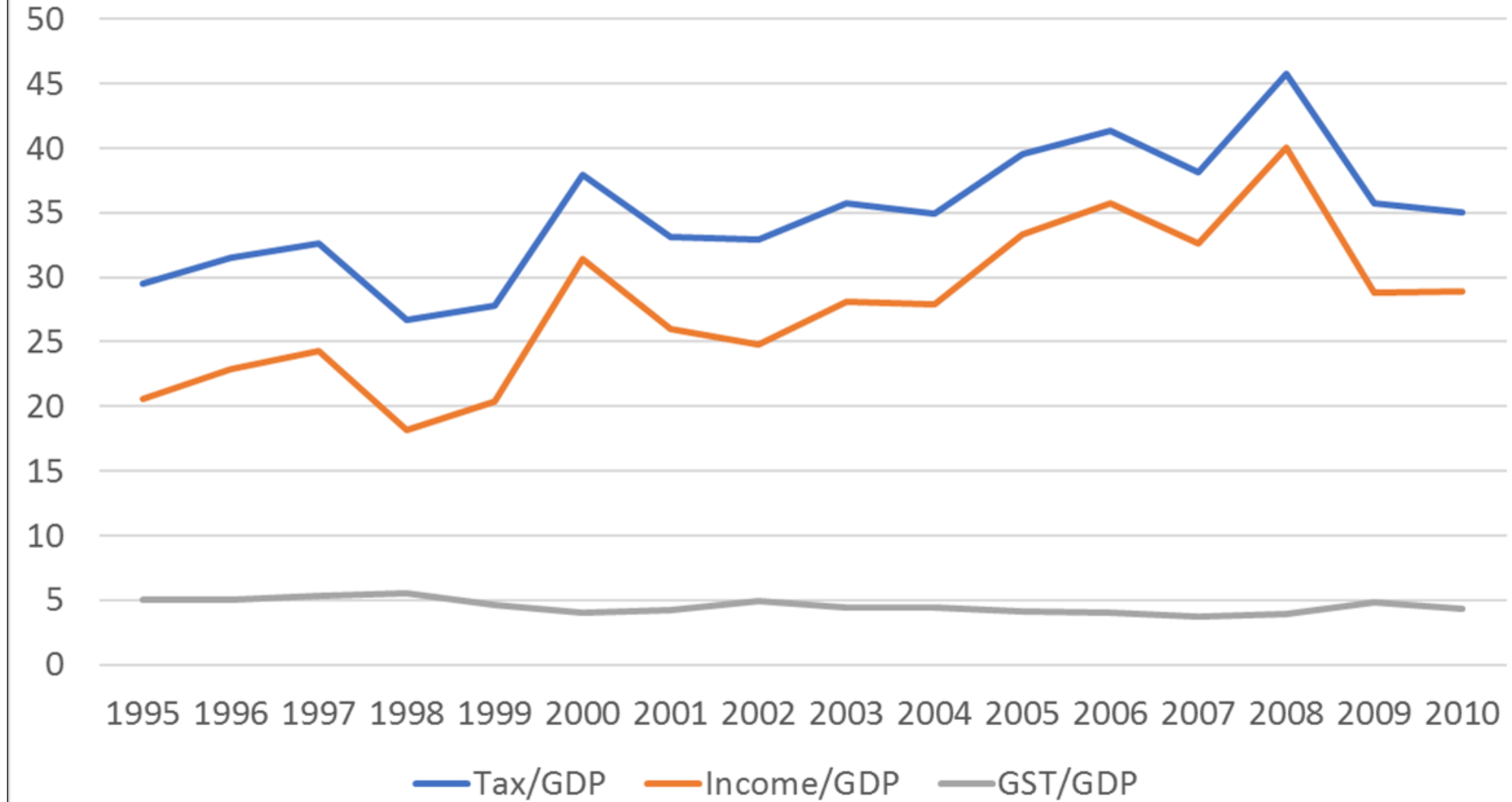




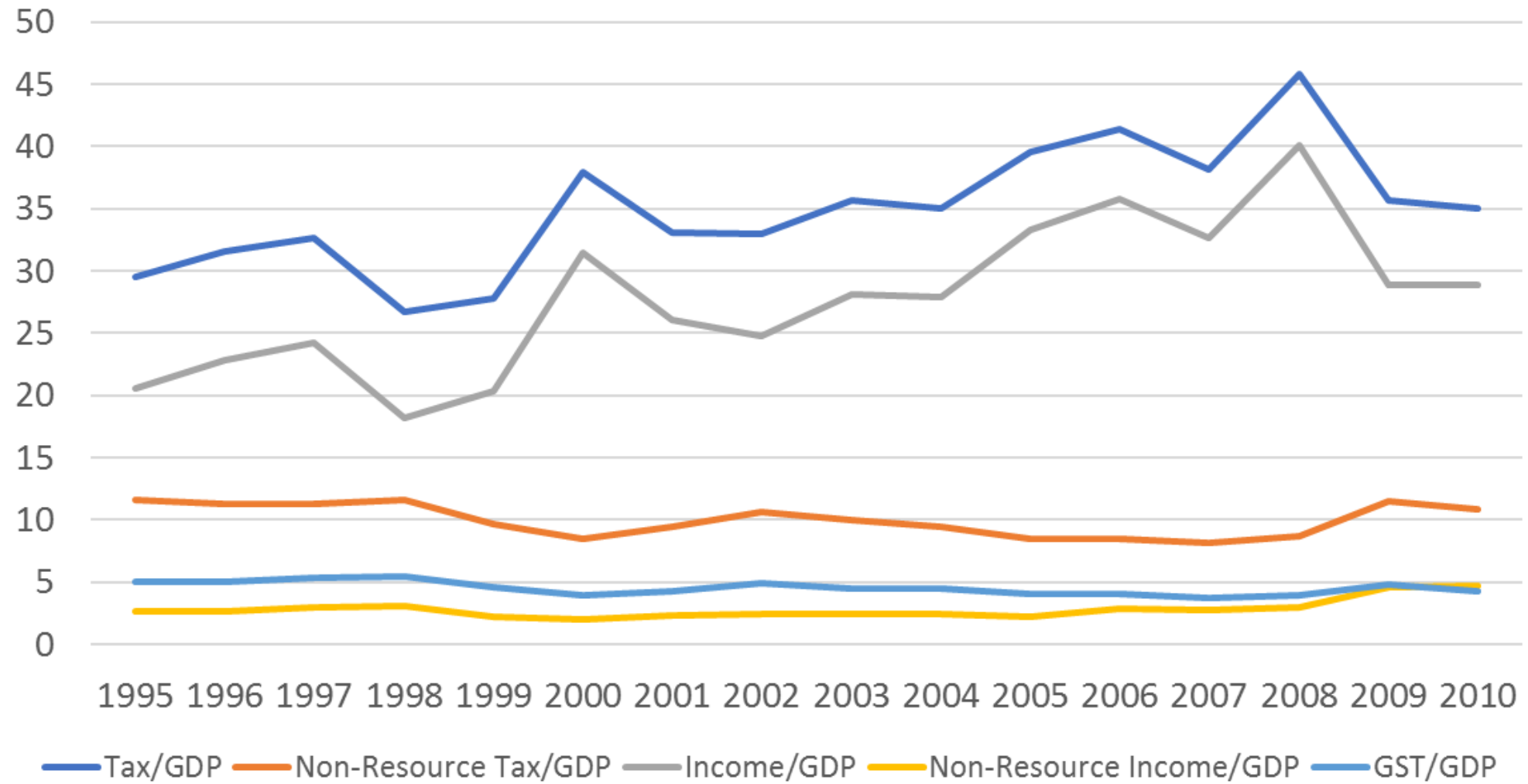
Tax/GDP, Income/GDP & GST/GDP (GFS)



Tax/GDP, Income /GDP & GST/GDP (GRD)



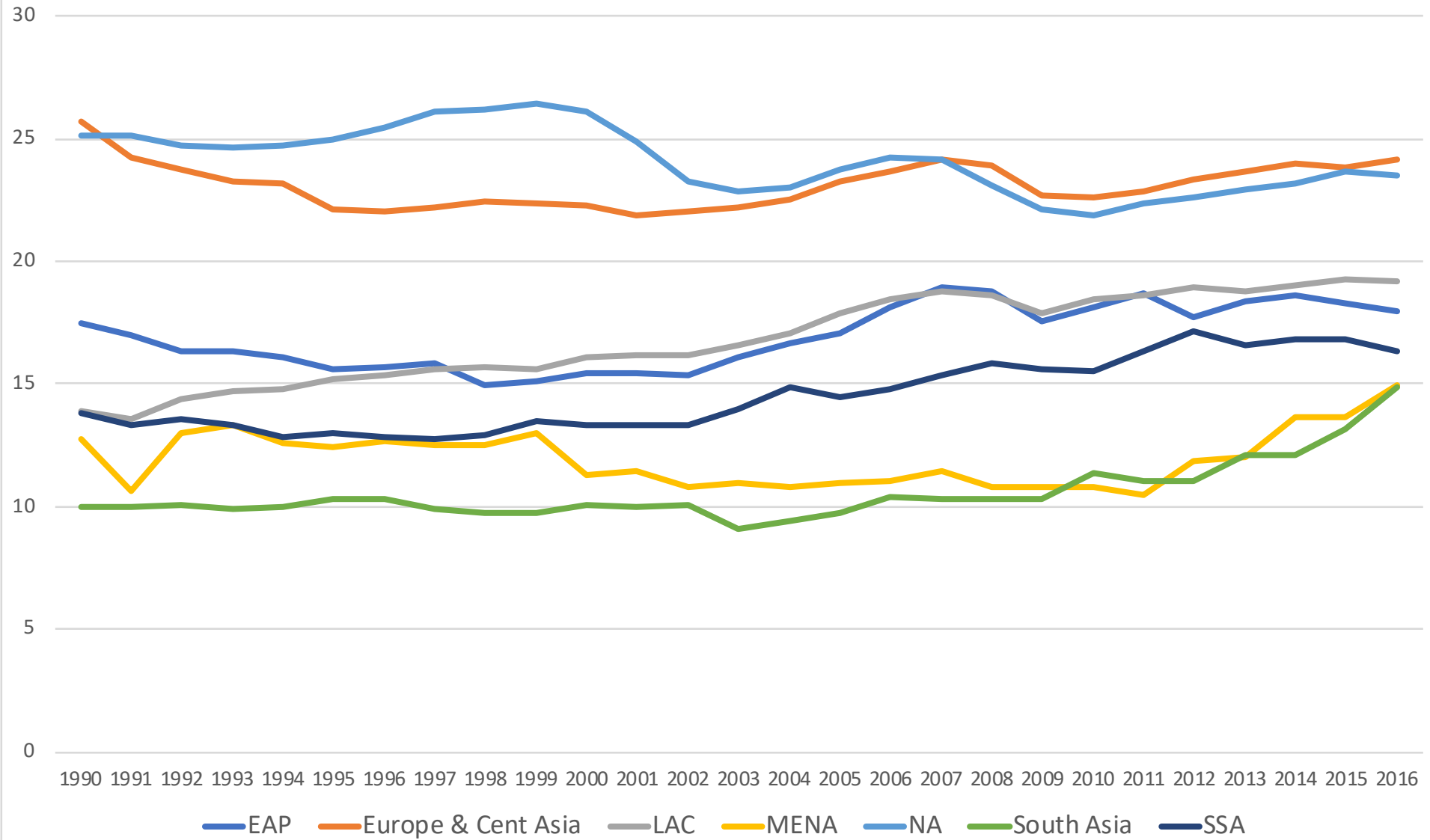
### Resource and Non-resource Taxes (GRD)



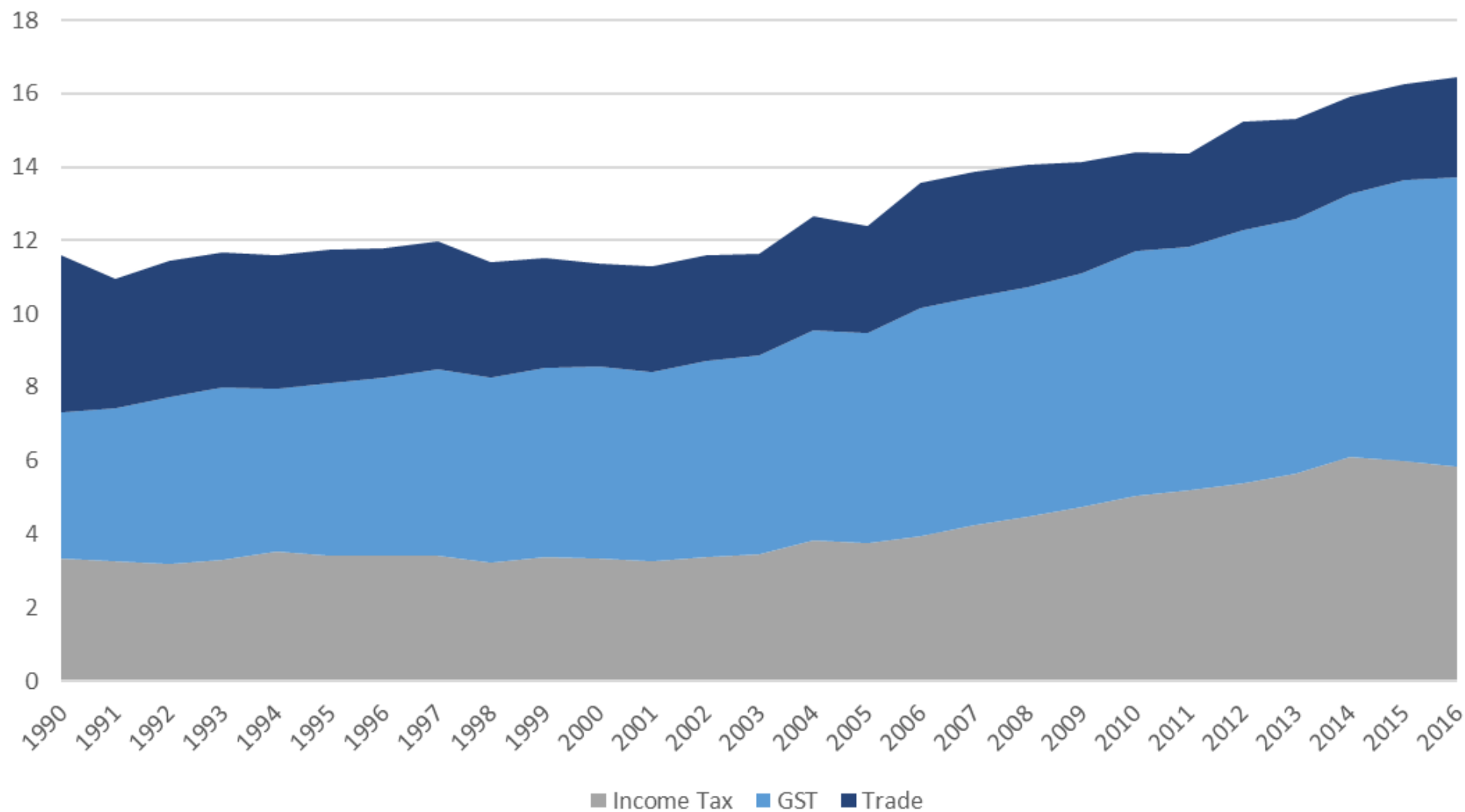
# Recent Trends: First insights from 2018 GRD

- Continual improvements in tax ratio in developing countries & regions.
  - Encouraging
  - Masks outliers: Somalia, Senegal.
- Changes in tax structure over time
  - Reliance on trade: quickly declining in developing countries
- Struggles for resource-dependent economies

Tax Ratio, by region 1990 - 2016 (% of GDP)

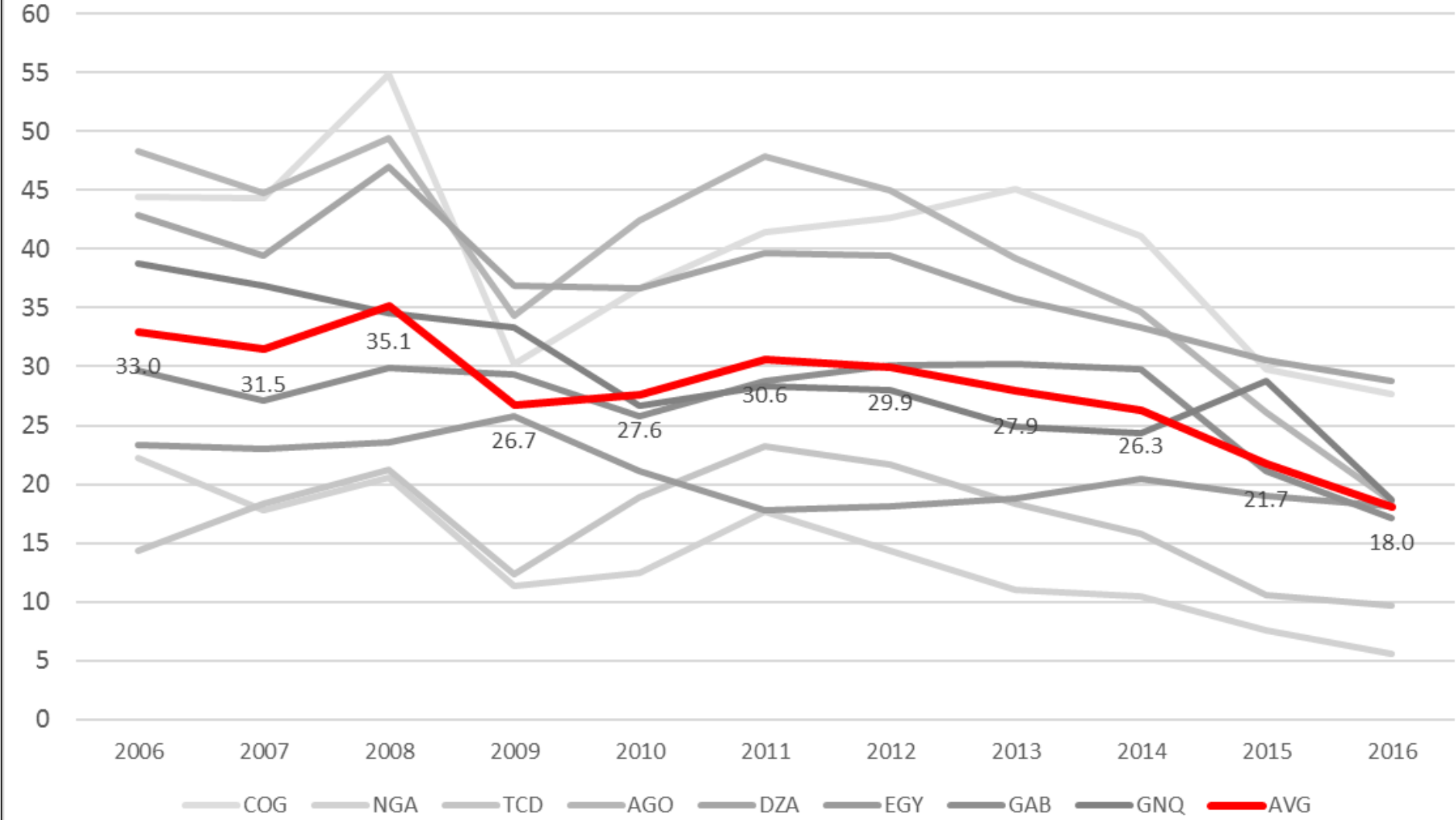


### LIC & LMICs: Evolution of Tax Structure 1990-2016





### Revenues of some African Oil-Producing countries 2006-2016



# GRD 2018

- Thorough revisions
  - Occasional removal: **More ≠ better**
- New VAT data
- Available [www.wider.unu.edu](http://www.wider.unu.edu)

	<i>GRD 2018</i>
Total Revenue	77.95%
Total Tax	80.91%
Income Tax	68.84%
Domestic GST	68.62%
Trade Tax	69.79%
Other Tax	65.39%
Property	58.85%

*(% of total available obsv. 1980-2016)*

# GRD: Research



**Volume 30, Issue 2**

**Fiscal Policy, State Building and  
Economic Development**

Pages: 159-364

March 2018

Collection of 9 open-access  
articles utilising the GRD



# GRD: Research



- Global distribution of Revenue Loss from Corporate Tax Avoidance (***Cobham & Jansky***)
- When do Developing Countries Compete Away their Corporate Tax Base? (***Hearson***)
- Taxation and Inequality in Developing Countries (***Martorano***)
- Party System Institutionalisation and Reliance on Personal Income Taxation in Developing Countries (***von Schiller***)
- Political Competition and Tax Revenues in Developing Countries (***Yogo & Ngo Njib***)
- Does the Political Resource Curse Affect Public Finance? (***von Haldenwang & Ivanya***)
- Tax Revenue Mobilization in Conflict-Affected Countries (***van den Boogard et al.***)
- Tax Structures, Economic Growth: New Evidence from the GRD (***McNabb***)

# GRD: Research

- GRD has also been used in a large # of publications since launch
  - Journals
  - Working Papers
  - Reports (e.g. UN)
  - NGOs & IO's (Our World in Data, *Mo Ibrahim Foundation*, etc.)
  - Media: NYTimes, Economist

# Next steps: Data visualisation

DataBank | World Development Indicators ⓘ

Table | Chart | Map | Metadata  
Download options ▾

Variables | Layout | Styles | Save | Share | Embed

- Database Available  | Selected 1
- Country Available 264 | Selected 2
- Series Available 53 | Selected 1
- Time Available 10 | Selected 10

Availability Range: Year [2008 - 2017]

Filter

VIEW RECENT YEARS 5 10 15 20 25 50

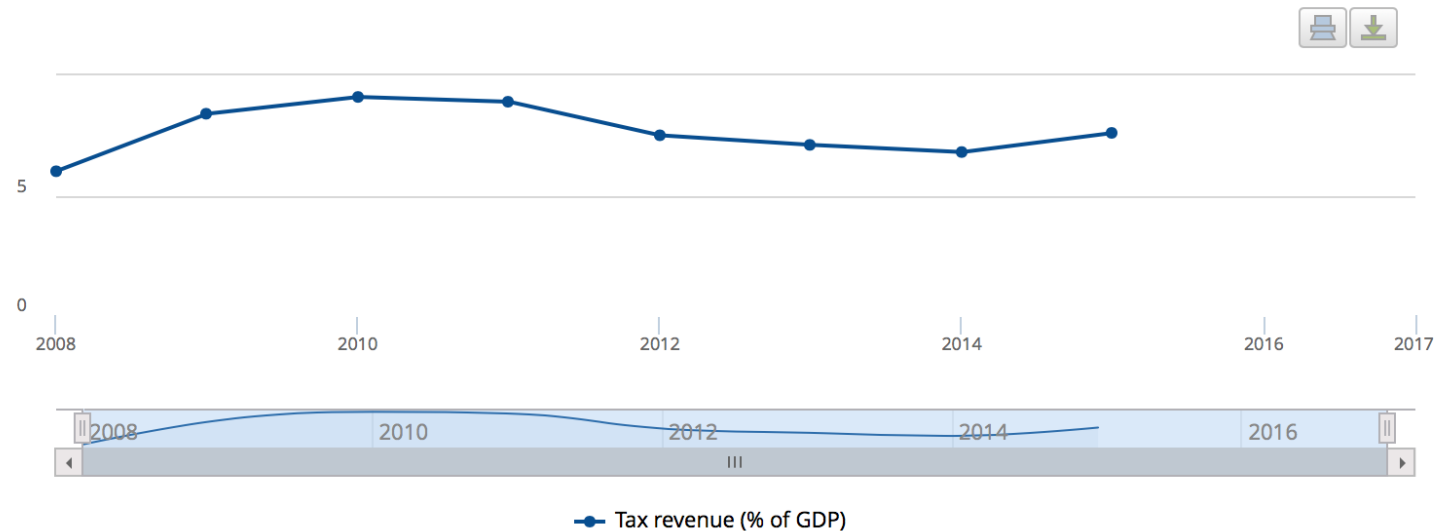
- |  |  |  |  |
|--|--|--|--|
| <input checked="" type="checkbox"/> 2017 | <input checked="" type="checkbox"/> 2014 | <input checked="" type="checkbox"/> 2011 | <input checked="" type="checkbox"/> 2008 |
| <input checked="" type="checkbox"/> 2016 | <input checked="" type="checkbox"/> 2013 | <input checked="" type="checkbox"/> 2010 |  |
| <input checked="" type="checkbox"/> 2015 | <input checked="" type="checkbox"/> 2012 | <input checked="" type="checkbox"/> 2009 |  |

Create Time Function ▾ ⓘ

## Preview

Clear Selection | Add Country (2) | Add Series (1) | Add Time (10)

Afghanistan ⓘ



Source: World Development Indicators



# Next steps: Data visualisation

- GRD Explorer
- Software designed around the GRD.
  - Help users get the most out of the data
  - Designed as a hub for tax data and info.
  - Guidance, notes, etc.
  - Desktop, tablet, mobile functionality.
  - Mockups:



INDICATORS

Total revenues (3)

COUNTRIES / REGIONS

East Asia & Pacific

Europe & Central Asia

Latin America & Caribbean

Middle East & North Africa

North America

South Asia

Sub-Saharan Africa



GRAPH

TABLE

Share

Download

YEARS

2004

to

2015



2004

2005

2006

2007

2008

2009

2010

2011

2012



COUNTRY

REGIONS



0k



860,00k



Map



Line Graph



Scatter Plot



Bar Chart



Clustered bar



Column chart



Clustered column



Area chart



INDICATORS ✕

Total revenues (3) ✕

COUNTRIES / REGIONS ➔

Latin America & Caribbean ✕

East Asia & Pacific ✕

Europe & Central Asia ✕

Middle East & North Africa ✕

North America ✕

South Asia ✕

Sub-Saharan Africa ✕



CORE

DETAILED

Merged General Central

Total Revenues ▾

Total Tax ▾

Total Tax

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INCLUDE

- Natural Resource Revenue
- Social Contributions

Property Tax ▾

Indirect Taxes ▾

Taxes on Goods and Services ▾

General Taxes on Goods and... ▾

VAT ▾

Excises ▾

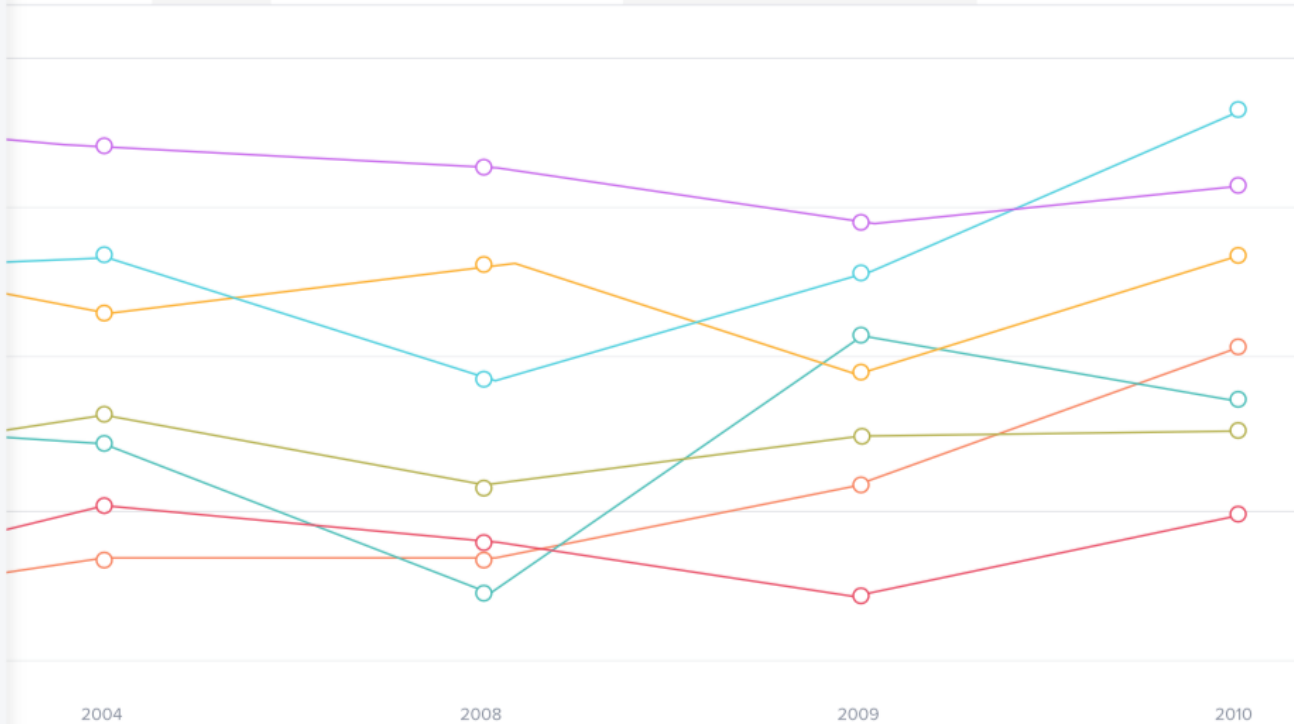
Trade Tax ▾

Import ▾

Export ▾

Share Download

▶ | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | < ▶



● Middle East & North Africa ● Europe & Central Asia  
● Sub-Saharan Africa ● East Asia & Pacific



Map



Line Graph



Scatter Plot



Bar Chart



Clustered bar



Column chart



Clustered column



Area chart



[← BACK](#)



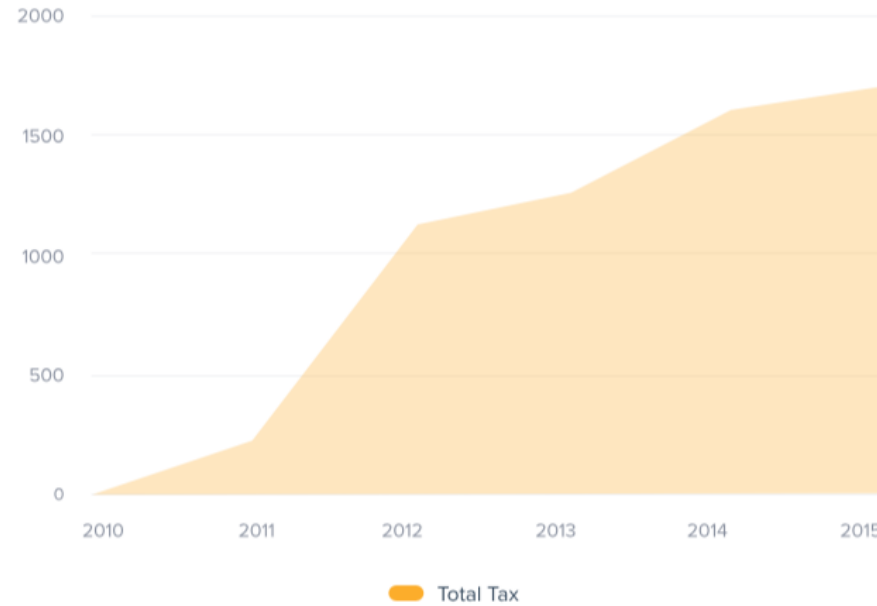
**Colombia** ∨

<b>Total Tax</b>	40%
<b>Total Revenue</b>	45%
<b>GDP per Capital</b>	\$ 39.000
<b>Currency</b>	Euro
<b>Income Group</b>	High
<b>Region</b>	Latin America & Cari...
<b>Other Clasification</b>	OECD, EU, etc

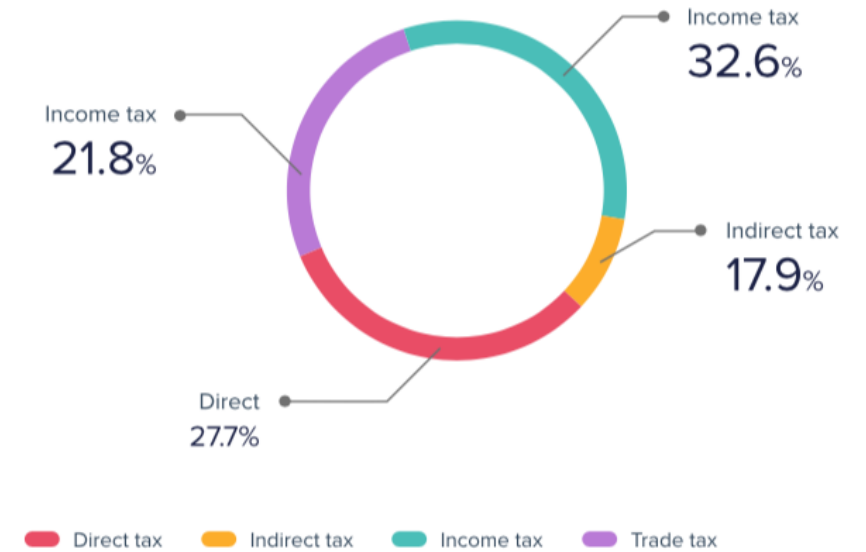
[More info →](#)

[</> Share](#) [↓ Download](#)

**Colombia total tax**



**Total tax composition**



**Contry notes**

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# Next steps: Data visualisation

- Built with UX in mind, idea is to engage users, especially those outside of research (policy, I.O.'s).
  - GRD already widely used in research community but hope that the tool stimulates discussion around taxation and use of the data in wider circles.
- Visualizations can be easily exported to include in reports, articles, blogs, twitter, wherever.
- Feedback welcome... see PC in Network Cafe.

# Concluding Remarks

- Data quality remains an issue
  - “Better than bad” (Moore, 2015)
  - The GRD is a ‘sticking plaster’ on the issue. International commitment required to ensure continual improvements in availability and quality of tax data going forward.
- Balance – caution whilst still encouraging use of the data.
- But, at least for the foreseeable future, there is a real need for this kind of dataset and the commitment of UNU-WIDER to fund its existence.





*Thank you!*

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