

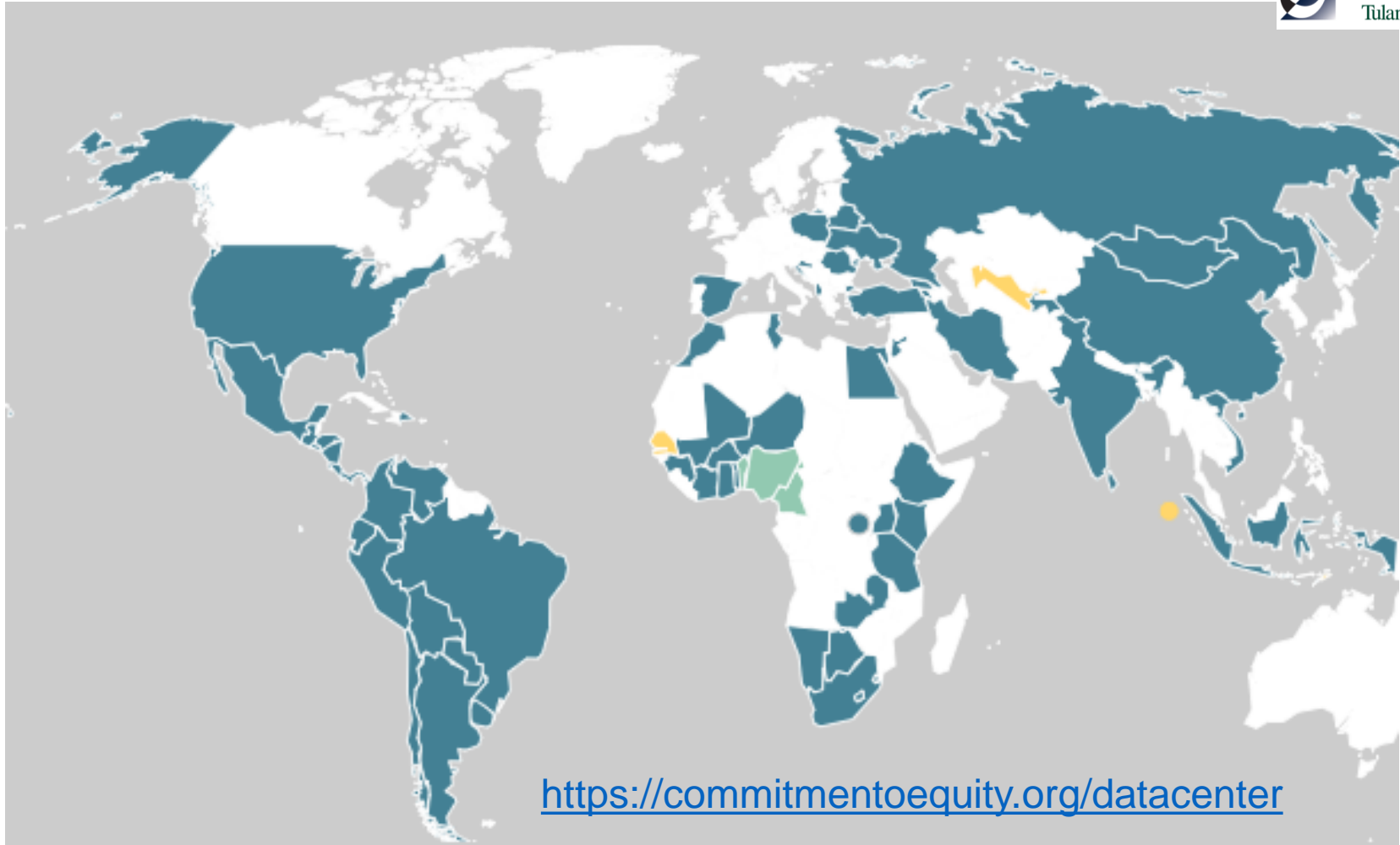
# Fiscal Policy, Income Redistribution and Poverty Reduction in Latin America

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Paper co-authored with Valentina Martinez Pabon (Yale University)  
and Carola Pessino (IADB)



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# COMMITMENT TO EQUITY HANDBOOK

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**ESTIMATING THE IMPACT OF  
FISCAL POLICY ON  
INEQUALITY AND POVERTY**

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SECOND EDITION VOLUME 1

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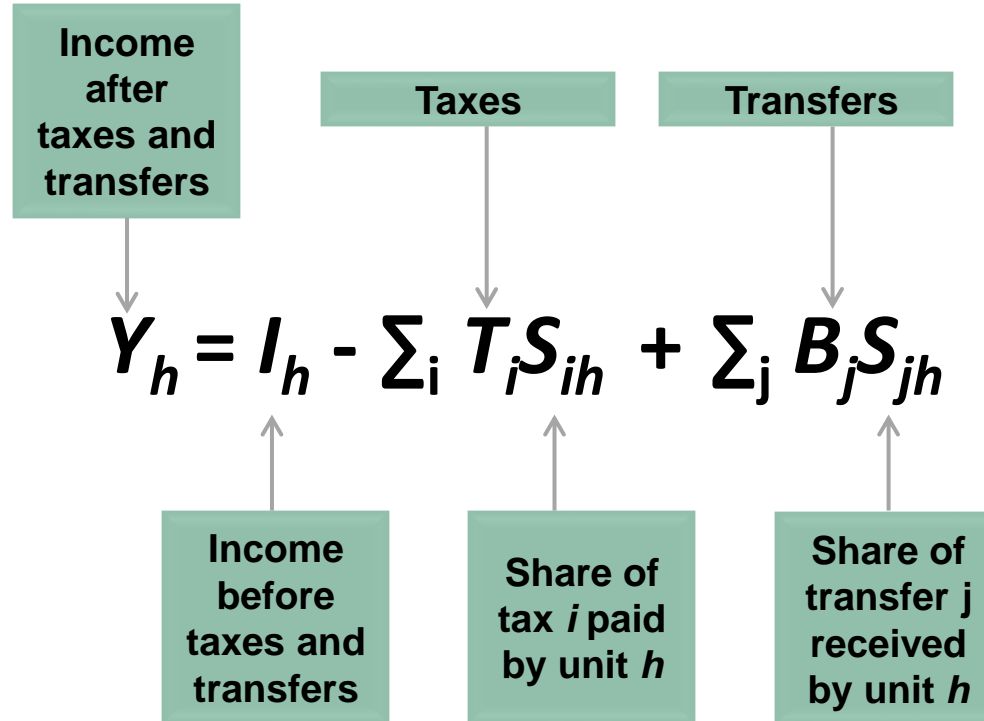
**Fiscal Incidence Analysis:  
Methodology, Implementation, and Applications**

**NORA LUSTIG, EDITOR**

Lustig, Nora, editor. 2018 and **2022**.  
*Commitment to Equity Handbook.*  
*Estimating the Impact of Fiscal Policy on*  
*Inequality and Poverty.*  
Brookings Institution Press and CEQ  
Institute, Tulane University.

Free online version available at:  
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ceq-handbook/](http://commitmenttoequity.org/publications-ceq-handbook/)

# Fiscal incidence analysis (FIA)



# Taxes and transfers included in FIA

- Taxes
  - Direct taxes
  - Indirect taxes Contributions to social security
- Transfers
  - Direct cash transfers (including noncontributory pensions)
  - Not-in-cash direct transfers such as school uniforms and school feeding programs
  - Contributory pensions
  - Indirect subsidies
  - In-kind transfers such as spending on education and health

# Tax shifting assumptions

- Economic burden of direct personal income taxes is borne by the recipient of income
- Burden of payroll and social security taxes is assumed to fall entirely on workers
- Consumption taxes are assumed to be shifted forward to consumers
- These assumptions are strong implying that labor supply is perfectly inelastic and that consumers have perfectly inelastic demand
- In practice, they provide a reasonable approximation (with important exceptions such as when examining effect of VAT reforms), and they are commonly used

# Tax evasion assumptions: case specific

- Income taxes and contributions to Social Security
  - Individuals who do not participate in the contributory social security system are assumed not to pay them
  
- Consumption taxes
  - Place of purchase: informal markets are assumed not to charge them
  - Some country teams assumed small towns in rural areas do not pay them

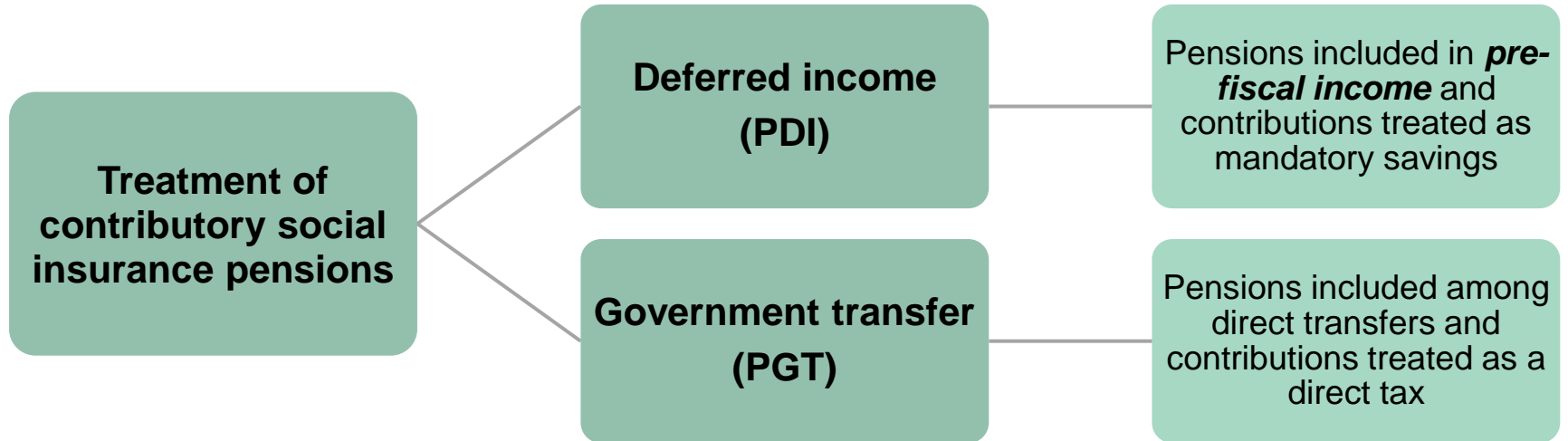
# Monetizing in-kind transfers

- Incidence of public spending on education and health followed so-called “benefit or expenditure incidence” or the “government cost” approach
- In essence, we use per beneficiary input costs obtained from administrative data as the measure of average benefits
- This approach amounts to asking the following question:

*How much would the income of a household have to be increased if it had to pay for the free or subsidized public service at the full cost to the government?*
- New methods in forthcoming 2<sup>nd</sup> edition of Handbook



# Treatment of contributory pensions



### Contributory Pensions as Deferred Income (PDI)

#### Prefiscal Income (PDI) = Market Income + Pensions

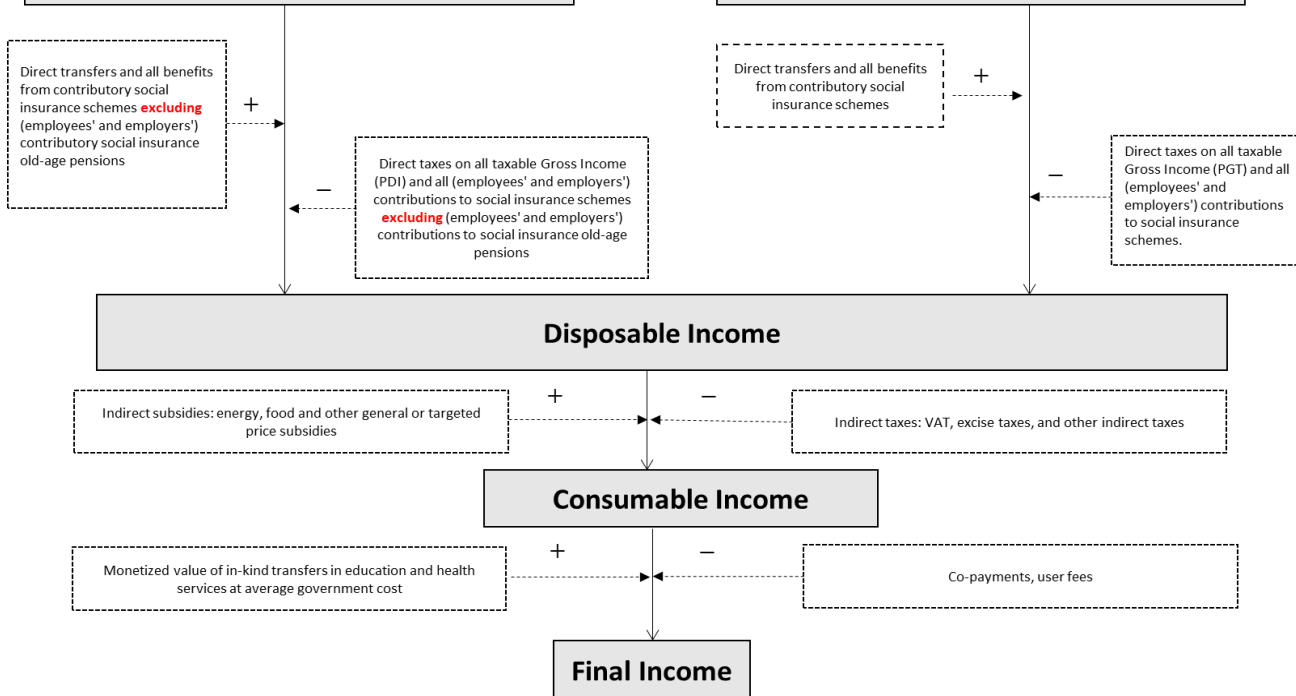
Factor Income (wages and salaries and income from capital) **PLUS** employers' contributions to social insurance **PLUS** private transfers (remittances, private pensions, etc.) **PLUS** imputed rent and own production  
**MINUS** (employees' and employers') contributions to social insurance old-age pensions  
**PLUS** Contributory social insurance old-age pensions

### Contributory Pensions as Government Transfer (PGT)

#### Prefiscal Income (PGT)

#### Market Income =

Factor Income (wages and salaries and income from capital) **PLUS** employers' contributions to social insurance **PLUS** private transfers (remittances, private pensions, etc.) **PLUS** imputed rent and own production



**FOUR  
CORE  
INCOME  
CONCEPTS**

# Fiscal incidence analysis: caveats

- Accounting approach
  - No behavioral responses
  - No general equilibrium effects
  - No intertemporal effects
    - ❖ However, economic rather than statutory incidence
- Point-in-time
- Mainly average incidence; a few cases with marginal incidence

# Does the net fiscal system decrease inequality? Lambert's fundamental equation

For the net fiscal system to be equalizing:

$$RE_N = \frac{(1-g)RE_t + (1+b)RE_B}{1-g+b} > 0$$

RE: redistributive effect (e.g., pre-fisc Gini  
MINUS post-fisc Gini)

g: taxes as a ratio of pre-fisc income

b: transfers as a ratio of pre-fisc income

t: taxes

B: transfers

Condition 1:

$$\rightarrow RE_t > -\frac{(1+b)}{(1-g)} RE_B$$

# Sign and size of the contribution of a tax or transfer to the change in inequality

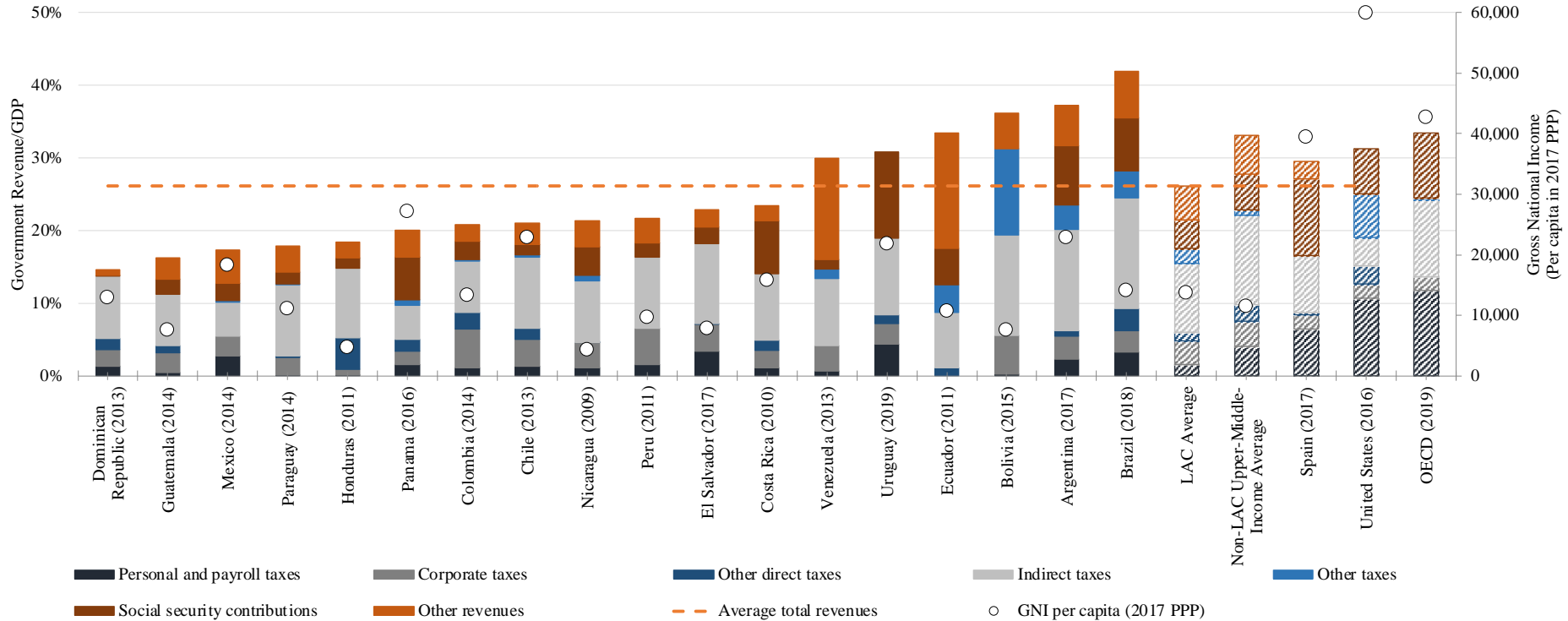
- Marginal contribution equals the inequality measure without minus the inequality with the tax or transfer of interest.
- If difference is positive (negative), the tax or transfer is equalizing (unequalizing)
- Gives correct answer to the “without vs. with comparison” but does not fulfill the principle of aggregation: the sum of the marginal contributions will not equal the total change in inequality

# Main messages

1. Analyzing the tax side without the spending side, or vice versa, is not very useful
  - Taxes can be unequalizing but spending sufficiently equalizing so that the unequalizing effect of taxes is more than compensated [we knew this]
  - Taxes can be regressive but when combined with transfers make the system more equalizing than without the regressive taxes [surprised?]
2. Analyzing the impact on inequality only can be misleading
  - Fiscal systems can be equalizing but poverty increasing [surprised?]

# **Size and Composition of Government Revenues and Spending**

# Size and Composition of Government Revenues (as a % of GDP)

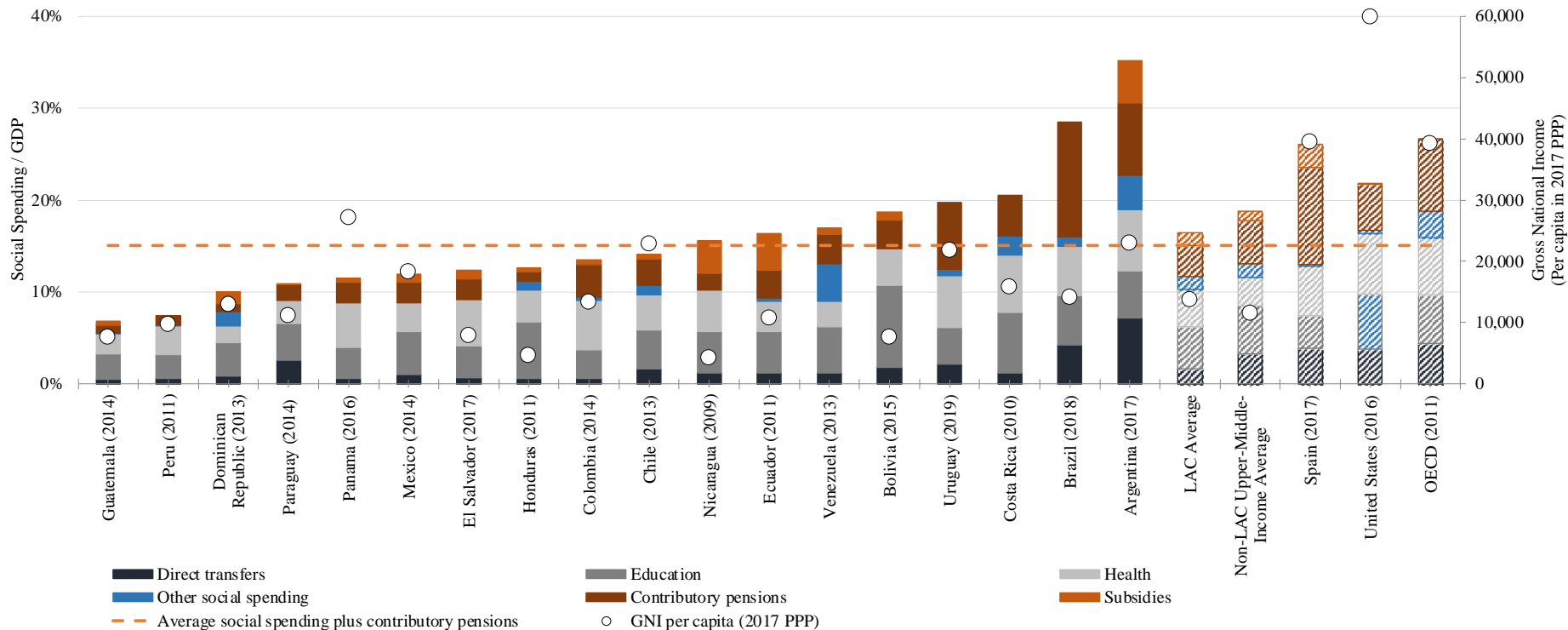


Notes:  
- Countries ranked by total government revenue (collected in the year in parenthesis) as a percentage of GDP

Source: see bibliographical reference by country at the end of this presentation.



# Size and Composition of Social Spending and Subsidies (as a % of GDP)



**Notes:**

- Countries ranked by social spending plus contributory pensions plus subsidies (executed in the year in parenthesis) as a percentage of GDP. Due to the lack of data on social spending (sub-components), the graph bars may appear to be out of order.

**Source:** see bibliographical reference by country at the end of this presentation.

# **Fiscal Policy and Income Inequality**

### Contributory Pensions as Deferred Income (PDI)

#### Prefiscal Income (PDI) = Market Income + Pensions

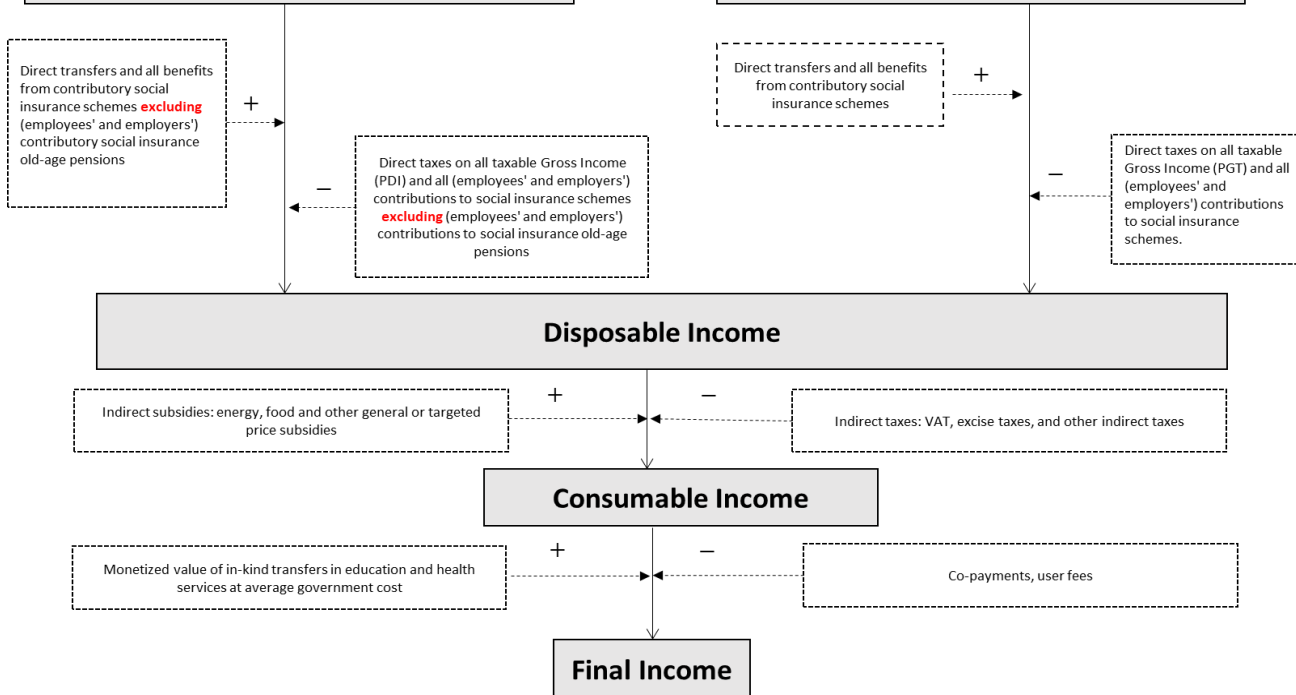
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### Contributory Pensions as Government Transfer (PGT)

#### Prefiscal Income (PGT)

#### Market Income =

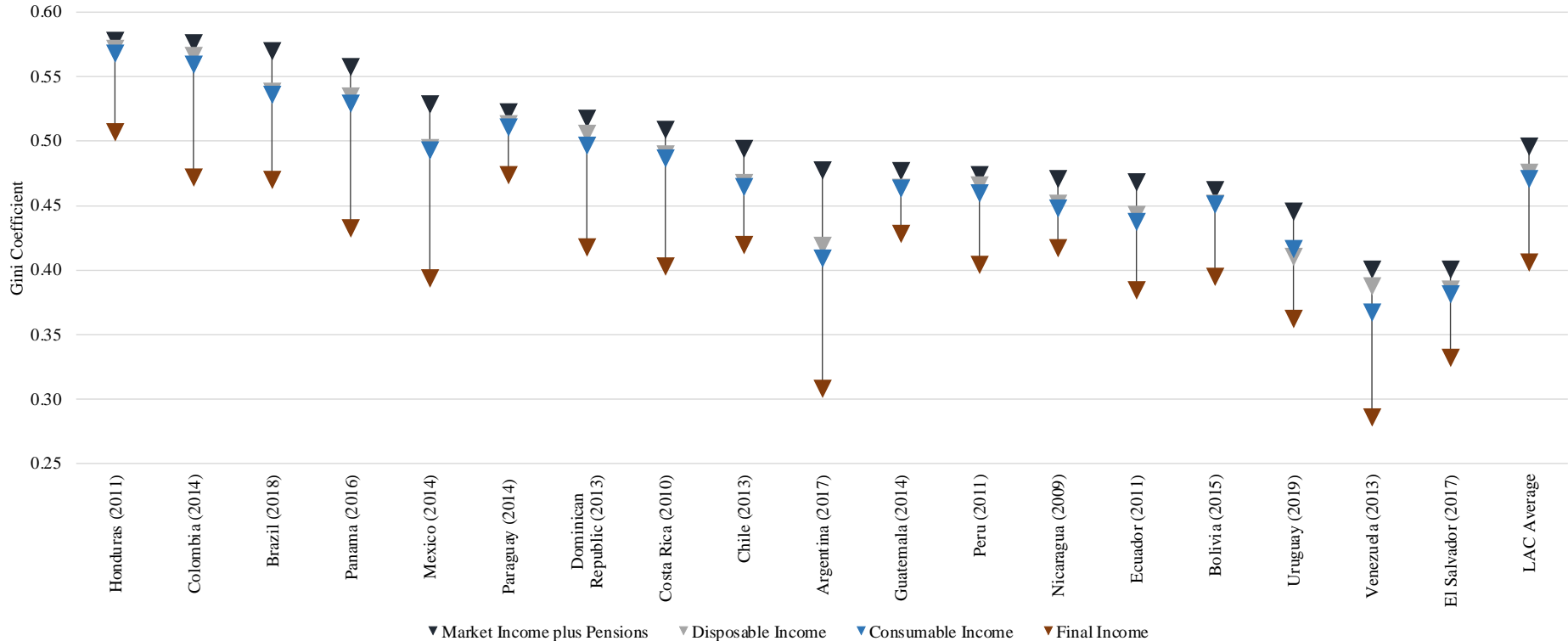
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# Fiscal Policy and Inequality

(Scenario PDI)



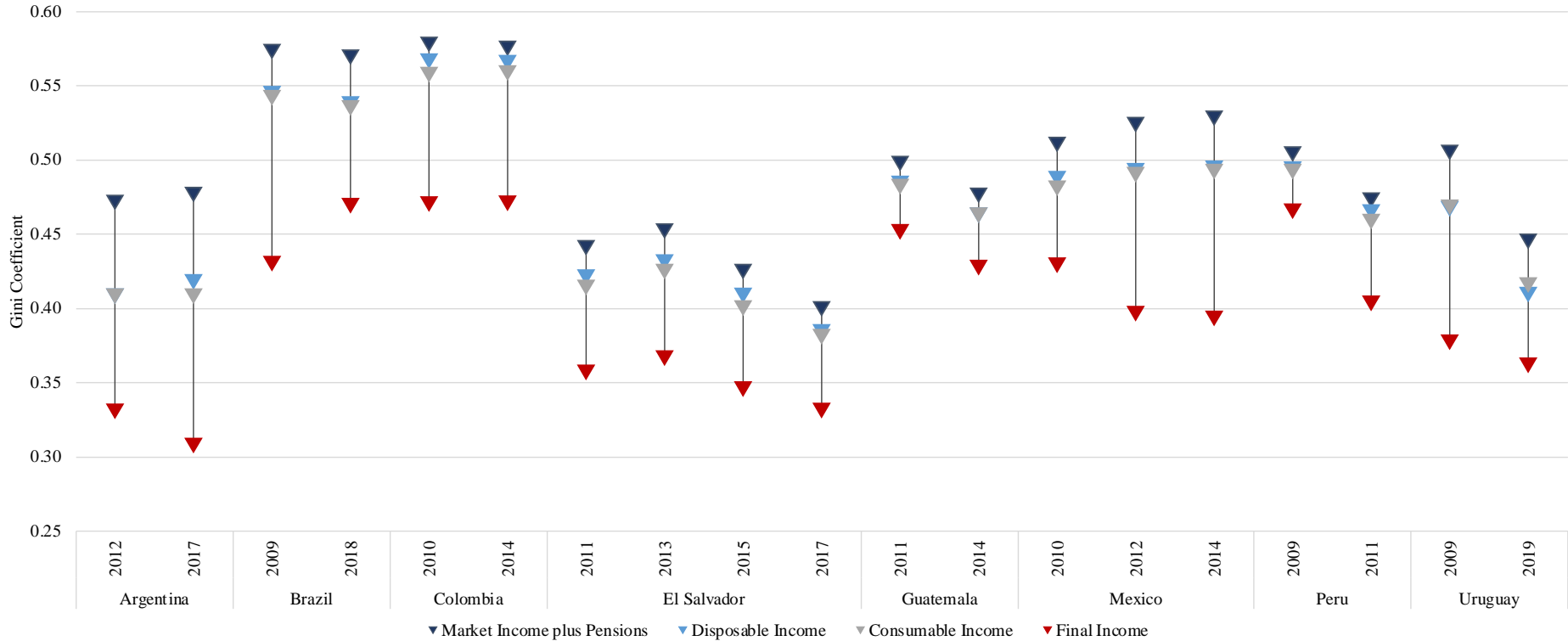
**Notes:**

- Information ranked by prefiscal Gini coefficient

**Source:** see bibliographical reference by country at the end of this presentation.

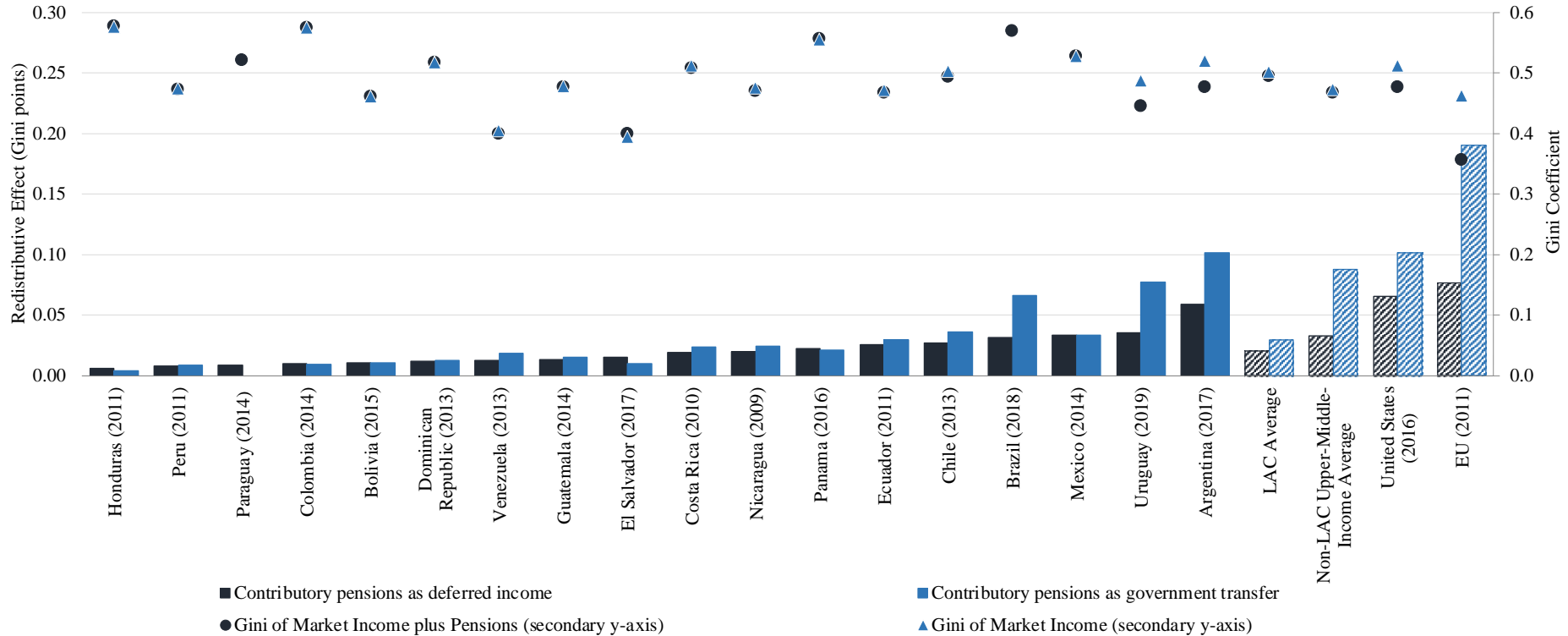
# Fiscal Policy and Inequality Over Time

(Scenario PDI)



Source: see bibliographical reference by country at the end of this presentation.

# Redistributive Effect: Change in Gini coefficient from Prefiscal to Disposable Income



Notes:  
- Information ranked by redistributive effect with pensions as deferred income

Source: see bibliographical reference by country at the end of this presentation.

# The Redistributive Impact of Specific Taxes and Transfers

- Fiscal system is equalizing in the 18 countries
  - Direct taxes are equalizing
  - Direct transfers are equalizing
  - Indirect taxes are equalizing in 12 of the countries (surprised?)
  - Indirect subsidies are equalizing in 12 of the countries (surprised?)
  - Pre-primary and primary education spending is pro-poor
  - Secondary education spending is pro-poor in 14 of the countries
  - Tertiary education spending is progressive in relative terms in 15 of the countries (surprised?)
  - Health spending is pro-poor in 7 of the countries

# Fiscal Policy and Poverty



### Contributory Pensions as Deferred Income (PDI)

#### Prefiscal Income (PDI) = Market Income + Pensions

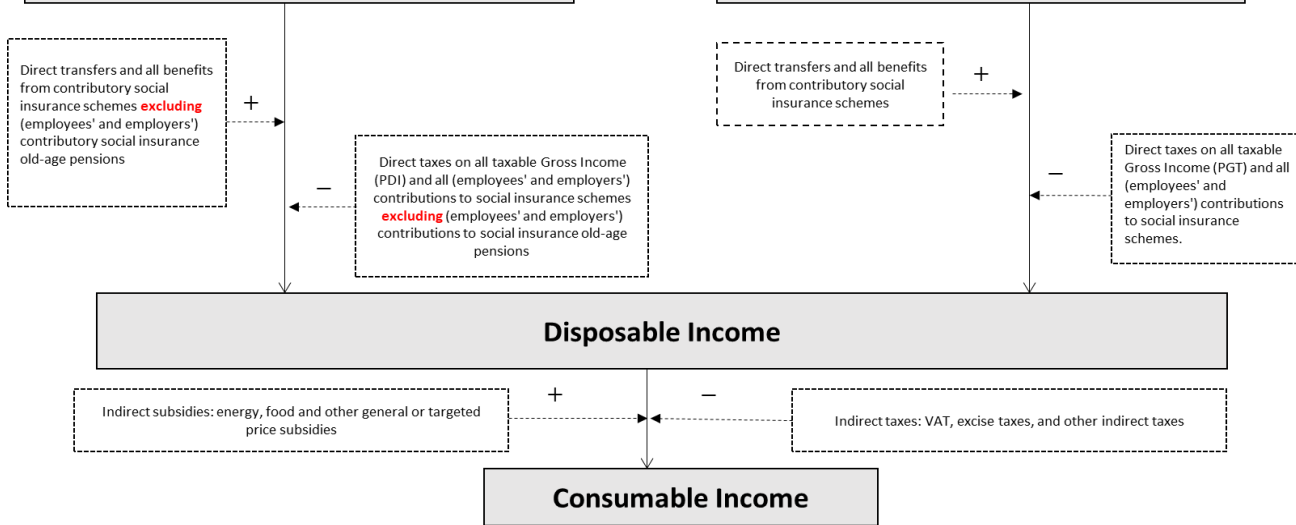
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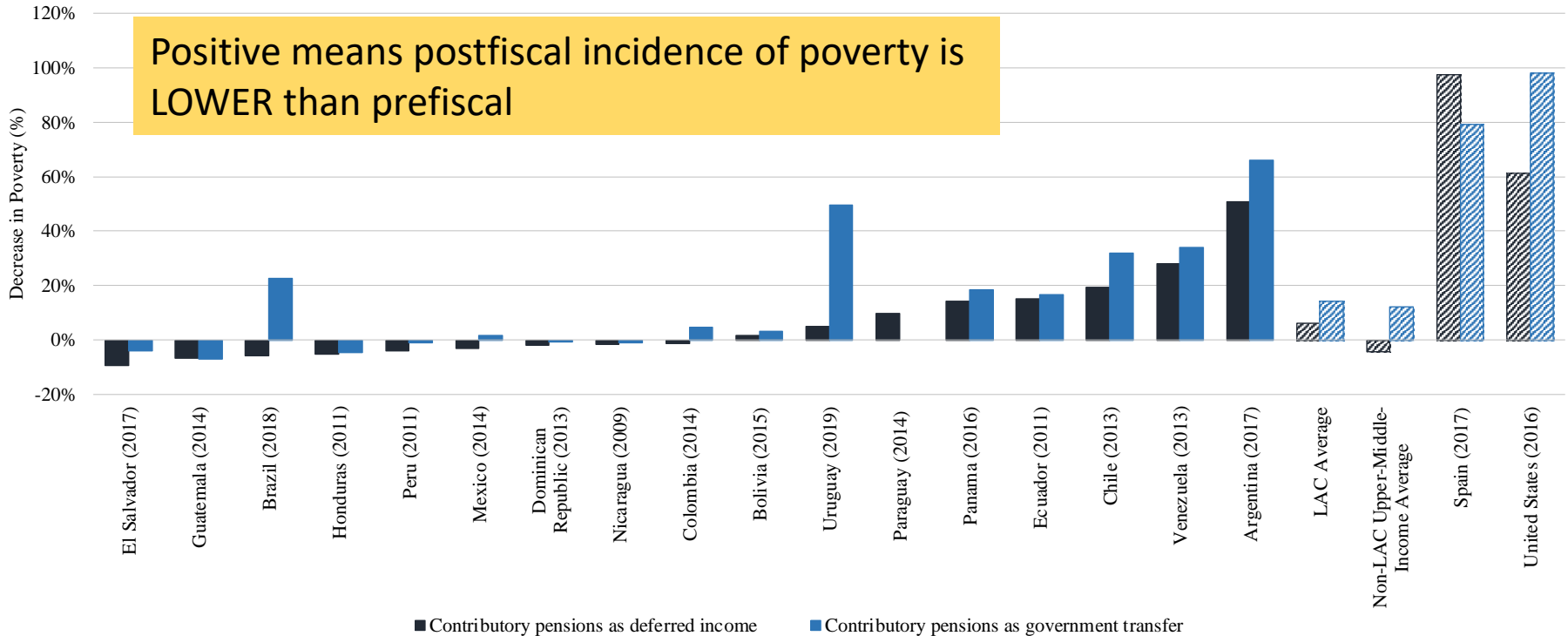
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**THREE  
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CONCEPTS**

# Poverty Reduction: %Δ in Headcount Ratio from Prefiscal to Consumable Income

Country-specific International Poverty Lines



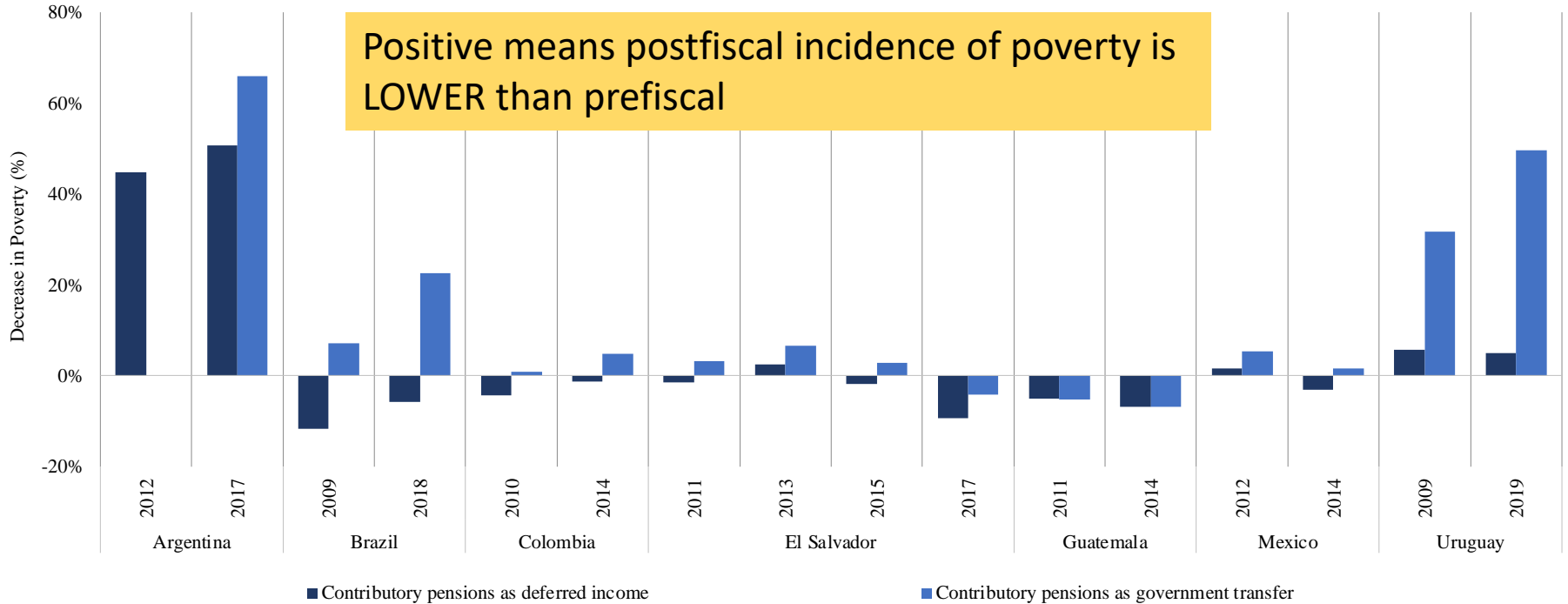
**Notes:**

- Information ranked by poverty reduction in %.

Source: see bibliographical reference by country at the end of this presentation.

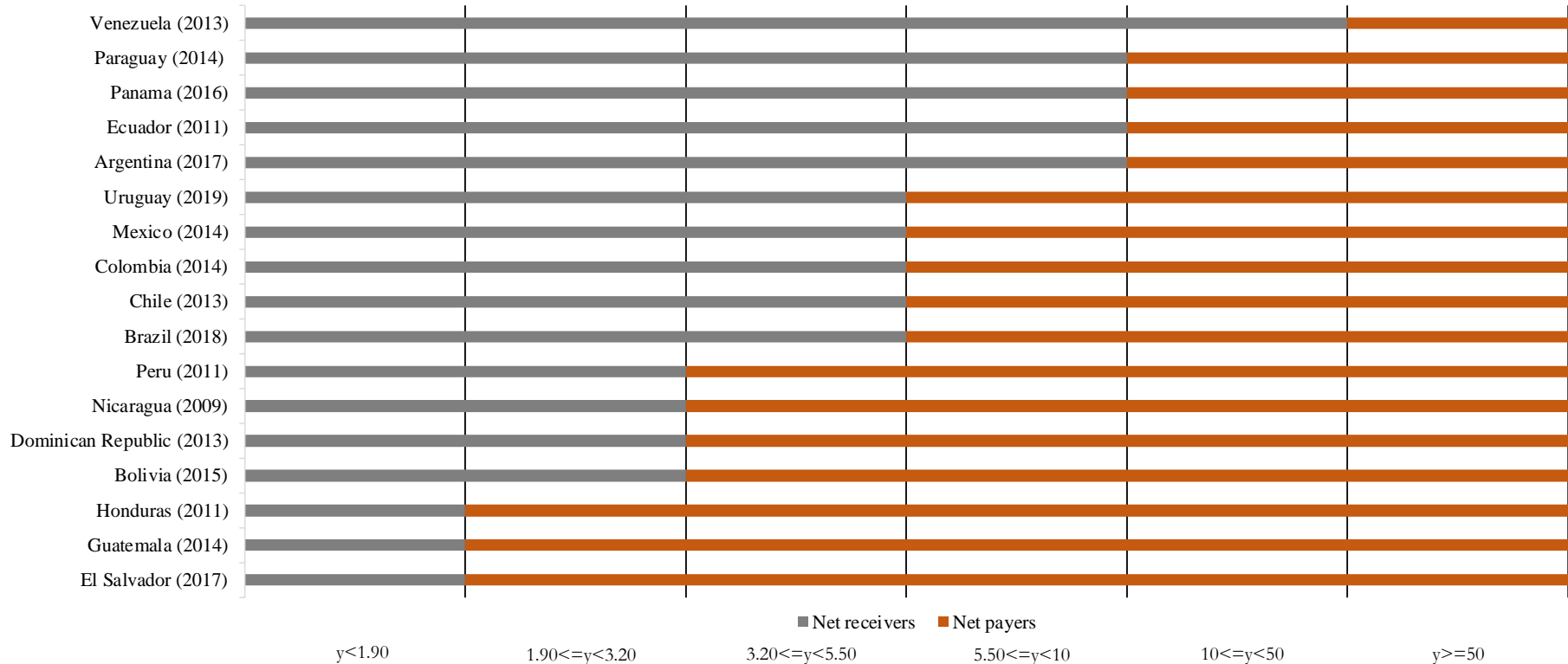
# Poverty Reduction Over Time: % $\Delta$ in Headcount Ratio from Prefiscal to Consumable Income

Country-specific International Poverty Lines



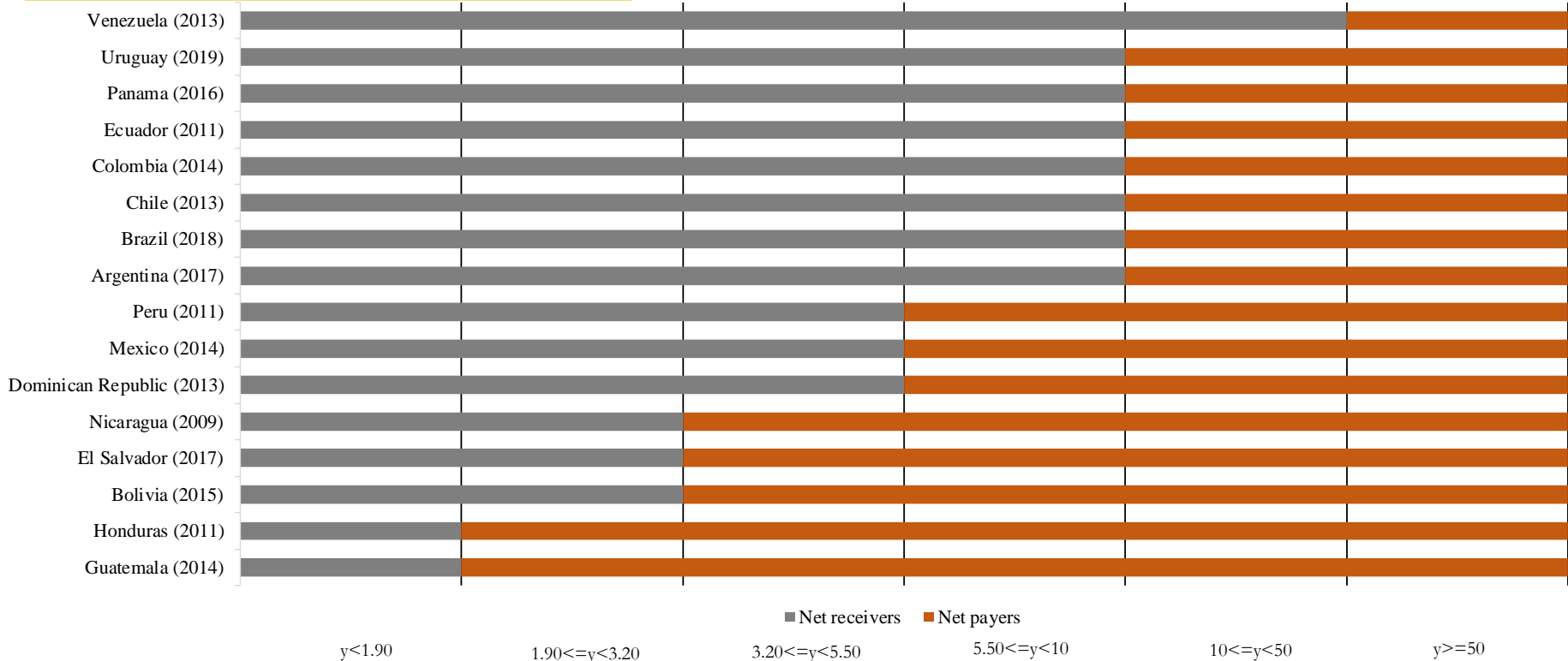
# Net Payers to the Fiscal System by Income Groups (in US\$ 2011 PPP/day)

## Pensions as deferred income, PDI



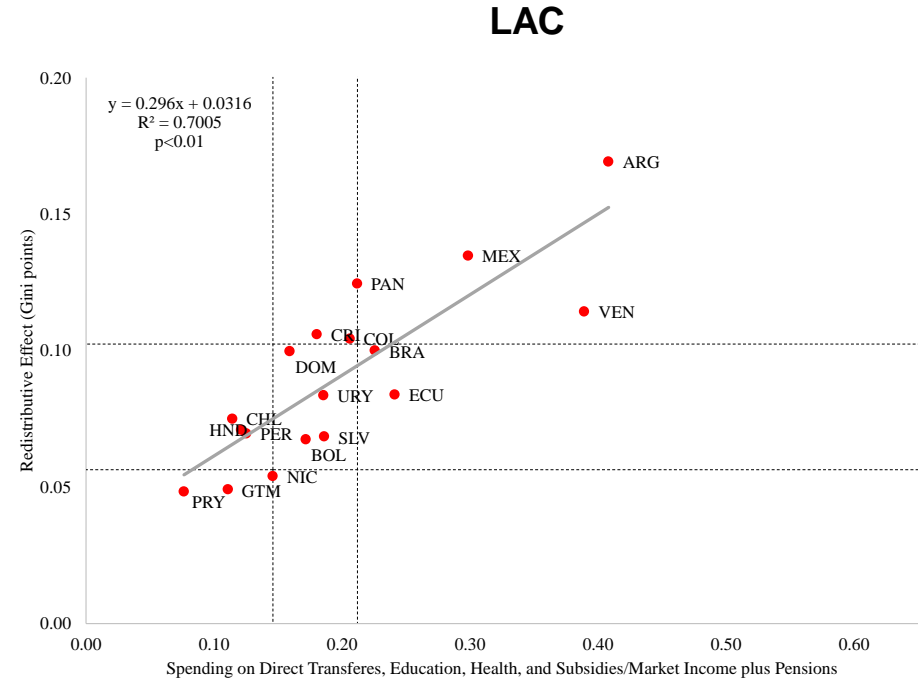
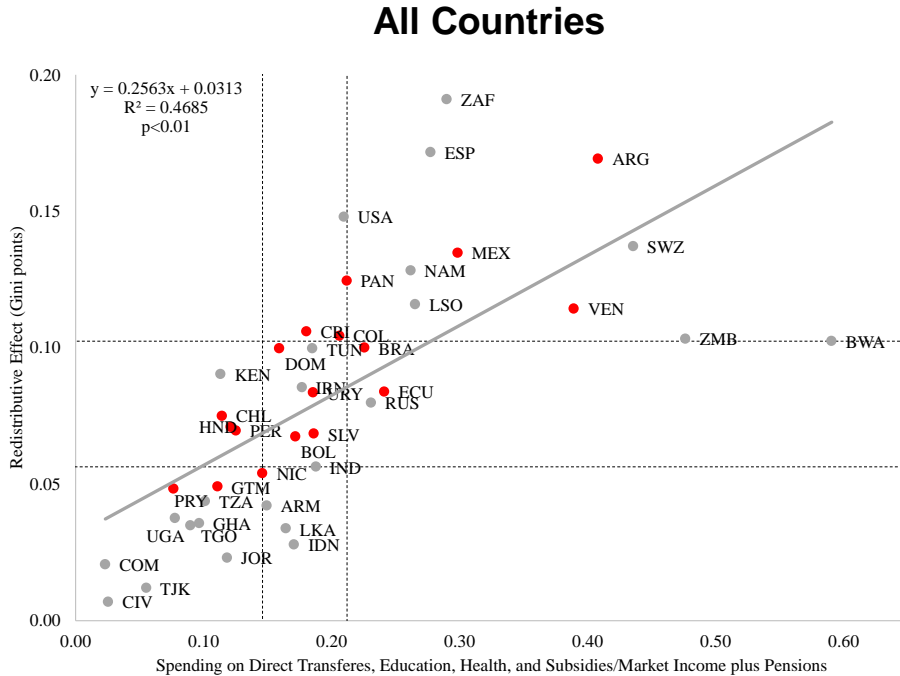
# Net Payers to the Fiscal System by Income Groups (in US\$ 2011 PPP/day)

## Pensions as government transfers, PGT



# **Toward a Characterization of Fiscal Systems in LAC**

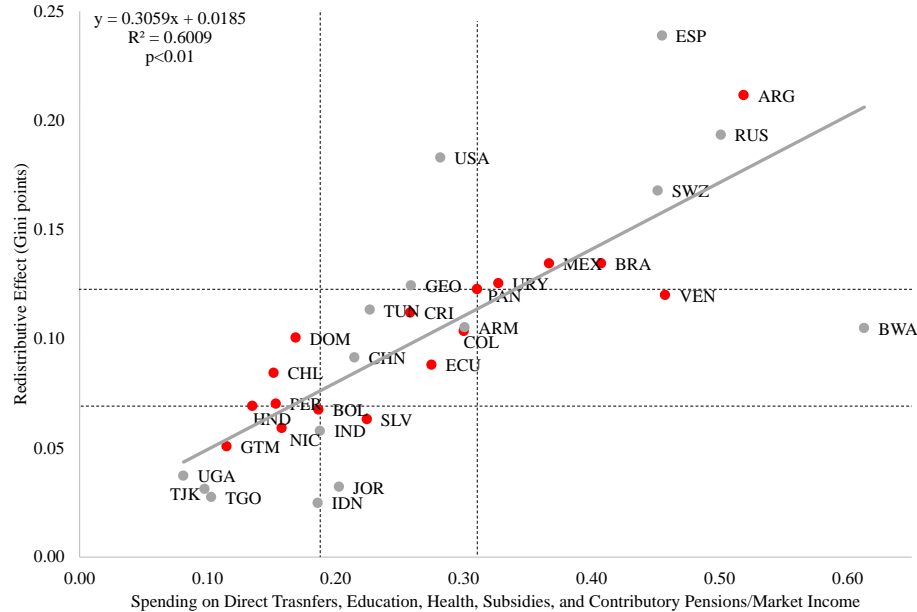
# Redistributive effect rises with social spending – Good news!



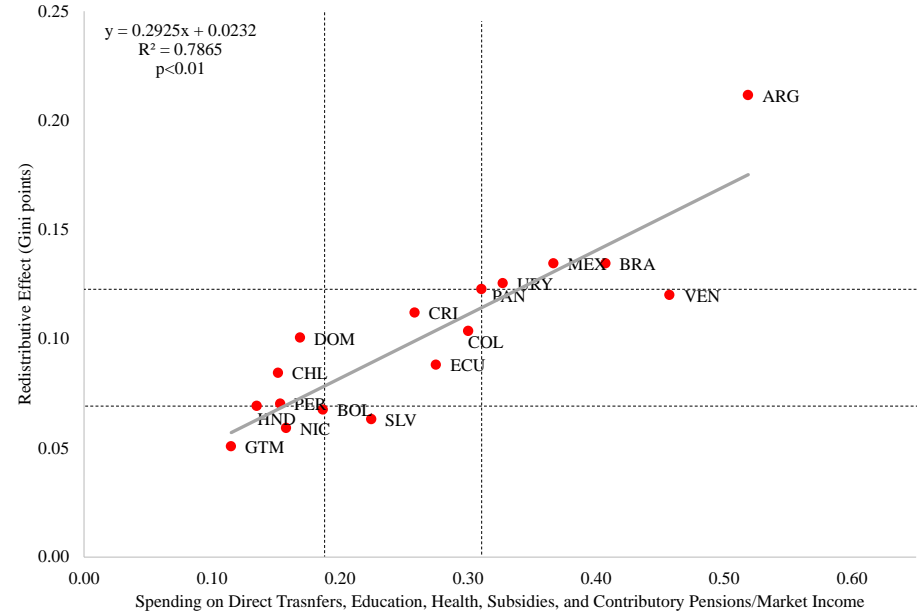
Pensions as deferred income, PDI

# Social Spending/Prefiscal Income vs. Redistributive Effect from Prefiscal to Final Income

## All Countries



## LAC

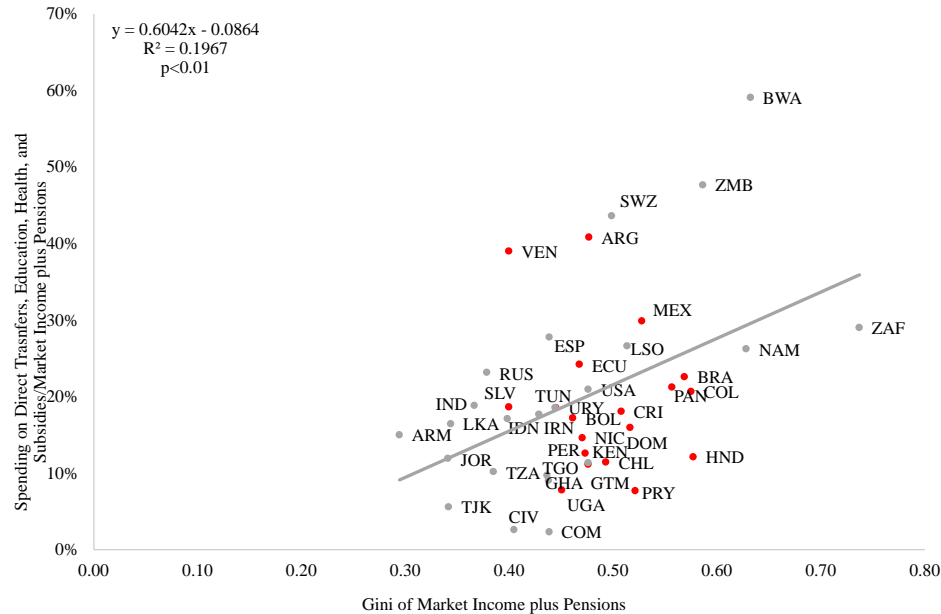


Pensions as gov transfers, PGT



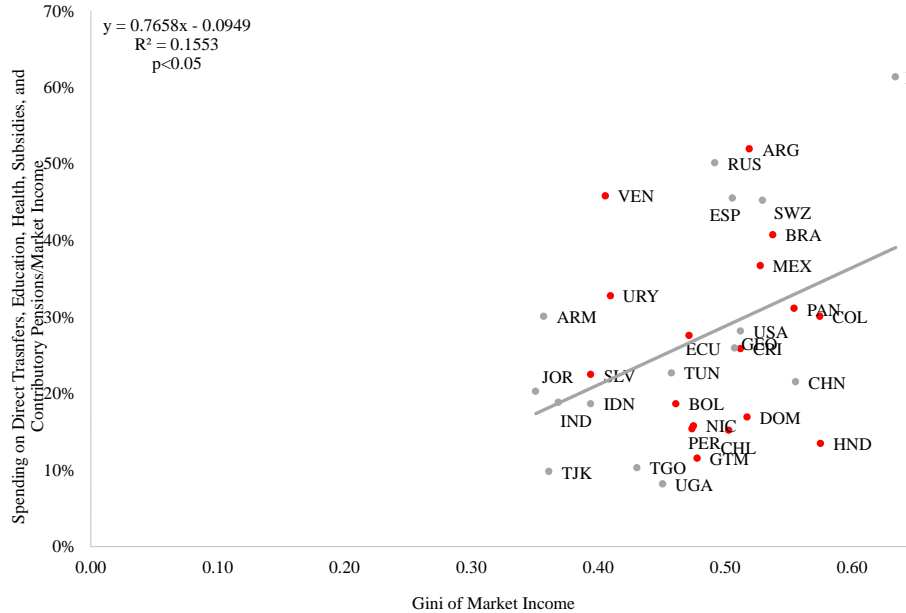
# LAC: More unequal, less social spending – Bad News!

## All Countries

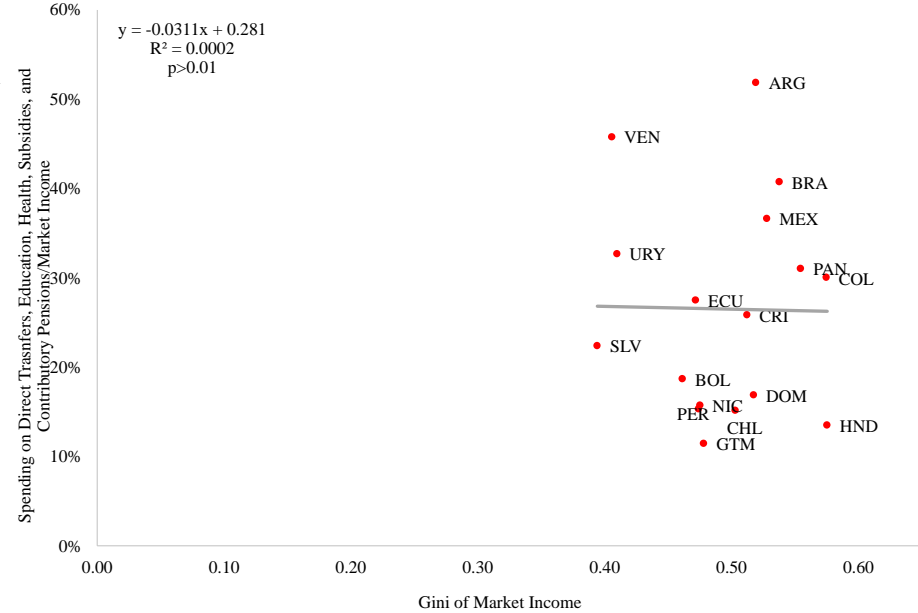


# LAC: More Unequal, More Social Spending/Prefiscal Income?

All Countries



LAC

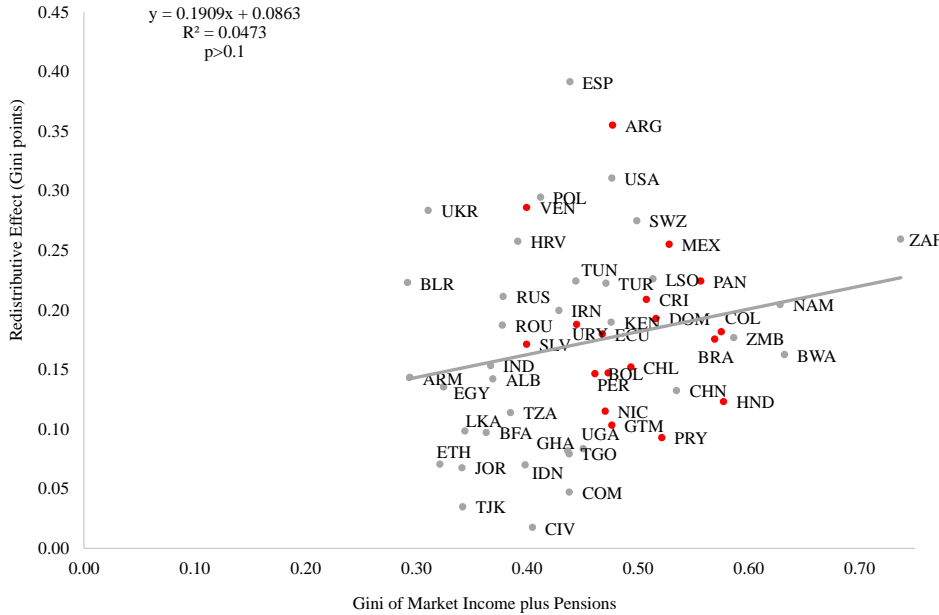


Pensions as gov transfers, PGT

# LAC: More unequal, less redistribution– Bad News!

## All Countries

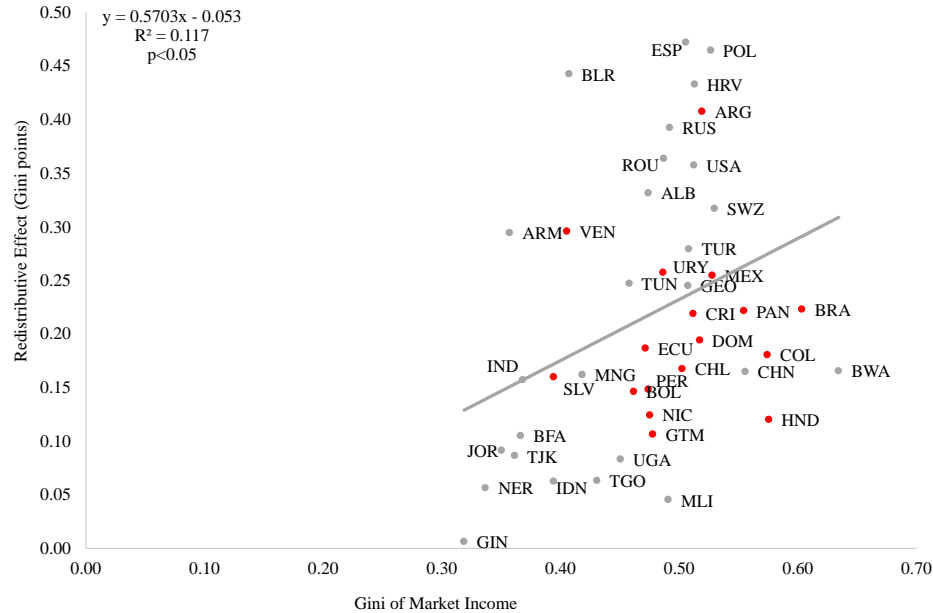
## LAC



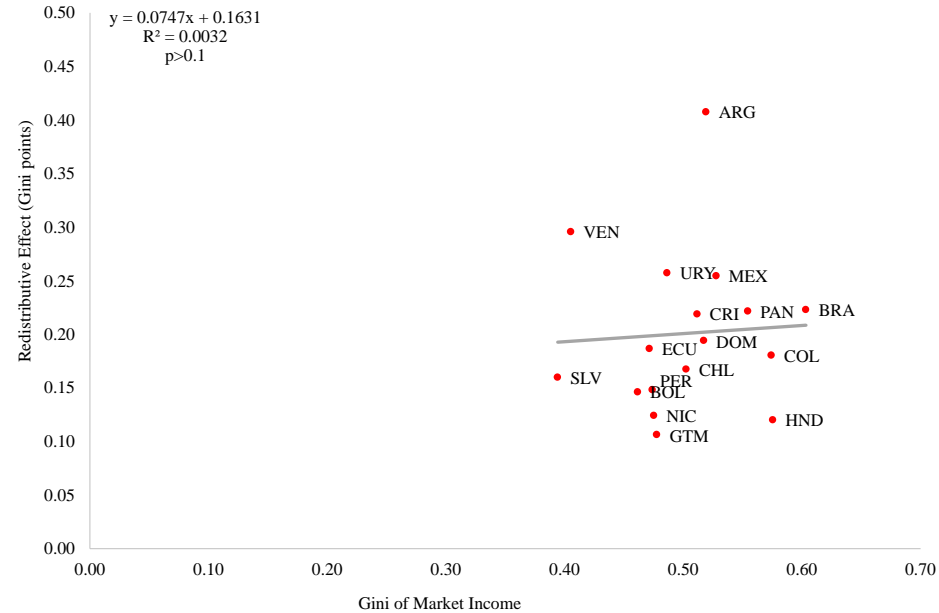
# LAC: More Unequal, More Redistribution?

(Scenario: PGT)

## All Countries



## LAC



Pensions as gov transfers, PGT

# In conclusion

- ❖ LAC countries are heterogeneous in their inequality and poverty levels, and their fiscal systems are also heterogeneous in their effect on reducing inequality and poverty.
- ❖ LAC fiscal systems are always equalizing but can often reduce the purchasing power of the poor.
  - *Warning:* unintended consequence of the domestic resource mobilization agenda can be making the poor worse off.
- ❖ Direct taxes and transfers are always equalizing, and indirect taxes and subsidies are often equalizing.
- ❖ Spending on education and health is always equalizing and often pro-poor
  - *Warning:* is this favorable result because middle-classes and the rich are opting out of using public schools and public healthcare?
- ❖ The more social spending/GDP the larger the redistributive effect.
  - *Warning:* it is possible that high redistributive effects are accompanied by inefficiencies and unsustainable macroeconomic conditions.
- ❖ However, in LAC countries, the more unequal not necessarily the more redistribution.

# Thank you!

# Teams and references by country

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# Teams and references by country

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