Taxation and Inequality

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Taxation & Developing Countries (a PEAKS training course)
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Overview

- Inequality trends and taxation
- The incidence and distributional impact of taxes

Conceptual, measurement and data issues:

- Assessing incidence
- Tax progression
- Distributional impact
- Evidence on different taxes
- Data: requirements and constraints

Assessing Incidence

- Involves identifying how much each person pays
- Statutory incidence: the legal liability to pay tax
- Economic incidence: those whose real purchasing power declines because of tax

- This challenge varies depending on the tax considered.
- Particularly for some indirect taxes there is still no clear consensus on where the economic burden of taxes falls.
- Studies on taxes must decide on the appropriate tax incidence shifting assumptions.

Tax Progression

- Tax progression: the extent to which a tax structure departs from proportionality.
- Taxes are said to be progressive if poorer households pay a proportionately smaller share of the tax than wealthy households, relative to income or expenditures.
- Taxes are regressive if the opposite is true, and neutral if the tax shares are equal to overall income/expenditure shares.
- Measure the average rate progression, does the average tax rate increase with income?
- If calculated from information on actual tax payments by individuals at different income levels, it can give a more accurate picture of progression than the use of statutory average tax rates (the latter ignore compliance aspects) .

Distributional Impact

- Two types of instruments: graphic representations and numeric measures.
- Lorenz curve: plots the cumulative proportion of income recipients - ranked from lowest to highest - against the proportion of total income received. The further the curve lies below the 45º line, the greater is the inequality of the variable under consideration.
- Concentration curve: are similar to Lorenz curves but use different income definitions for each axis. Typically plot post-tax income, expenditure or tax payments against the proportion of the population ranked by pre-tax income (whereas the Lorenz curve uses the same income definition to rank both the axes, concentration curves).

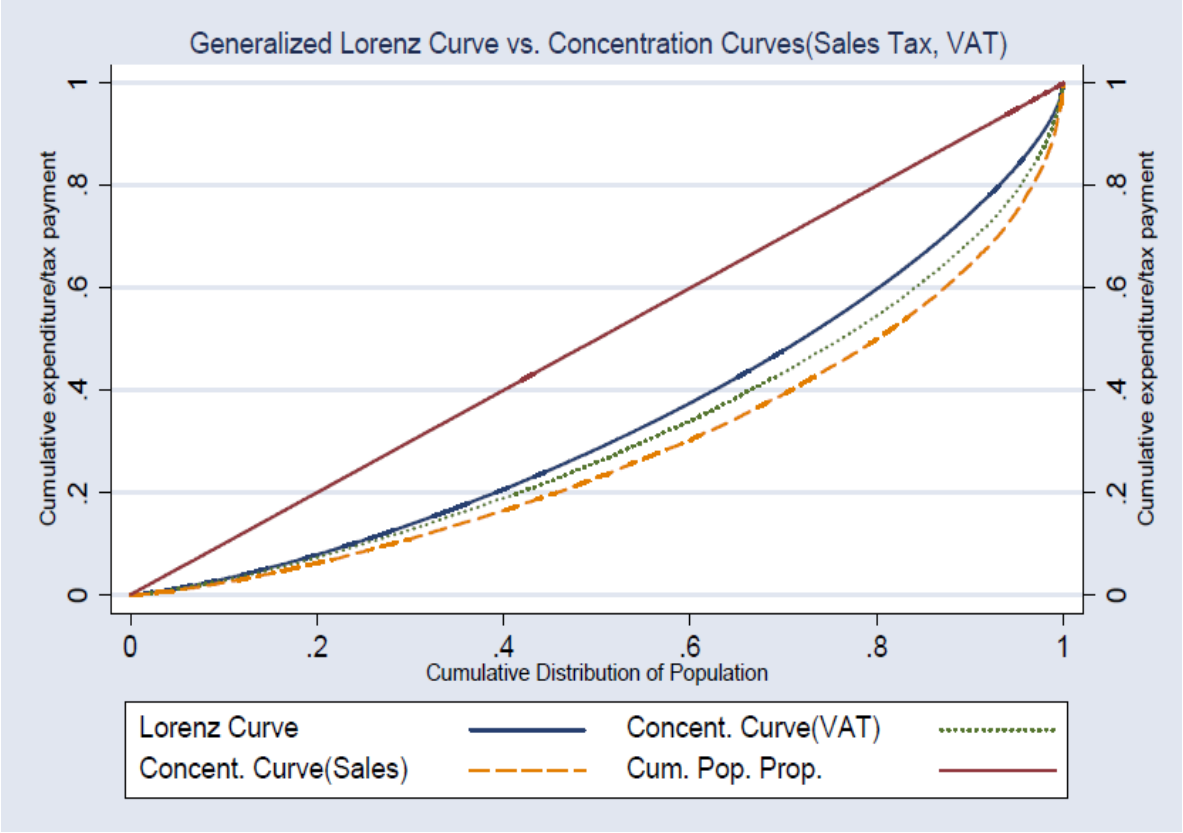
Distributional Impact

- These graphic representations can be used to make comparisons across different taxes and transfers yielding a ranking in terms of progressivity of alternative instruments.

- They are also made between specific taxes and the underlying income or expenditure distribution to provide an indication of their contribution to changes in the overall income or expenditure contribution.

Distributional Impact

- Generalised Lorenz and concentration curves – Sales tax, VAT, Ethiopia (Source: Muñoz and Cho, 2003)

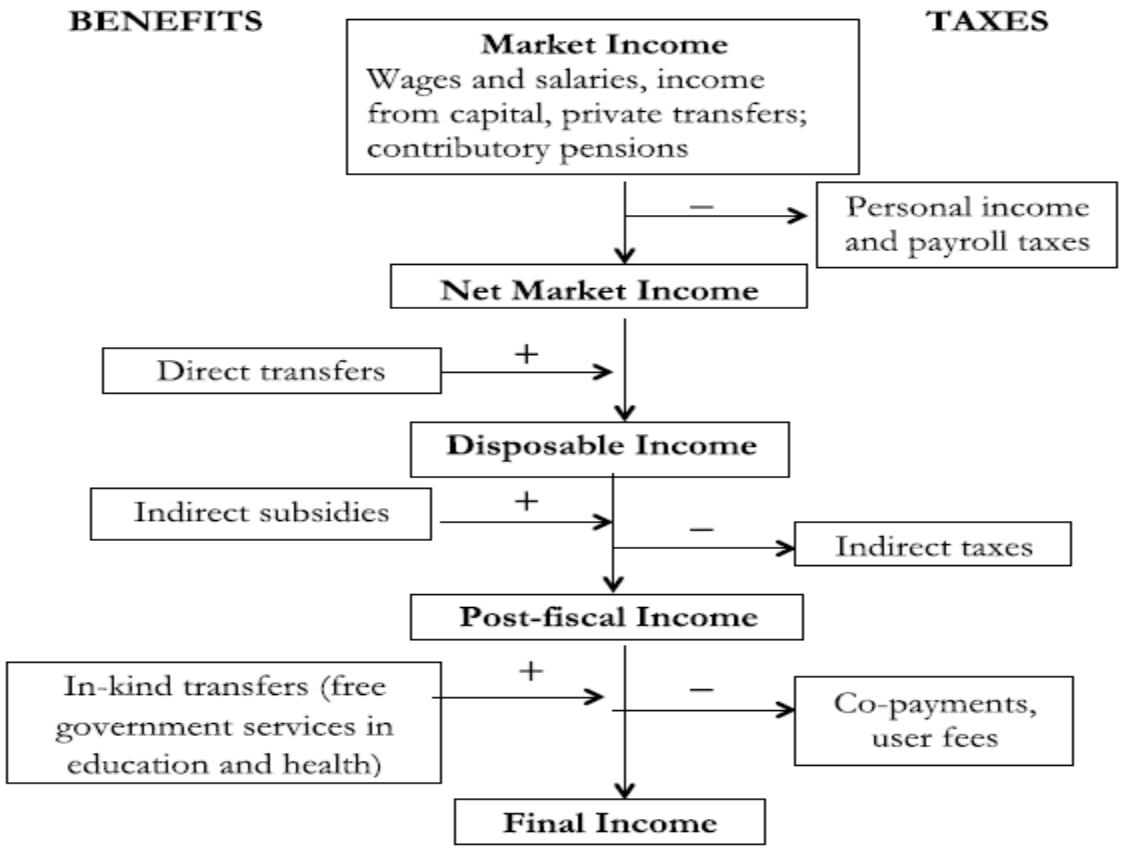


Distributional Impact

- Gini coefficient: a numerical measure of the extent of inequality associated with Lorenz or concentration curves, measuring the area between the relevant curve and the 45º line, as a proportion of the total area beneath the 45º line.
- A common measure of the level of redistribution achieved by taxes and transfers is given by the difference between the Gini index for market incomes and the Gini index for disposable incomes.
- This difference provides only a crude estimate of the actual degree of public redistribution. Among other things, it does not take potential behavioural effects into account.

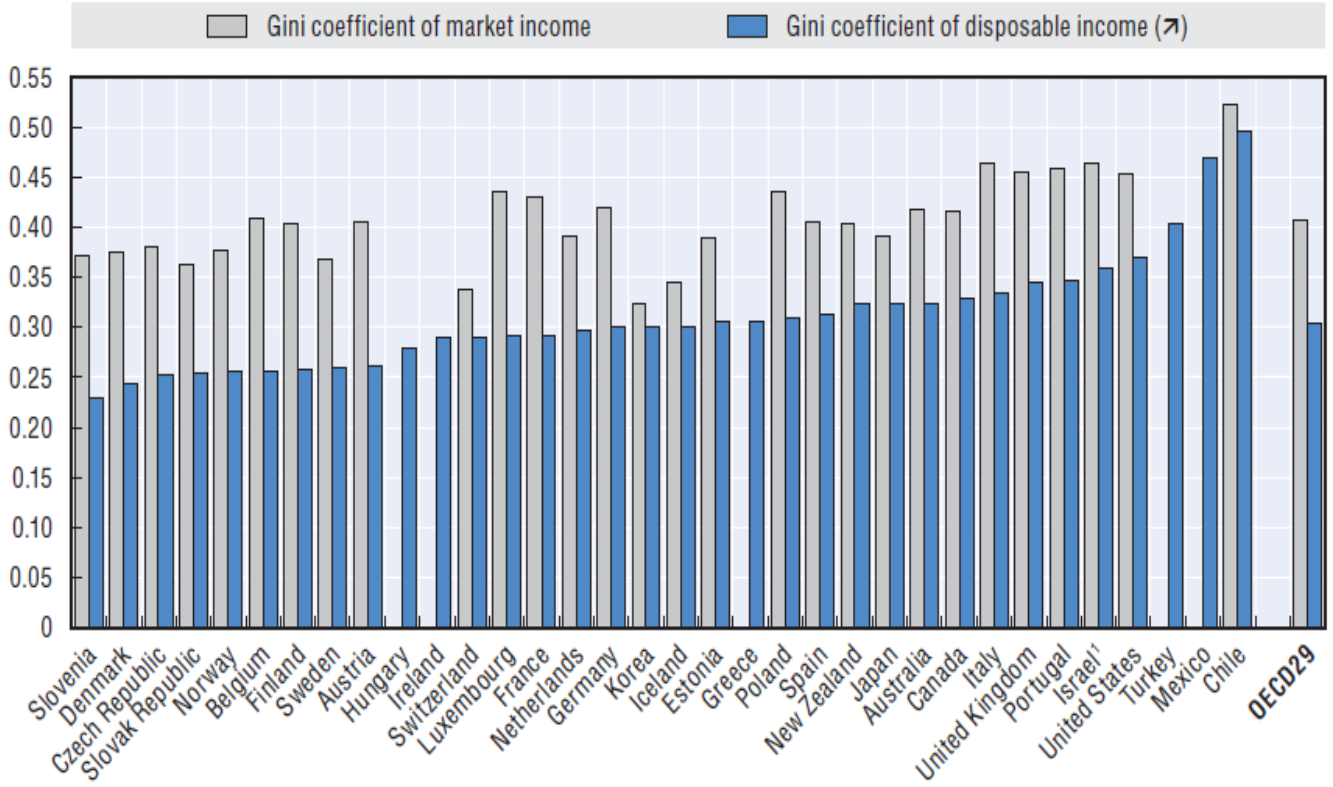
Distributional Impact

- Income definitions



Distributional Impact

- OECD example of market and disposable incomes

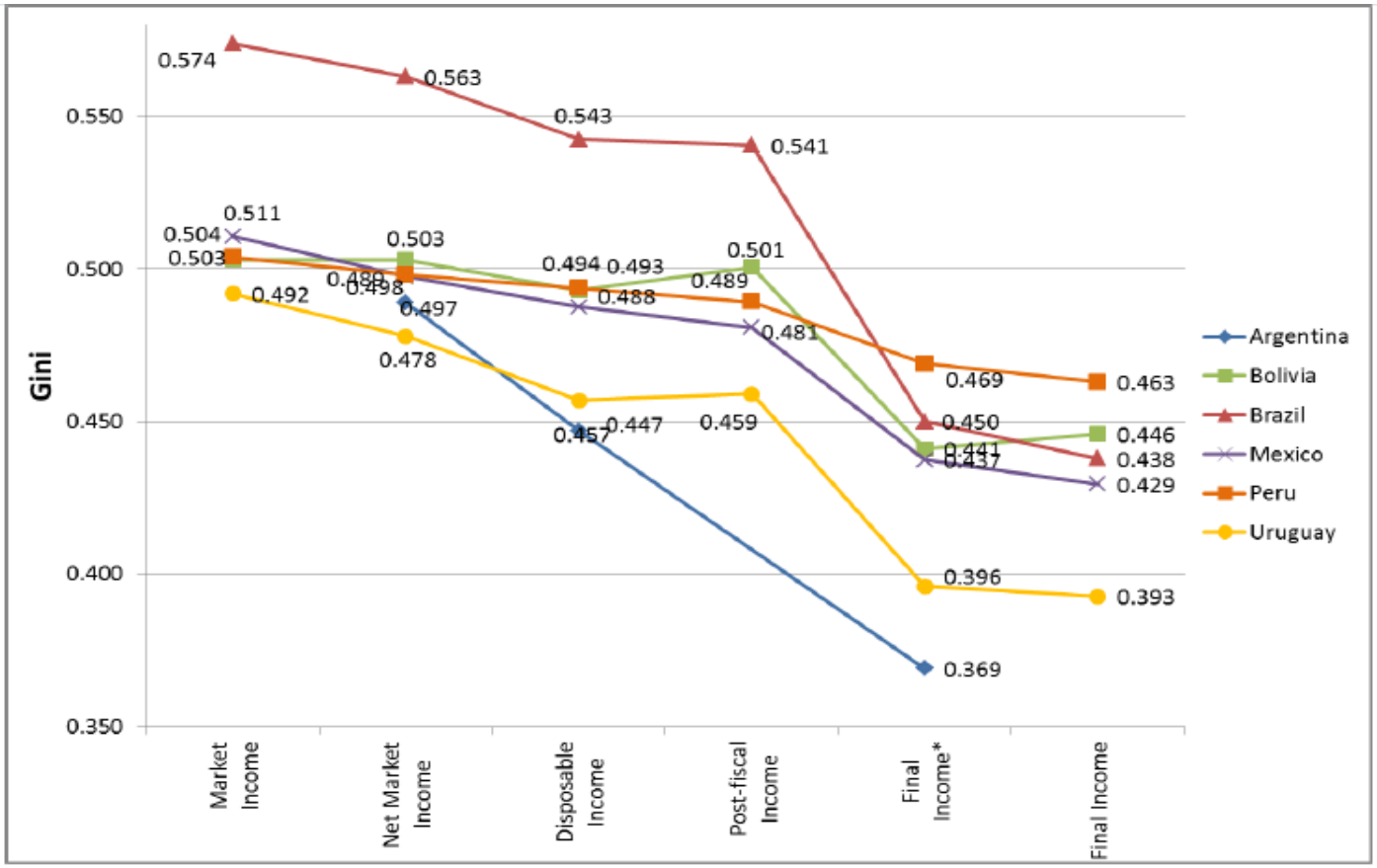


Distributional Impact

- The exclusive concentration on market and disposable income comparisons may give a false picture of the extent and profile of redistribution achieved by government.

- Since the disposable income concept includes only a selection of taxes and items of public spending, it provides only a partial picture of the effect of the public sector on household welfare.

Tracking the Gini from Market to Final Income



Source: Lustig et al 2013

Distributional Impact

- Personal income tax varies from around five percent of GDP in Uruguay to nearly zero in Bolivia.
- In all countries in which they exist, direct taxes are progressive, but because direct taxes are a small percentage of GDP almost everywhere, their redistributive impact is small.
- Indirect taxes and subsidies mixed, regressive in Bolivia and Uruguay.

Distributional Impact

- This approach does not take behavioural and other "second round" effects into account. Techniques that address these shortcomings typically require strong assumptions and display higher data requirements.

- The difference in the Gini indeces for market and disposable incomes is an:

"intelligible, if imperfect, way to gauge the level of income redistribution in a country" (Brandolini and Smeeding, 2009).

Evidence on Different Types of Taxes

- *Direct taxes*:

- In general, personal income and property taxes are progressive. However, high levels of tax non-compliance combined with narrow tax bases contribute to low income tax ratios, low income tax progressivity and overall regressivity of tax systems in LDCs.

- Resource taxation can be progressive.

Evidence on Different Types of Taxes

- *Indirect taxes*:

- Taxes on imports, which continue to be important low-income countries, often are among the most regressive.

- Evidence on excise taxes such as fuel, alcohol and tobacco excises is mixed: regressive in most Central American countries. Taxes on kerosene is regressive.

- Distributive impact of VAT is mixed (clearly regressive in Central America, progressive in some African countries), strong evidence that the exemption of items that make up a large share of the consumption of households in the lower quintiles and small businesses can result in progressive incidence.

Data

- For OECD, EU and some LAC countries, data on the distribution of different types of income are readily available, see:

- Luxembourg Income Study (LIS): http://www.lisdatacenter.org/

- OECD: http://stats.oecd.org/

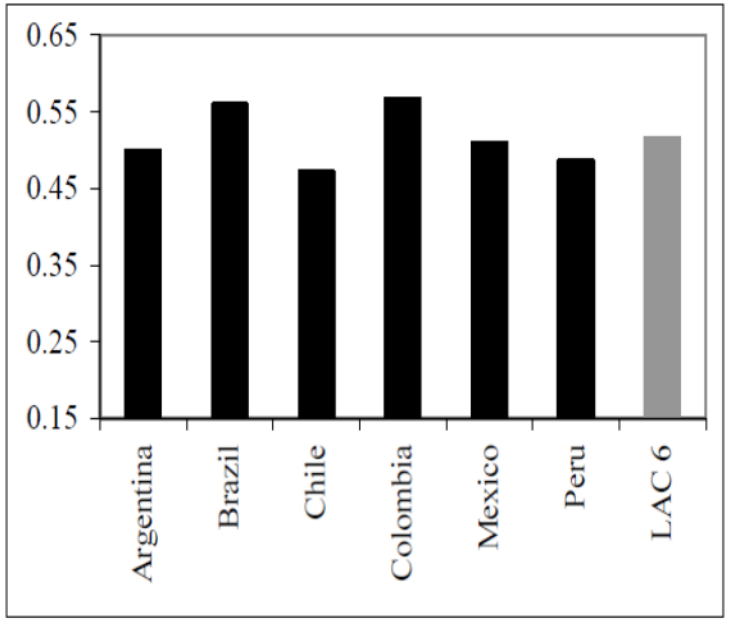
  [Under Social Protection and wellbeing – income distribution and poverty – by country: inequality]

- Data availability in low-income countries: requirements and constraints.

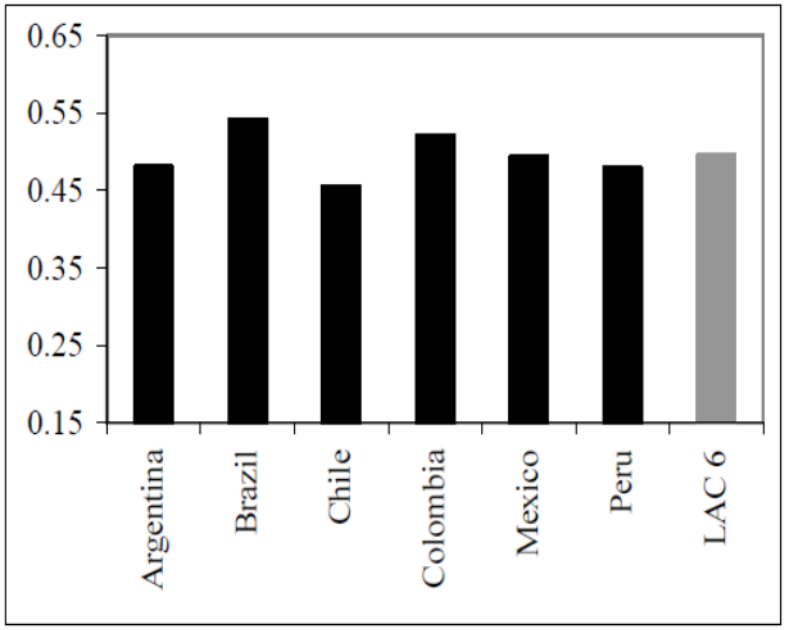
Example: The Distribution of Market and Disposable Incomes in LAC

- The average Gini of market income for Latin America is 52%, 2 percentage points higher than the disposable income Gini (50%)

A) Market income Gini



B) Disposable income Gini

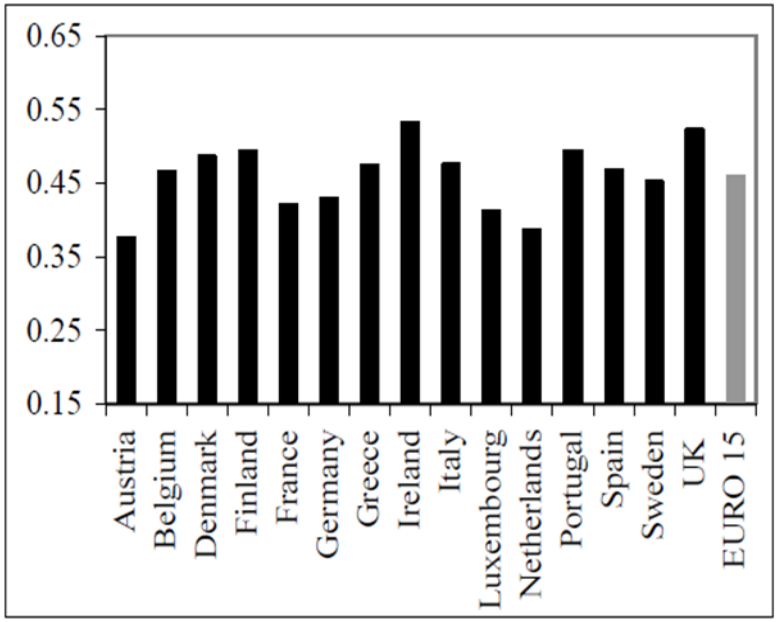


Source: Goñi et al, 2008

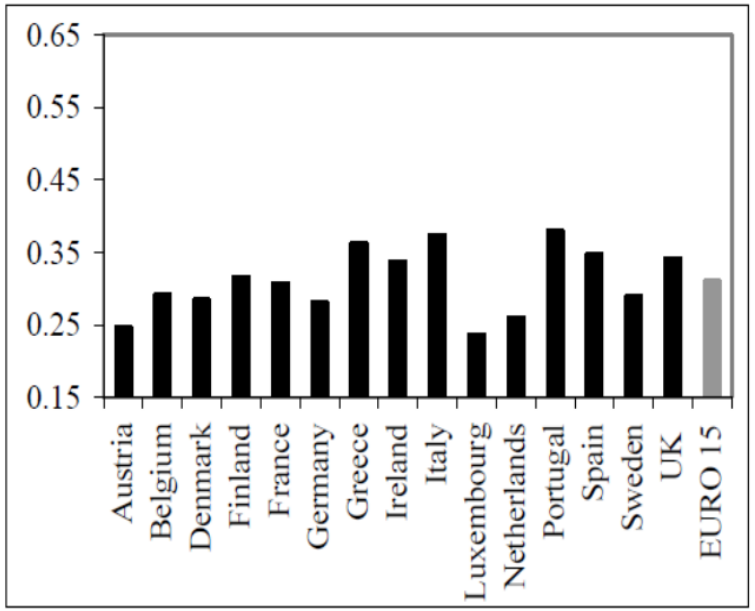
Example: The Distribution of Market and Disposable Incomes in the EU

- The average Gini of market income in EU is 46%, vs 26%, 20 percentage points; Note market income Ginis are similar to LAC; but disposable income Gini is much smaller, pointing to the important role played by direct taxes and transfers.

A) Market income Gini

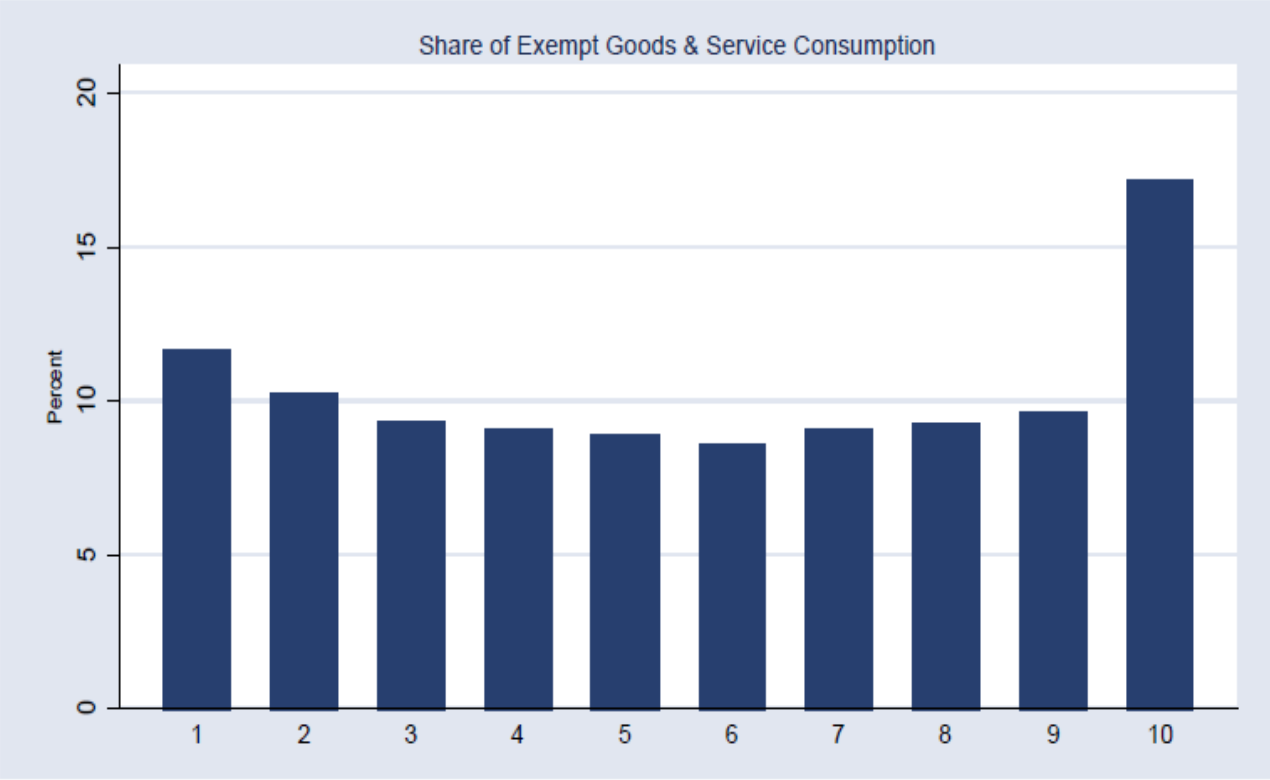


B) Disposable income Gini



Example: Distribution of VAT Exempt Goods in Ethiopia

- Most of the exempt goods and services are disproportionately consumed by the relatively well–to do, so the exemptions cannot be justified on equity grounds (Source: Munoz and Cho, 2003)



Example: Net Impact of VAT Reform in Ethiopia

- Net impact of VAT in Ethiopia (as a percentage of average consumption; Munoz and Cho, 2003)

Quintile	Loss	Gain			Net Effect		
		Extra spending divided equally between primary education and health	Extra spending in primary education only	Extra spending in health only	Extra spending divided equally between primary education and health	Extra spending in primary education only	Extra spending in health only
1	1.37	2.16	1.79	2.53	0.79	0.42	1.16
2	1.20	1.55	1.41	1.70	0.35	0.21	0.50
3	1.09	1.05	1.02	1.08	-0.04	-0.07	0.00
4	0.96	0.74	0.84	0.64	-0.22	-0.12	-0.32
5	0.56	0.43	0.51	0.35	-0.13	-0.05	-0.21

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