



Presentation prepared for the event:

# **Inequality in a Lower Growth Latin America**

Monday, January 26, 2015

*Woodrow Wilson International Center for Scholars*

Washington, D.C.

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# Inequality in LAC:

## Explaining the Recent Past to Shed Light on the Future

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*Augusto de la Torre*

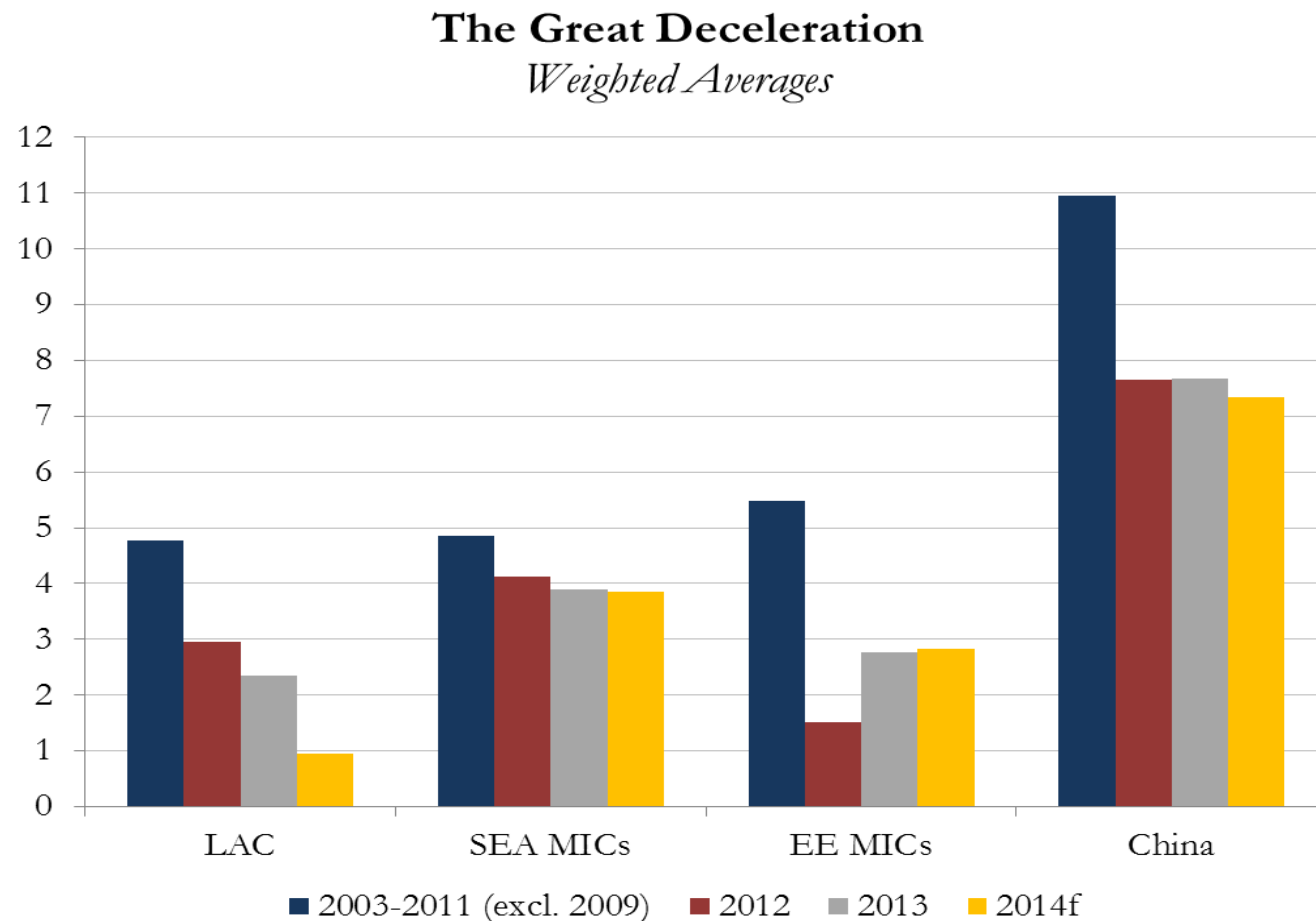
Based on ongoing research by a team including Guillermo Beylis, Julián Messina, Eduardo Levy Yeyati, and Carlos Rodríguez-Castelán

**Wilson Center, Washington, DC**

January 2015

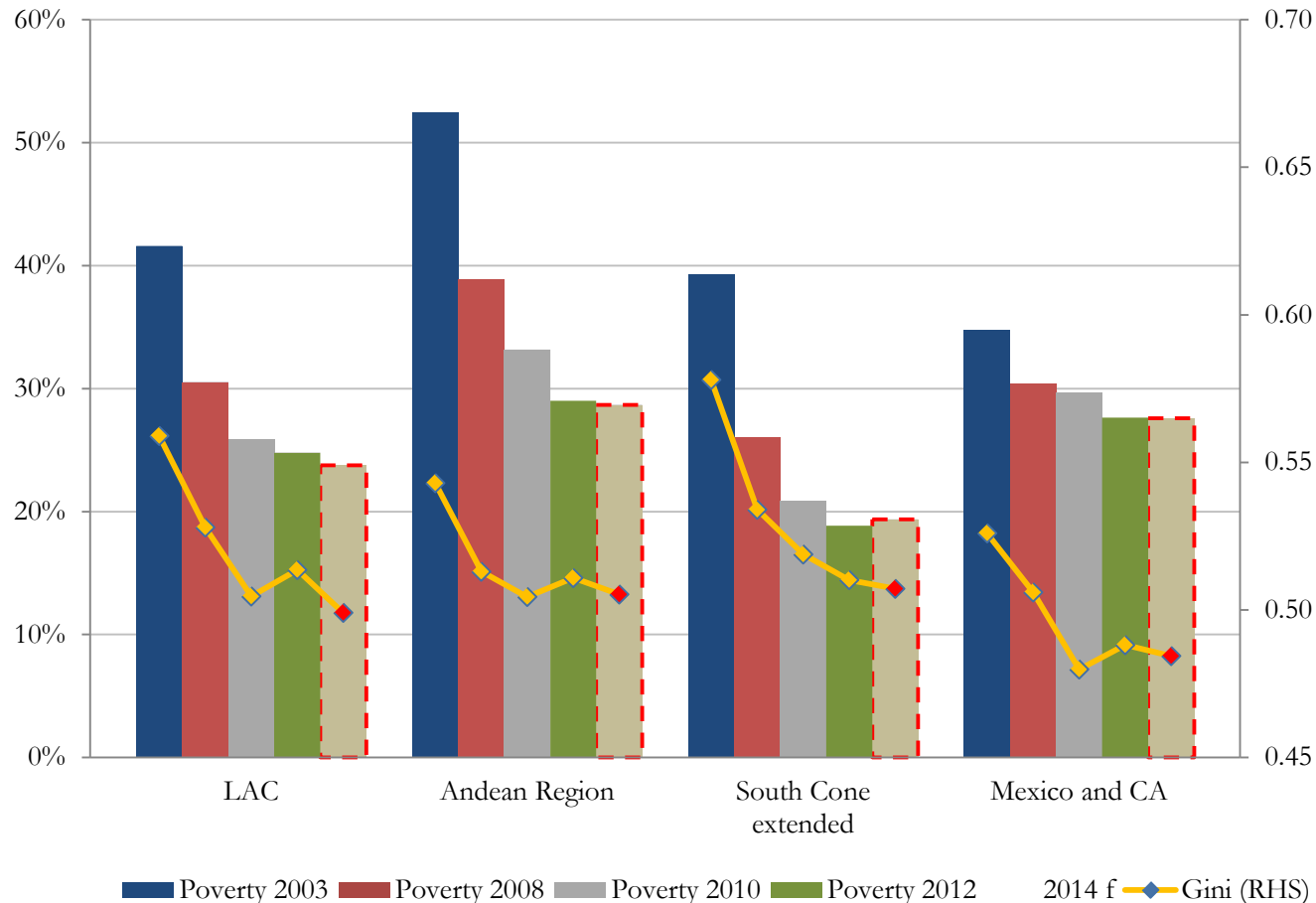
Chief Economist Office  
Latin America and the Caribbean  
World Bank

# The great EM deceleration is affecting particularly intense in the case of Latin America



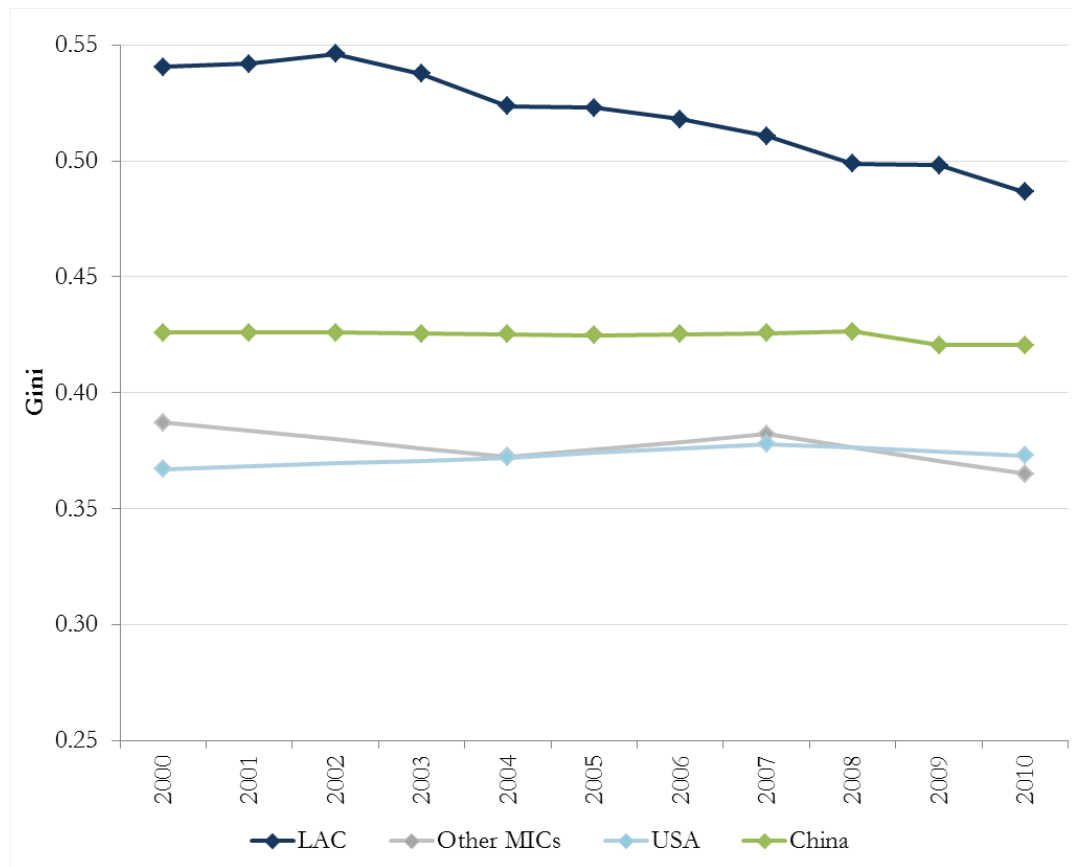
# How big of a threat is it to social progress and, in particular, to the declining trend in inequality?

Poverty and Inequality in LAC



# Income inequality reduction in LAC is rather unique...*but...*

Household Income Inequality Across Regions



## ... does it reflect measurement limitations?

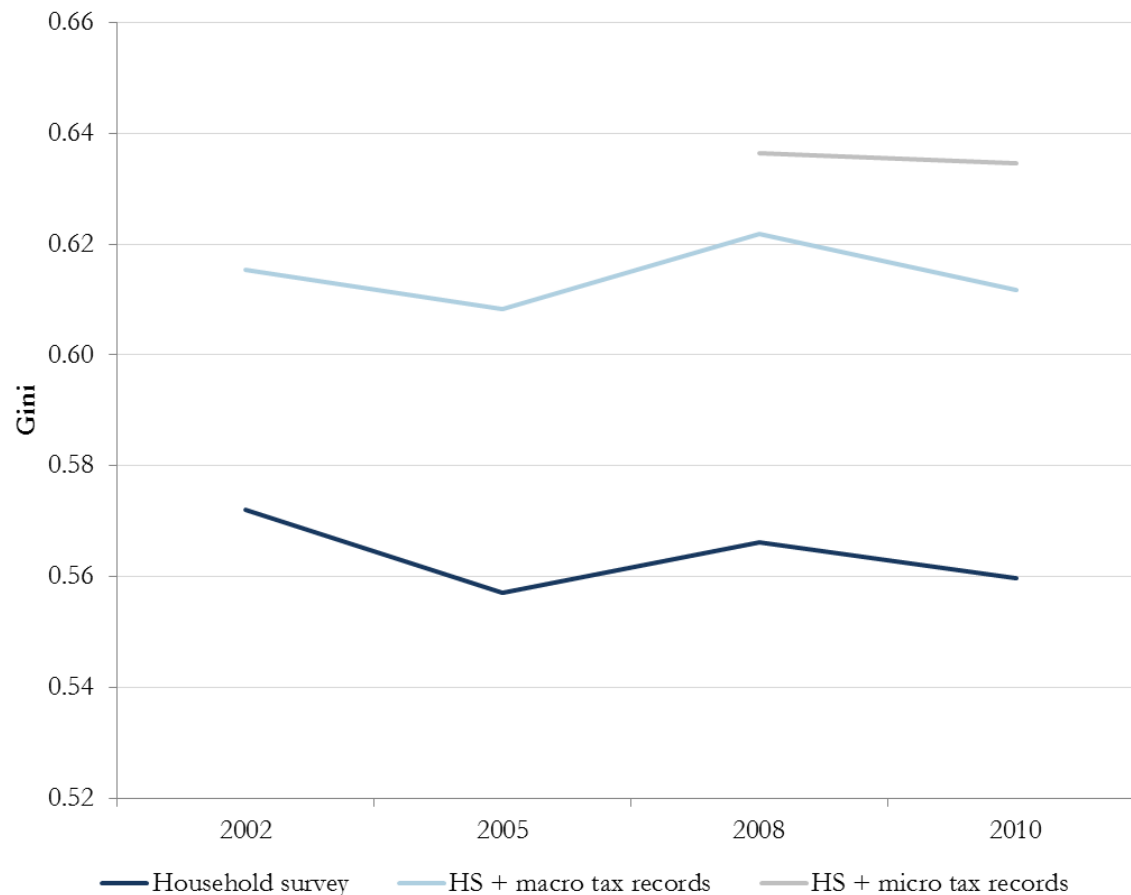
- Comparability: LAC uses income surveys, other regions use consumption
- Top earners have a higher than average non-response rate
- Capital income is hardly captured
- By being a measure of nominal income inequality, the Gini assumes that the consumption basket is the same for all income groups

# What do we do about the measurement issue?

- Complement household surveys with tax-based records – to capture top earners and capital income
- Analyze the shares of GDP going to labor (after adjusting for the income of self-employed workers) – as a robustness test
- Estimate the inequality of *purchasing power* by correcting for decile-specific inflation rates
- *Bottom line*: the LAC inequality reduction story holds, but with some caveats

# Adding the top earners changes the level but not the evolution of income inequality in non-crisis periods

Colombia: Basic and Augmented Gini Index





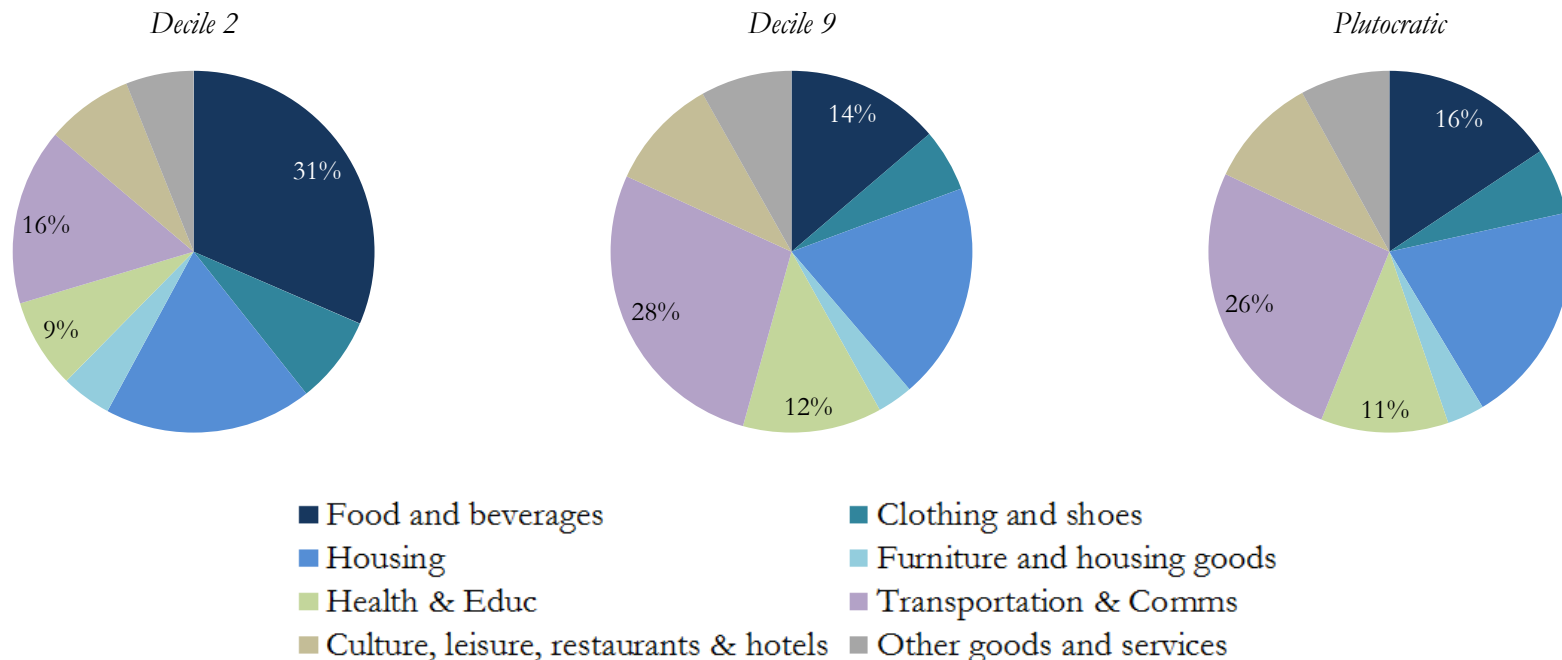
# The share of labor in GDP shows only part of the picture

- We check for consistency between the evolution of the labor share in national income and that of the survey-based Gini
  - The expectation is that, since capital income is concentrated at the top, as the labor share declines inequality should increase.
- We find that the decline in labor shares (which in LAC was milder than elsewhere) was associated with a rise in income at the top 1%...
- ...but that there is no systematic association with changes in the Gini
  - Labor shares don't tell us how labor income is distributed
- In sum, changes in labor shares are a good proxy for changes of income at the top but not for changes in the distribution elsewhere

# Nominal vs. purchasing power inequality...

- *The consumption basket of the rich and the poor are very different*
- *Inflation rates across products are different – e.g., food prices*
- *The basket used to calculate the CPI is biased toward the rich*

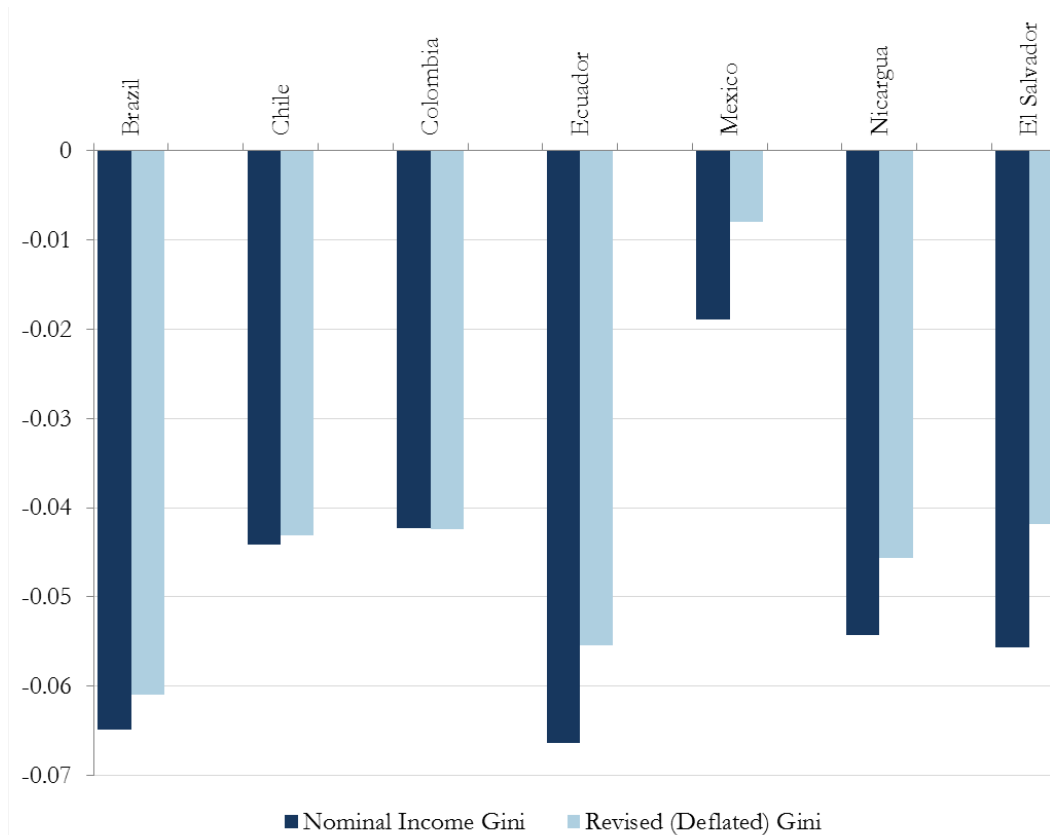
**Consumption Basket Across the Expenditure Distribution: Brazil - 2009**



## ... a similar movie with less action

### Change in Nominal and Deflated Gini for Selected LAC Countries

*circa 2001 - 2012*



*Note: El Salvador 2000 to 2012 , Colombia 2001 to 2012, Mexico 2002 to 2012 , Brazil and Chile: 2001 to 2011, Ecuador 2006 to 2012, and Nicaragua 2005 to 2009.*

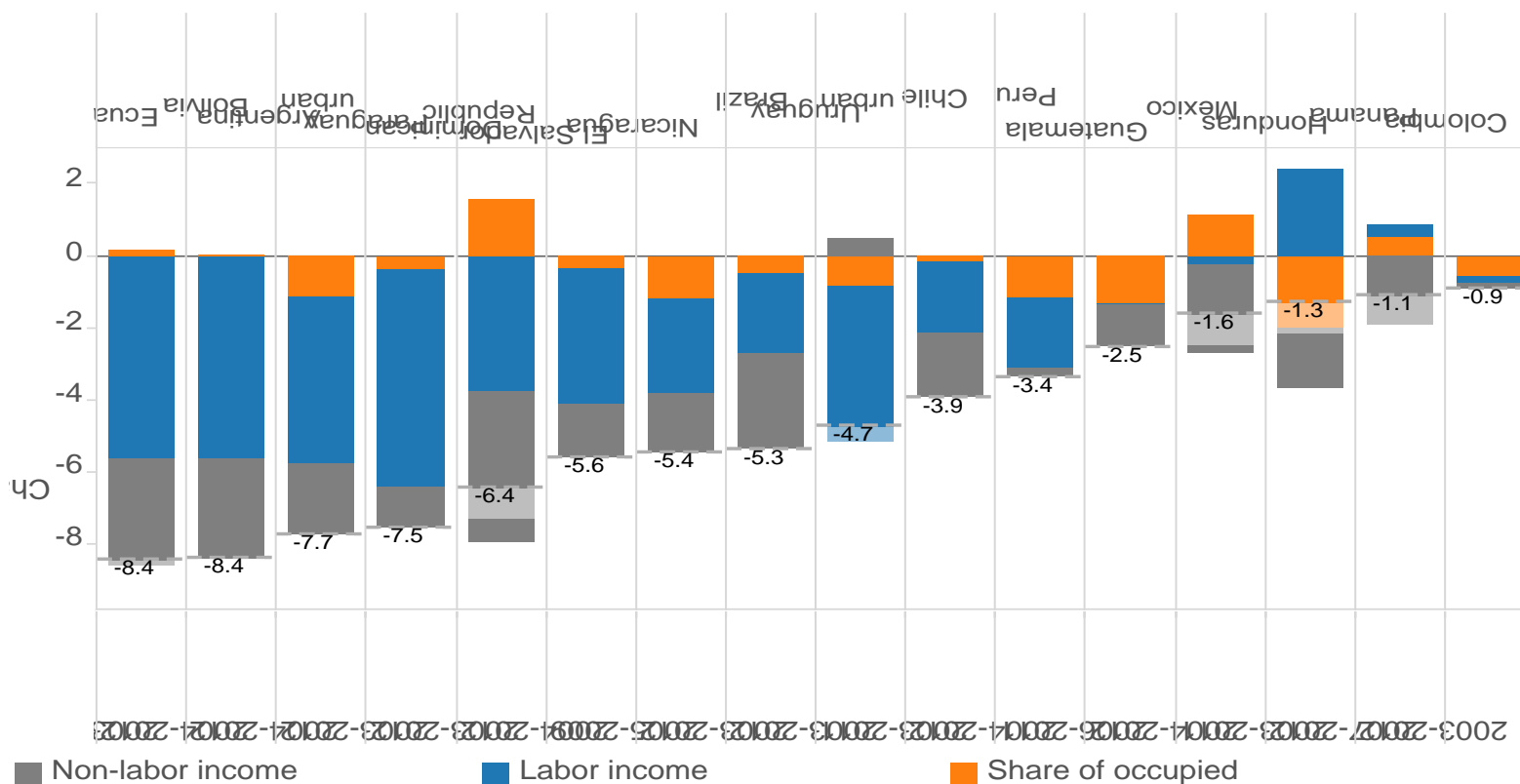
# What are the drivers of the decline in household income inequality in the region?

- Big shift in social policy is a natural candidate...
  - Expansion of CCT programs
  - Expansion of pension coverage, especially via non-contributory systems
- ... but its impact was mainly on poverty reduction
- It does not seem to have been the main driver of household income inequality reduction...
- ... where the decrease in labor income inequality seems to have played the biggest role

# The fall in labor income inequality was more important than transfers for income inequality in most of LAC

## Decomposition of the Evolution of Household Income Inequality

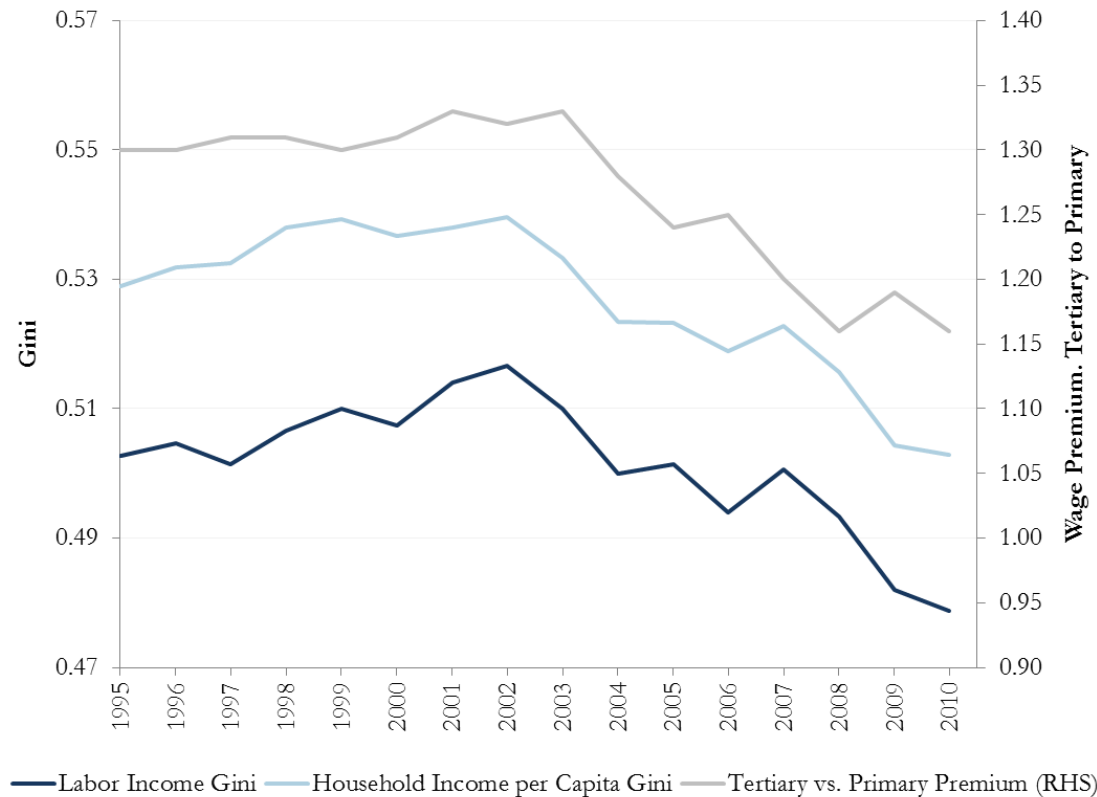
circa 2001 - 2012



Source: Cord, L., O. Barriga, L. Lucchetti, C. Rodriguez-Castelan, L. Sousa, D. Valderrama (2014) "Inequality Stagnation in Latin America in the Aftermath of the Global Financial Crisis". World Bank Unpublished Document.

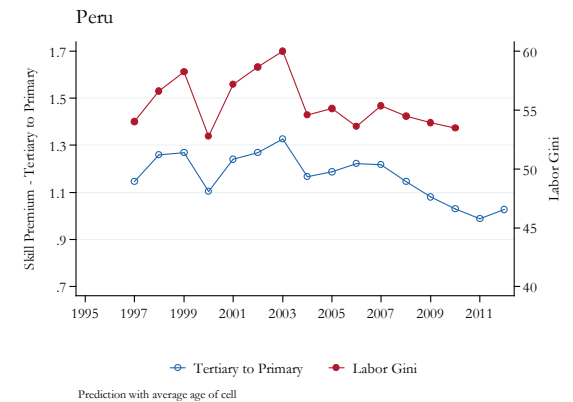
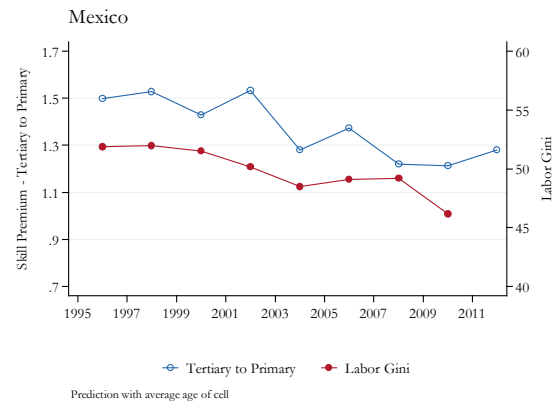
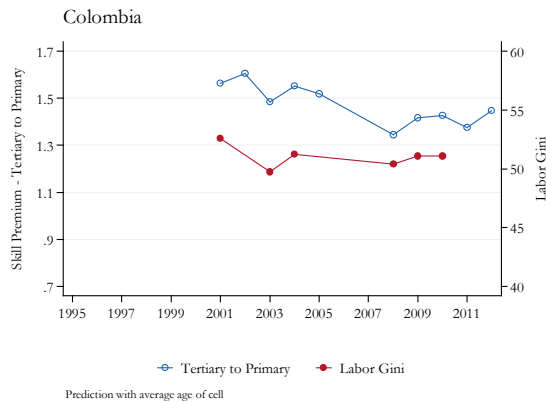
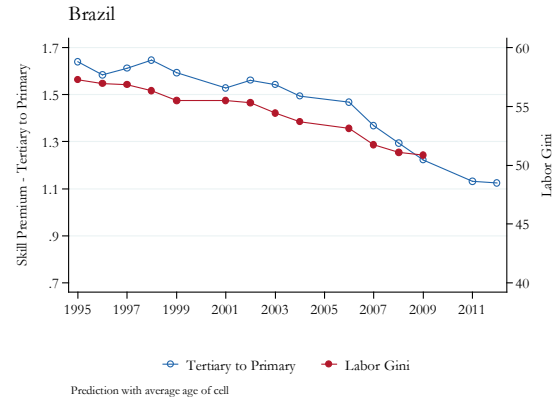
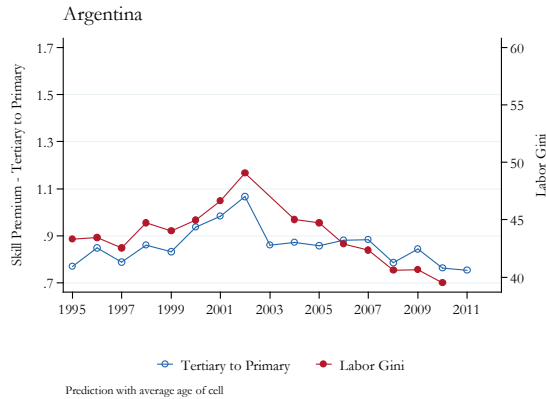
# The well-tuned trio: co-movement between household income, labor income, and returns to education ...

Labor and Total Income Gini and the Education Wage Gap (LAC Average)



# ... is a little less well-tuned on a country by country basis

## Composition-Neutral Earning Premiums and Gini Coefficient of Labor Earnings



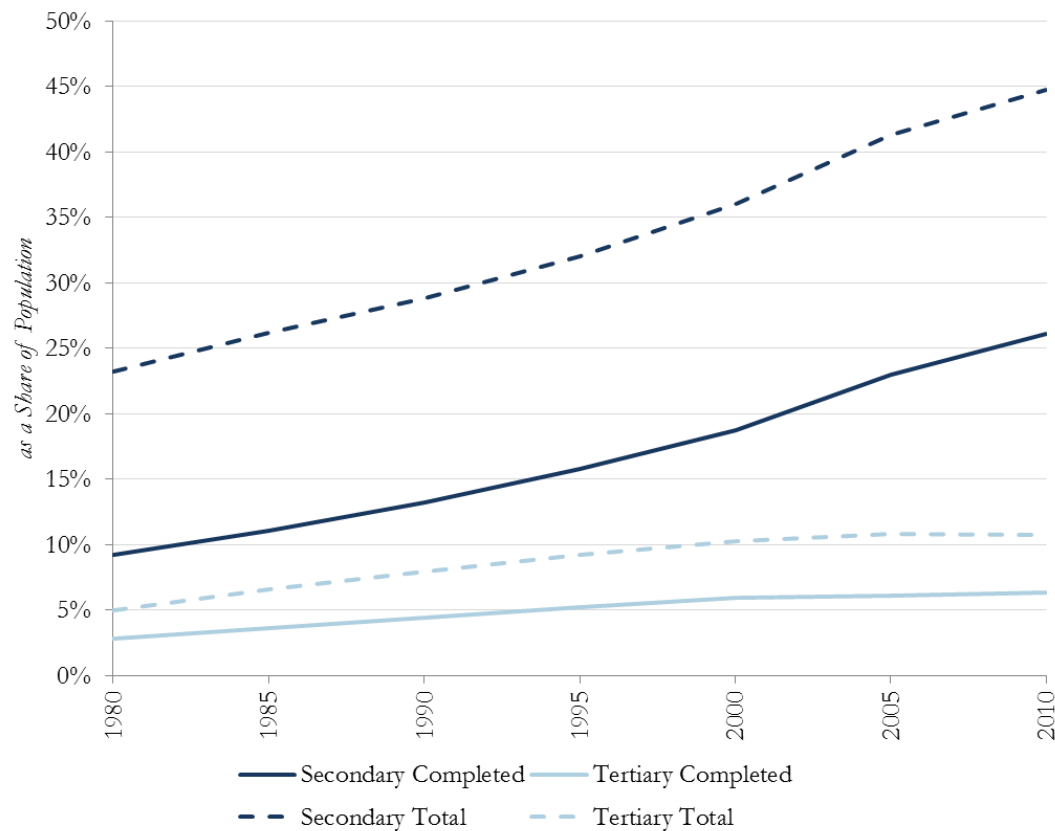
# What if we focus on the falling returns to education?

- For starters, a common factor seems difficult to discard, given that the (trio) phenomenon was widespread across the region
- H1: increase in the supply of education (quantity)
- H2: decrease in the quality of education, especially tertiary (Lustig)
  - Lower average quality of educational institutions (“garage universities”)
  - Lower average readiness of students that enter tertiary education
- H3: a demand side story (congenial to the common factor story)
  - By promoting growth of nontradable sectors, commodity boom increased demand of unskilled relative to skilled workers



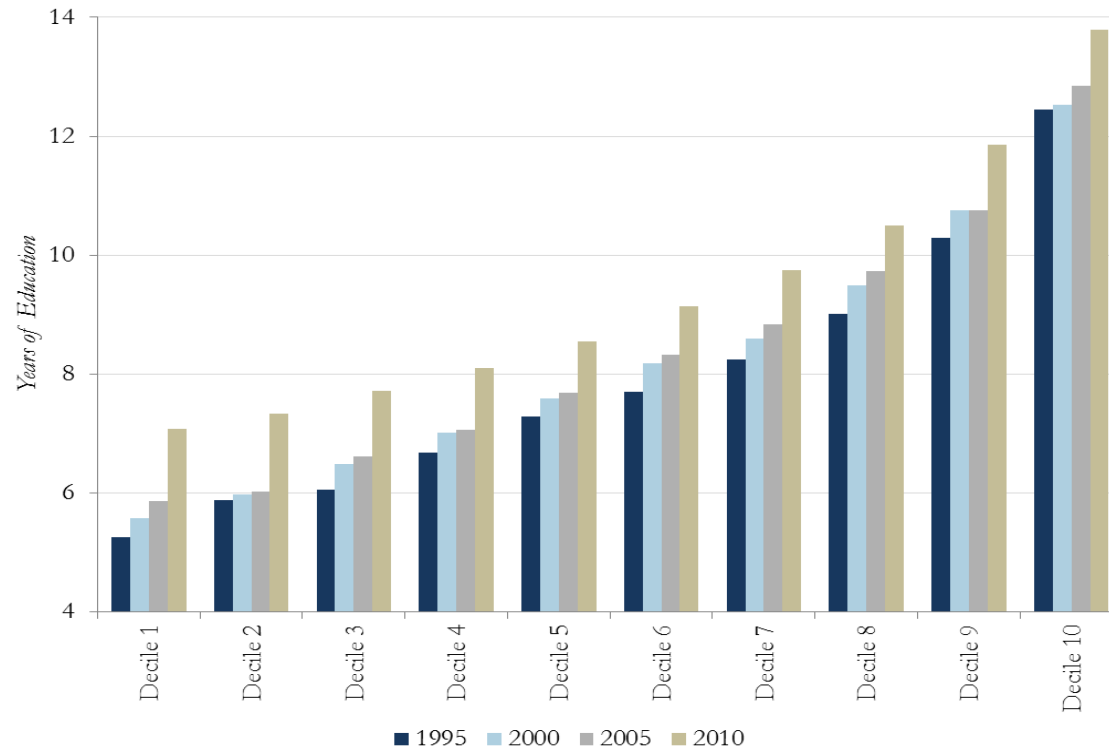
# H1: a dead end road – if anything, the completion of *tertiary* education decelerated in the 2000s

Education Coverage in LAC



## H2: Accelerated entry into school and rise in educational attainment for lower income groups

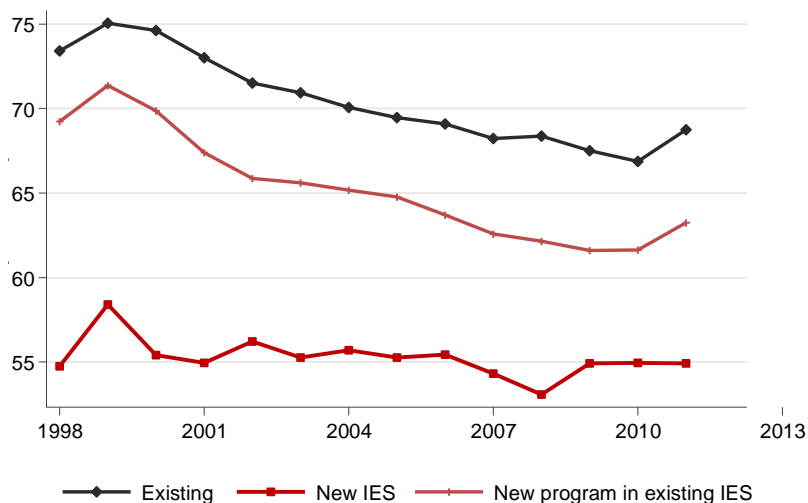
Average Years of Completed Education by Household Income Decile



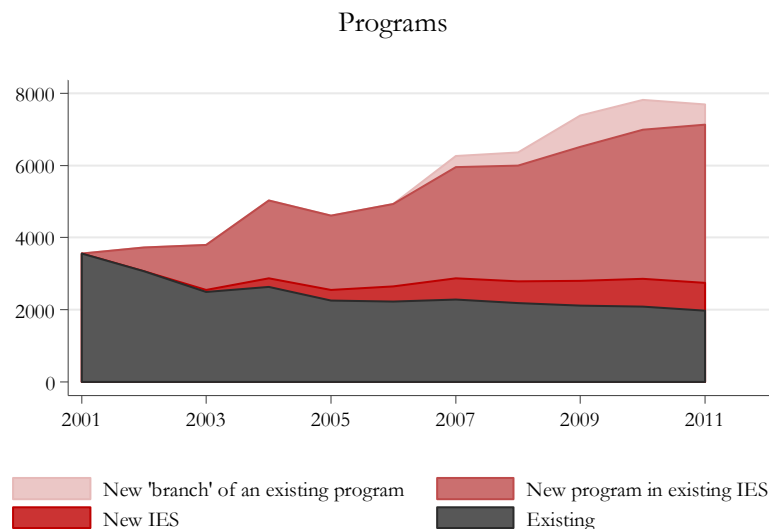
*Did returns to tertiary education fall because of less prepared students at entry or because lower quality of the new tertiary education programs provided?*

## H2: A case study – Colombia

**Average test score before entering tertiary education has been falling**



**Most of the new entrants access education through new programs**



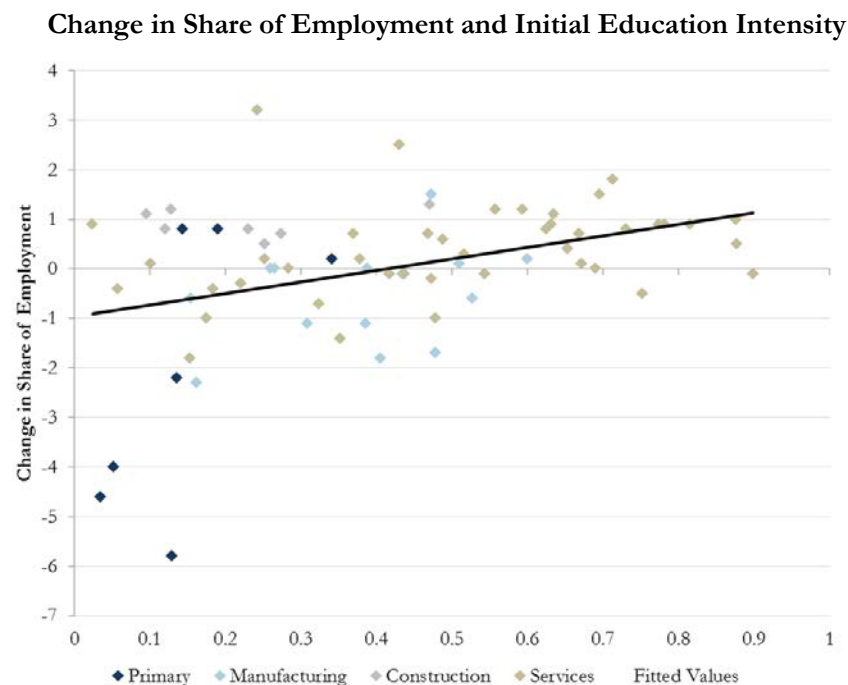
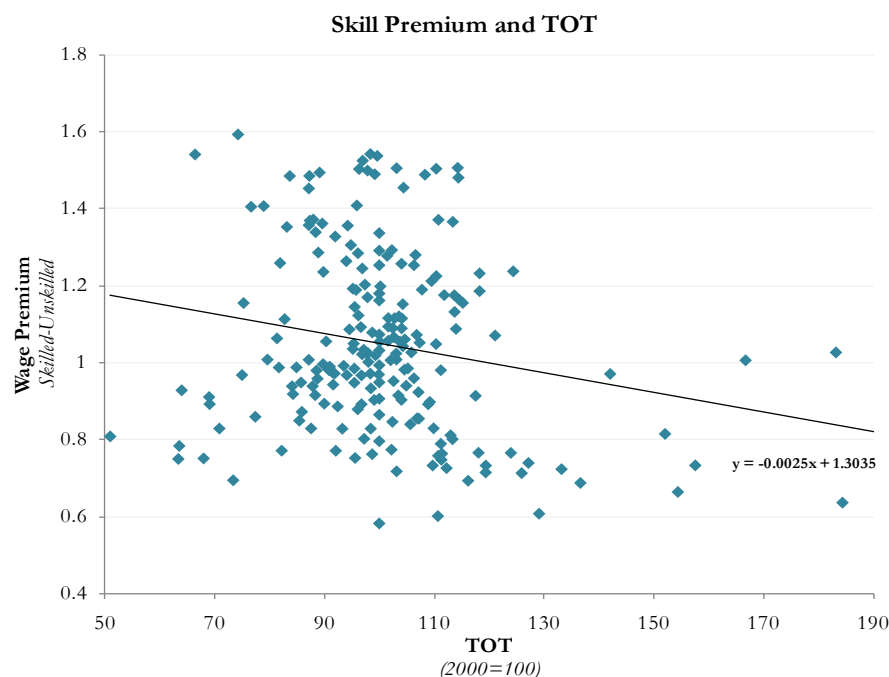
*Controlling for student socio-economic characteristics and area of study, the effect of new programs weakens*

## H2: Colombia – controlling for student characteristics and area of study, the effect of new programs weakens

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
New program in new institution	-0.2790*** [0.008590]	-0.2735*** [0.008592]	-0.1495*** [0.008546]	-0.1078*** [0.009320]	-0.04406*** [0.009056]	-0.04762*** [0.009105]	-0.02952** [0.009616]	-0.03584*** [0.01025]
New programs in an existing institution	-0.1439*** [0.004358]	-0.1443*** [0.004347]	-0.08048*** [0.004187]	-0.05886*** [0.004314]	-0.03472*** [0.004189]	-0.04015*** [0.004215]	-0.03816*** [0.004243]	-0.03437*** [0.004627]
Constant	14.022*** [0.003019]	8.1593*** [0.4102]	10.022*** [0.4027]	12.333*** [0.3965]	12.748*** [0.3706]	12.797*** [0.3703]	12.828*** [0.3685]	12.759*** [0.4037]
Year FE	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age gender FE	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Test Score in HS	No	No	Yes	Yes	Yes	Yes	Yes	Yes
School FE	No	No	No	Yes	Yes	Yes	Yes	Yes
Area	No	No	No	No	Yes	Yes	Yes	Yes
Level of education	No	No	No	No	Yes	Yes	Yes	Yes
Institution characteristics	No	No	No	No	No	Yes	Yes	Yes
Departament FE	No	No	No	No	No	No	Yes	Yes
Family Income & Parents education	No	No	No	No	No	No	No	Yes
Observations	127073	127073	127073	127073	127073	127073	127073	107449
Adjusted R <sup>2</sup>	0.021	0.043	0.121	0.187	0.267	0.269	0.271	0.273

### H3: low demand for skills? Mixed results, so far...

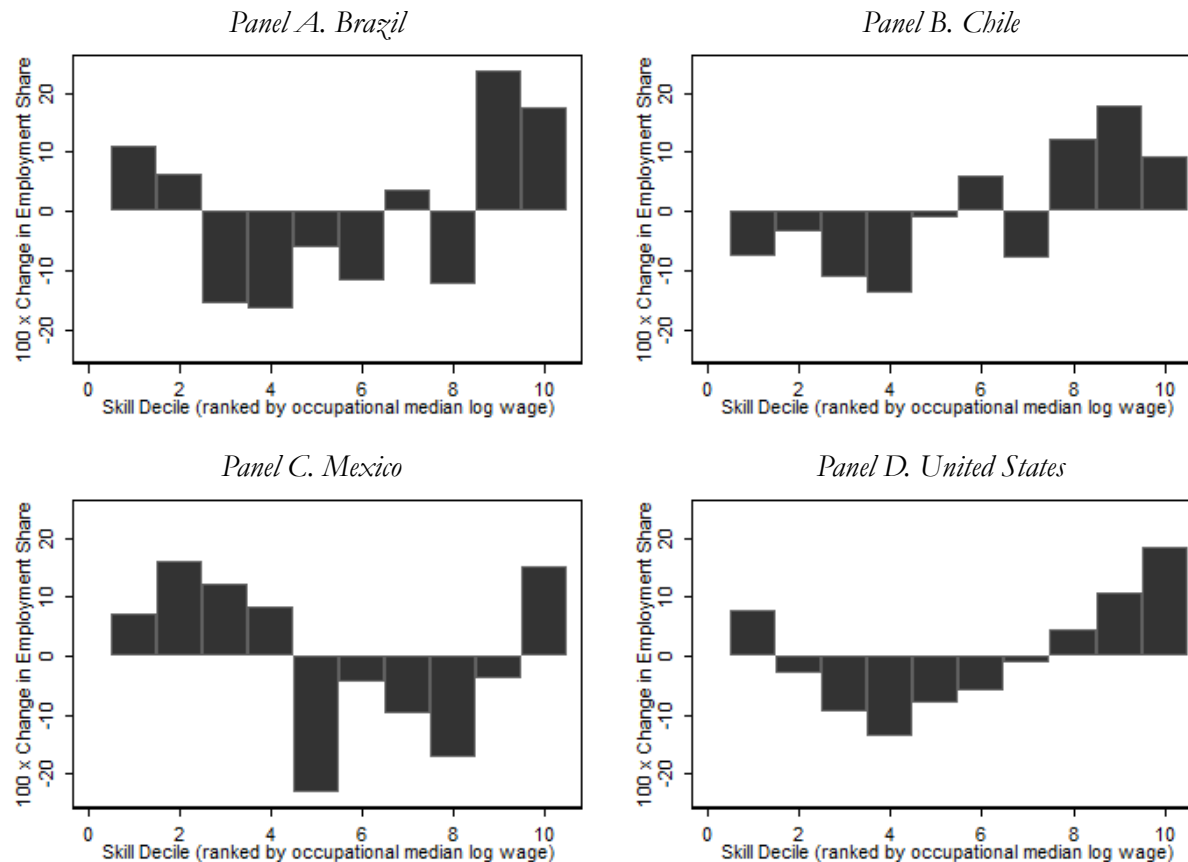
- Sectors that grew the most include services, which have more educated workers and pay higher wages, on average...
  - The notion that services are low skilled is questionable – there is heterogeneity
- ... but does this reflects a rise in skill-job mismatches?
- It would be better to look at the occupation content of sectors



Note: On the left, the scatter represent a pooling of countries from the LAC region; on the right, each dot represents a sector in a country of LAC. Each dot in both panels corresponds to a year in 2000-2010.

### H3: ...but when we look at skill content of occupations the story is highly nuanced

#### Change in Employment Share by Skill Decile



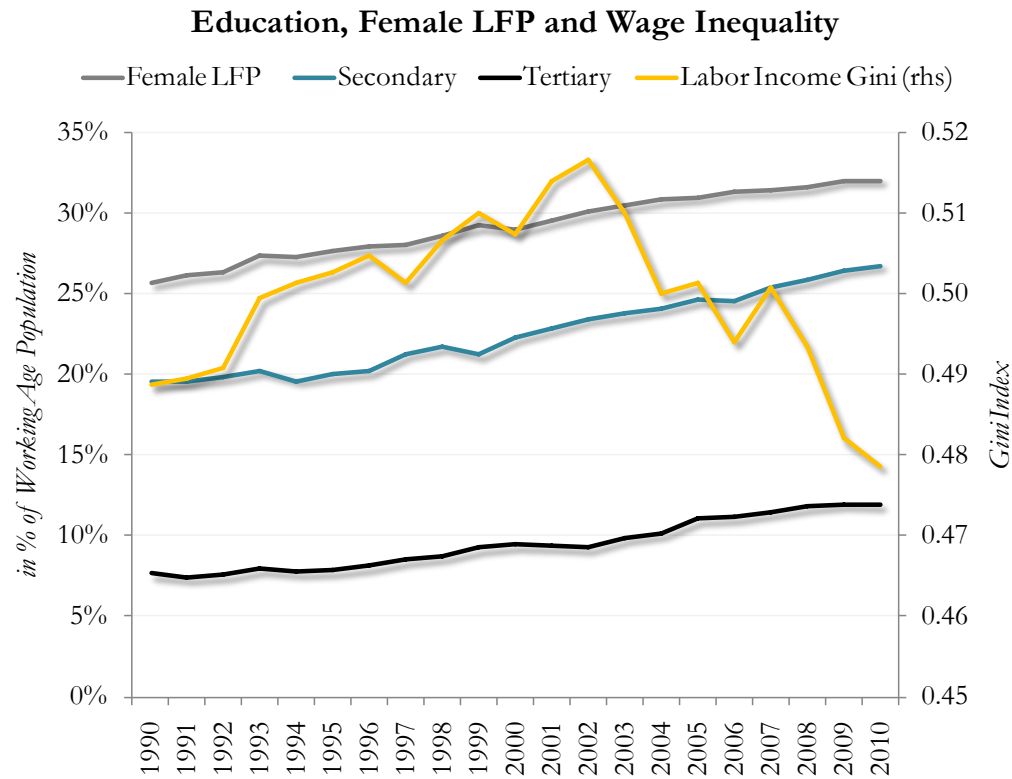
# So, what was behind the fall in labor earnings inequality?

- The fall in the skill premium, proxied by a reduction in the returns to education, appears as a primary candidate
- But other gaps were closing – e.g., reductions in gender (or ethnic) pay differentials (Ñopo, 2012)
- For a given skill premium, changes in the composition of the labor force may have affected income inequality
  - Older and better educated workers are better paid, except under fast skill obsolescence
  - Controlling for skills, female workers tend to receive lower wages than men, especially after the “marriage penalty”
  - Changes in the age and education structure of the labor force, and in female labor force participation can mechanically change wage inequality in either direction
- Institutional changes – e.g., increases in the minimum wage

Thank you!



# Supply factors? Changes in the composition of the labor force are not a good explanation



# Supply factors? There seems to be evidence in favor of the “degradation of tertiary education” hypothesis

