

Declining Inequality in Latin America

Nora Lustig

*Samuel Z. Stone Professor of Latin American Economics
Tulane University
Nonresident Fellow CGD and IAD*

International Economic Association
17th World Congress
Dead Sea, Jordan – June 10, 2014

Determinants of the evolution of earnings inequality

Research Project

- Phase I: Joint with L F Lopez-Calva -- UNDP-sponsored => volume published in 2010
- Phase II: Julian Messina; L F Lopez-Calva; Carlos Rodriguez; Francisco Ferreira (Brazil); Raimundo Campos (Mexico) – WB-sponsored

Declining inequality in Latin America

Outline

- The facts
- Determinants
 - Labor earnings
 - Transfers
- Declining earnings inequality
 - Zooming in: Brazil and Mexico
- Conclusions

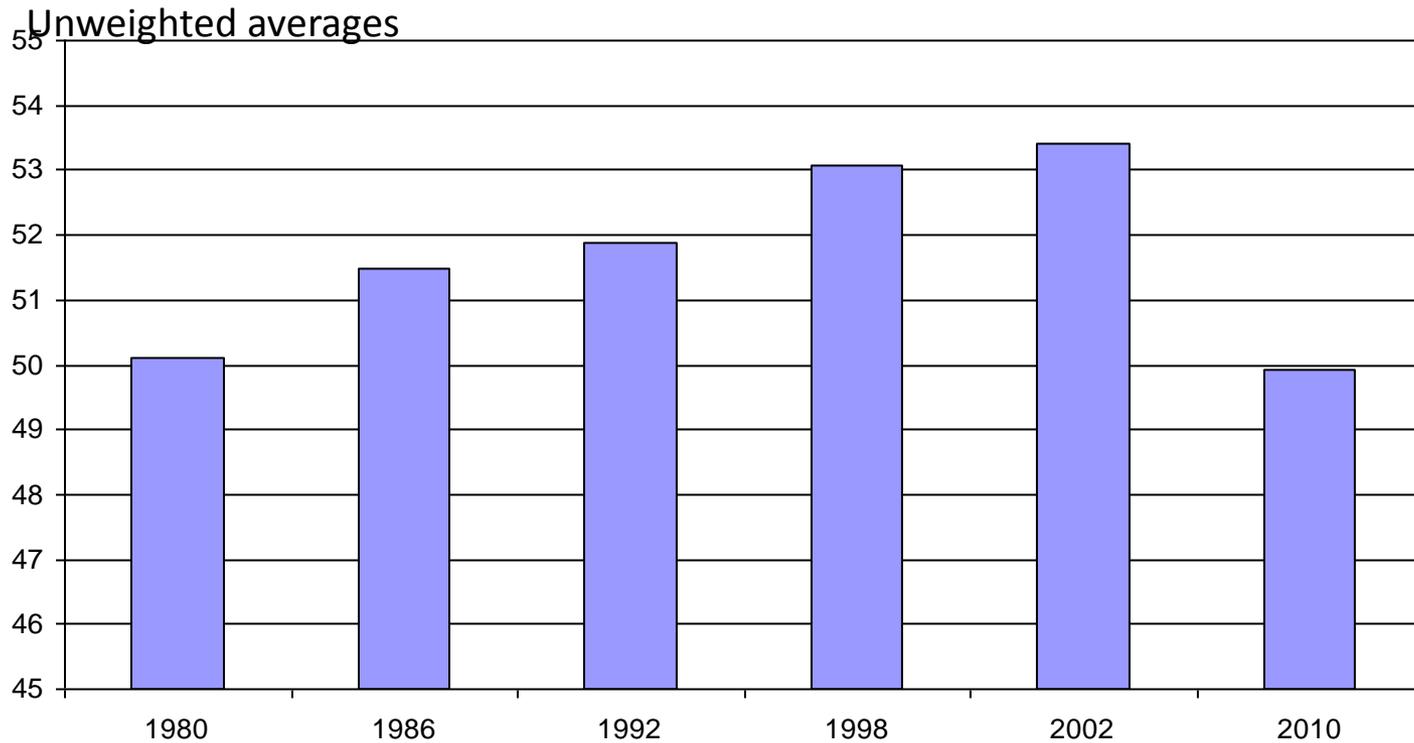
Inequality in Latin America is high...

...but has been declining since around 2000

- Average Gini coefficient is higher than .5 => most unequal region in the world
- After rising in the 1980s and 1990s, inequality has declined in practically all countries in the 2000s => Gini fell by an average of 1% per year
- Decline is statistically significant and robust to changing years, dataset or indicator
- The average decline 6.5 Gini points, more than twice the 2.5 Gini points increase in the 1990s
- Important contribution to the decline in poverty (by some estimates, around 40 percent on average)
- In countries with high growth & low growth
- In countries with high and low (by Latam standards) initial inequality
- In countries with left and nonleft governments
- In commodity exporters and commodity importers

Inequality in LA: 1980-2011

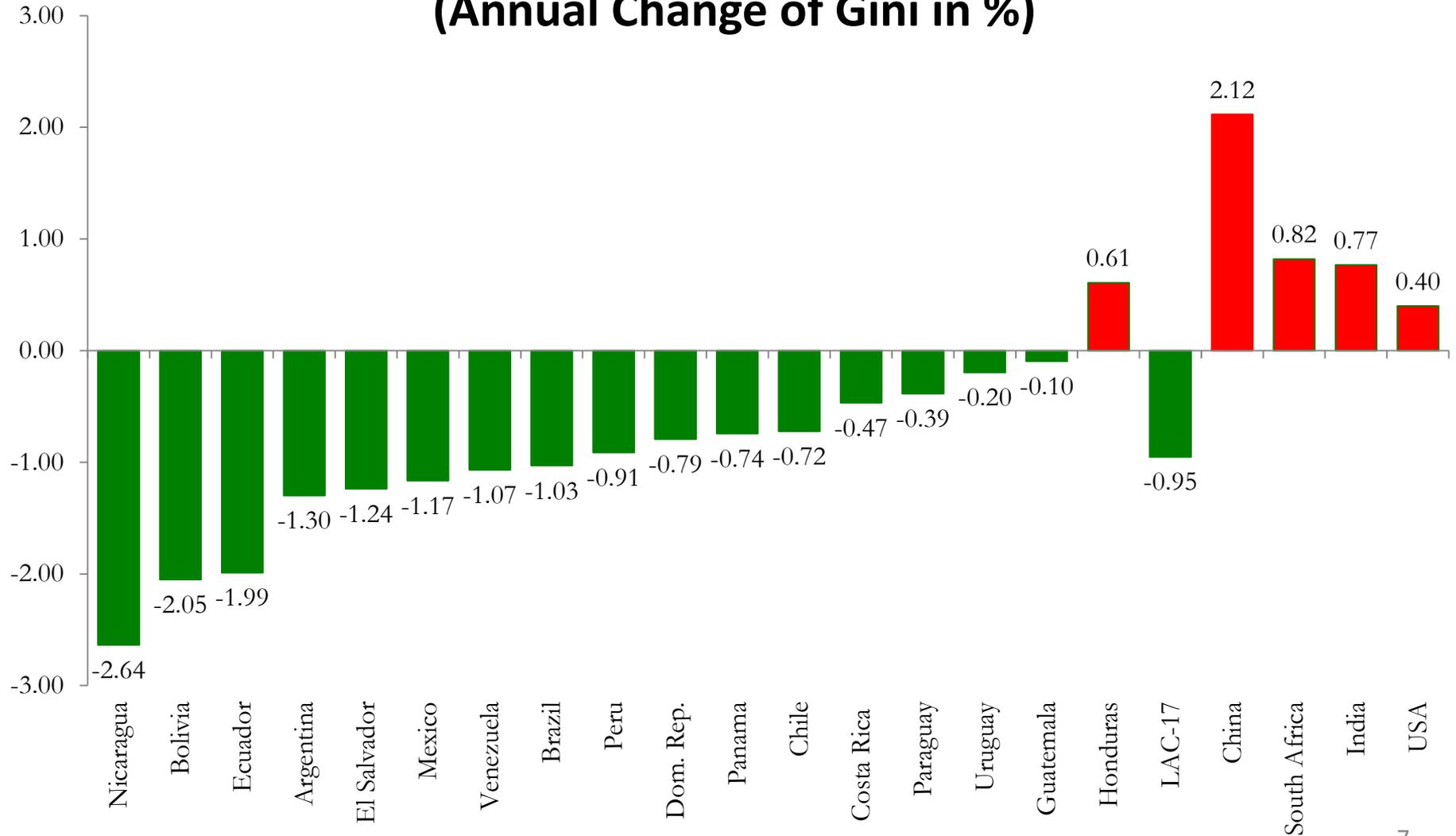
Gini coefficient – Household per capita income



Source: own estimates based on SEDLAC (CEDLAS and World Bank).

Declining income inequality by country: 2000-2011

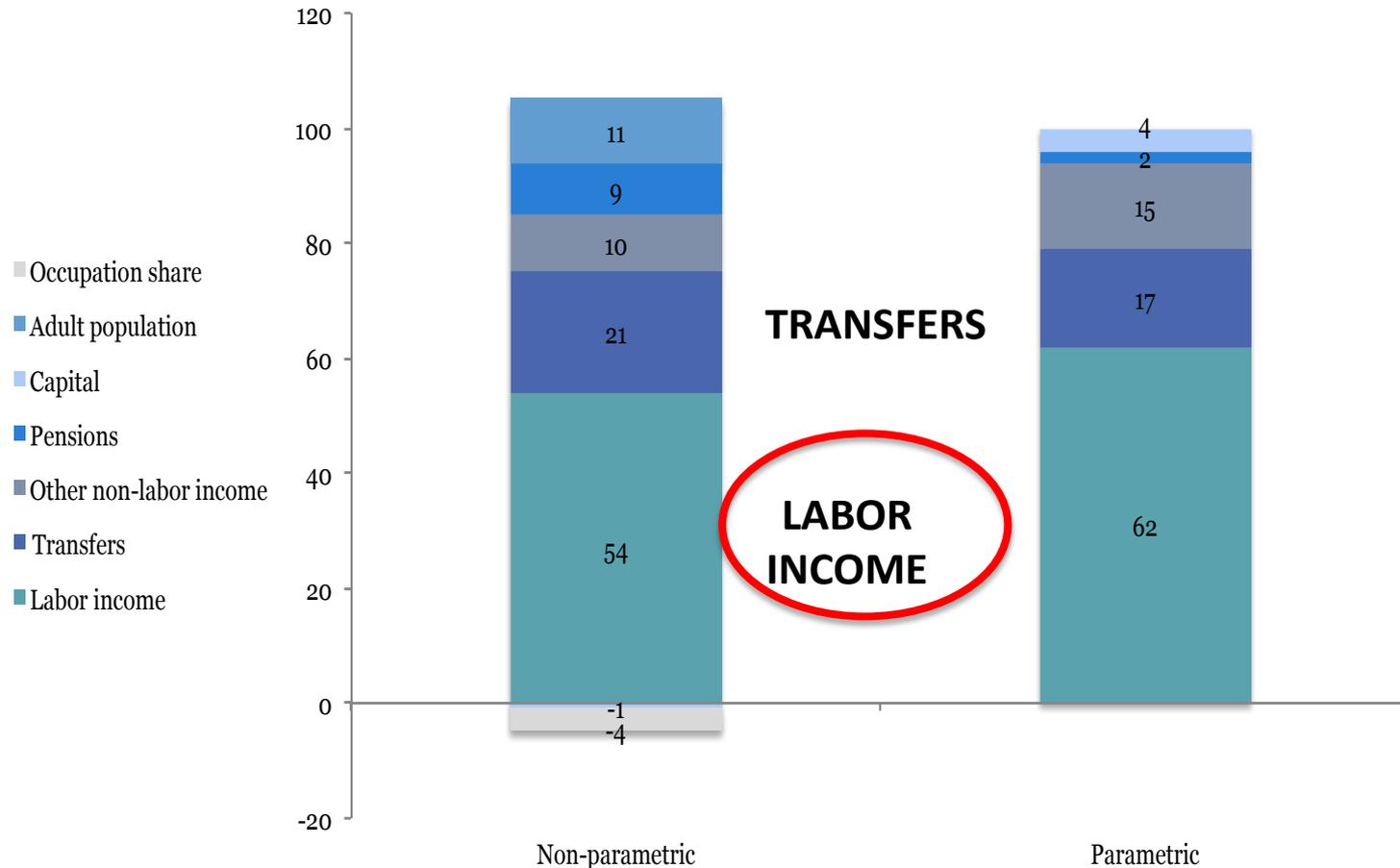
(Annual Change of Gini in %)



Determinants of the decline in inequality

- Decline in earnings inequality
- Larger and more progressive transfers
- Higher labor participation rates

Contribution of proximate determinants to the decline in inequality (%) Latin America, c. 2000-2010



Source: Non-parametric decomposition results from Azevedo et al. (2013a); and parametric results provided by CEDLAS, based on data from SEDLAC (CEDLAS and The World Bank).

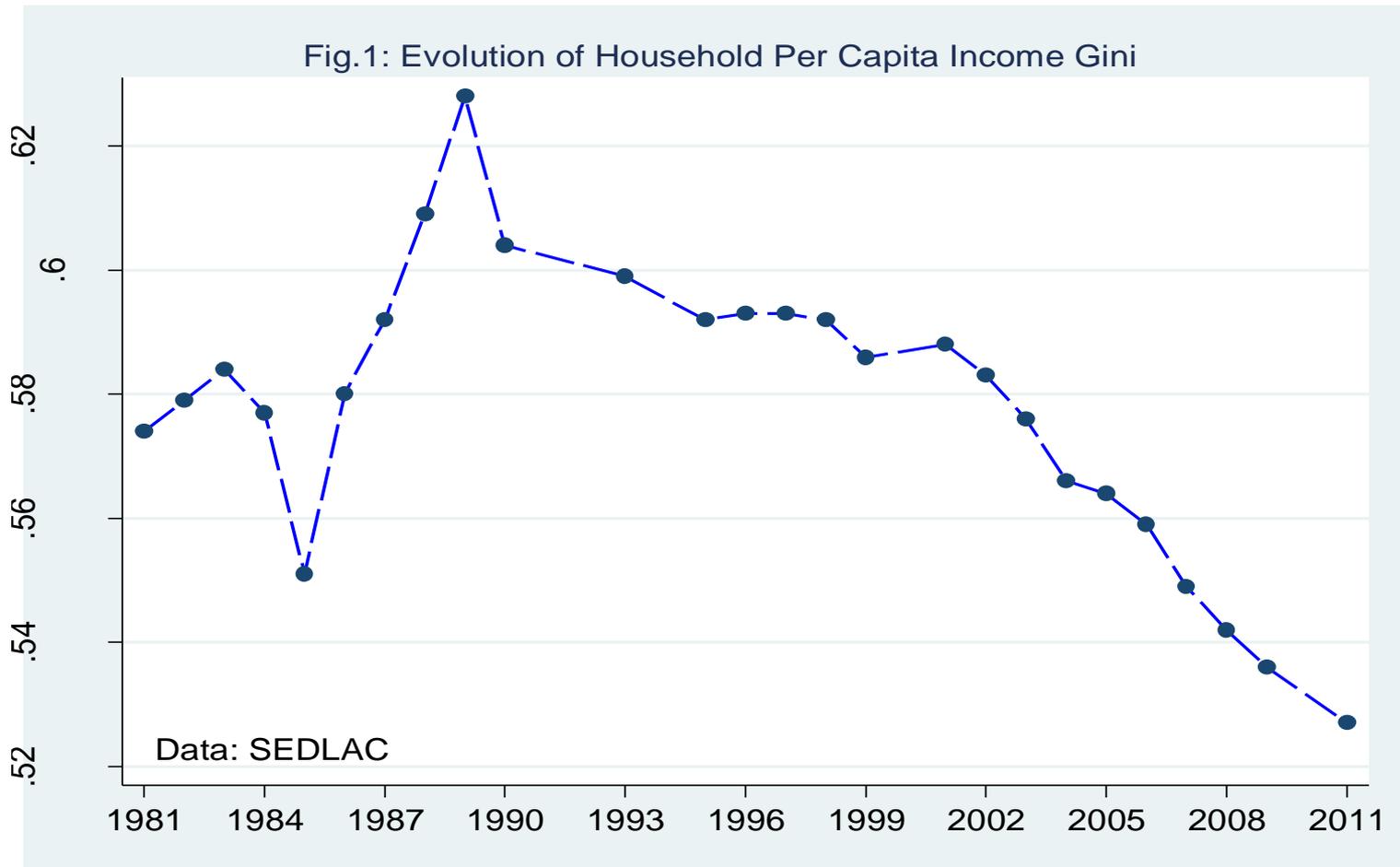
Declining earnings inequality

- Wage structure (relative wages) and composition effects (workers' characteristics)
- The former dominate (in fact, composition effects can go in the opposite direction):
 - Bottom of wage distribution:
 - Higher demand for low-skilled workers?
 - More favorable labor market institutions (minimum wages)?
 - Lower labor market segmentation (for example, declining male, formal sector and urban wage premiums)?
 - Top of wage distribution:
 - Tinbergen's race between education and technology?
 - Degraded tertiary education: new cohorts are of lower quality?

Zooming in: Brazil

- Inequality of overall income and labor (hourly) earnings experienced a considerable decline
- Returns to education declined at every level but the rate at which the decline occurred increased with education
 - => In other words, the returns to education curve became less convex
- Average years of education increased from 7.5 to 8.6 and Gini coefficient of years of education decreased from 0.31 to 0.27
 - => an expansion and a less dispersed distribution of education

Brazil: Decline in Inequality (Gini)



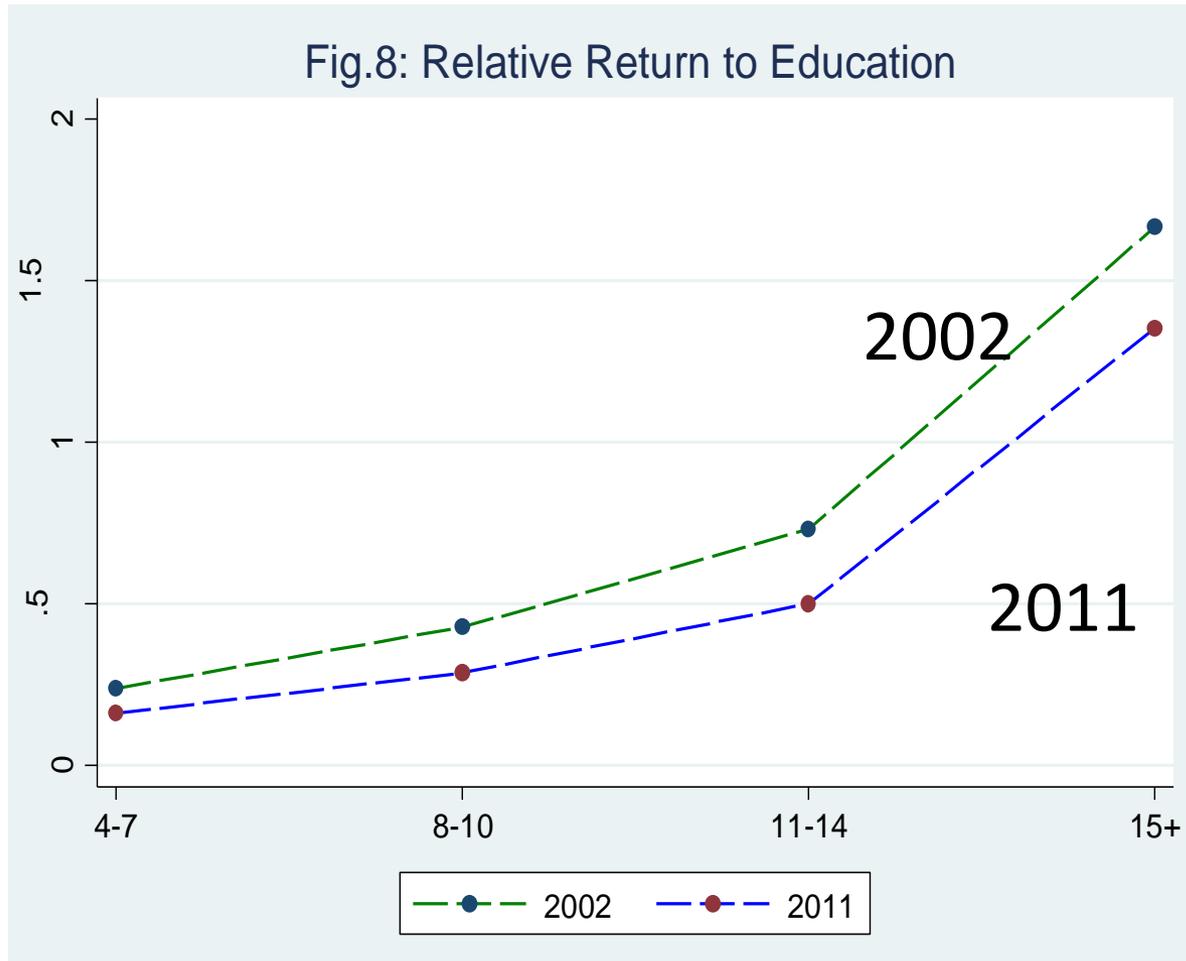
Wang, Yang. 2013. "Decomposing the Changes in Male Wage Distribution in Brazil." Tulane University, Ph.D. field paper

Brazil: Decline in Wage Inequality

Table 1: Dispersion of Real Wages: 2002-2011, Male aged 16-65

	2002	2003	2004	2005	2006	2007	2008	2009	2011
	Hourly Wage								
<i>Male Sample</i>									
Mean	4.63	4.38	4.25	4.35	4.57	4.65	4.80	4.98	5.15
Median	2.50	2.41	2.42	2.39	2.55	2.66	2.79	2.91	3.11
Gini	0.52	0.51	0.50	0.50	0.50	0.49	0.48	0.48	0.47
Theil	0.57	0.54	0.52	0.53	0.54	0.52	0.51	0.53	0.48
90-10	7.79	7.27	7.05	6.60	6.75	6.12	6.11	6.00	5.60
50-10	2.08	2.01	2.00	1.83	1.87	1.84	1.85	1.82	1.79
90-50	3.75	3.62	3.53	3.60	3.60	3.33	3.30	3.30	3.13
Obs	44097	43480	47187	49734	51479	51519	53825	55138	49419

Brazil: Decline in relative returns to education

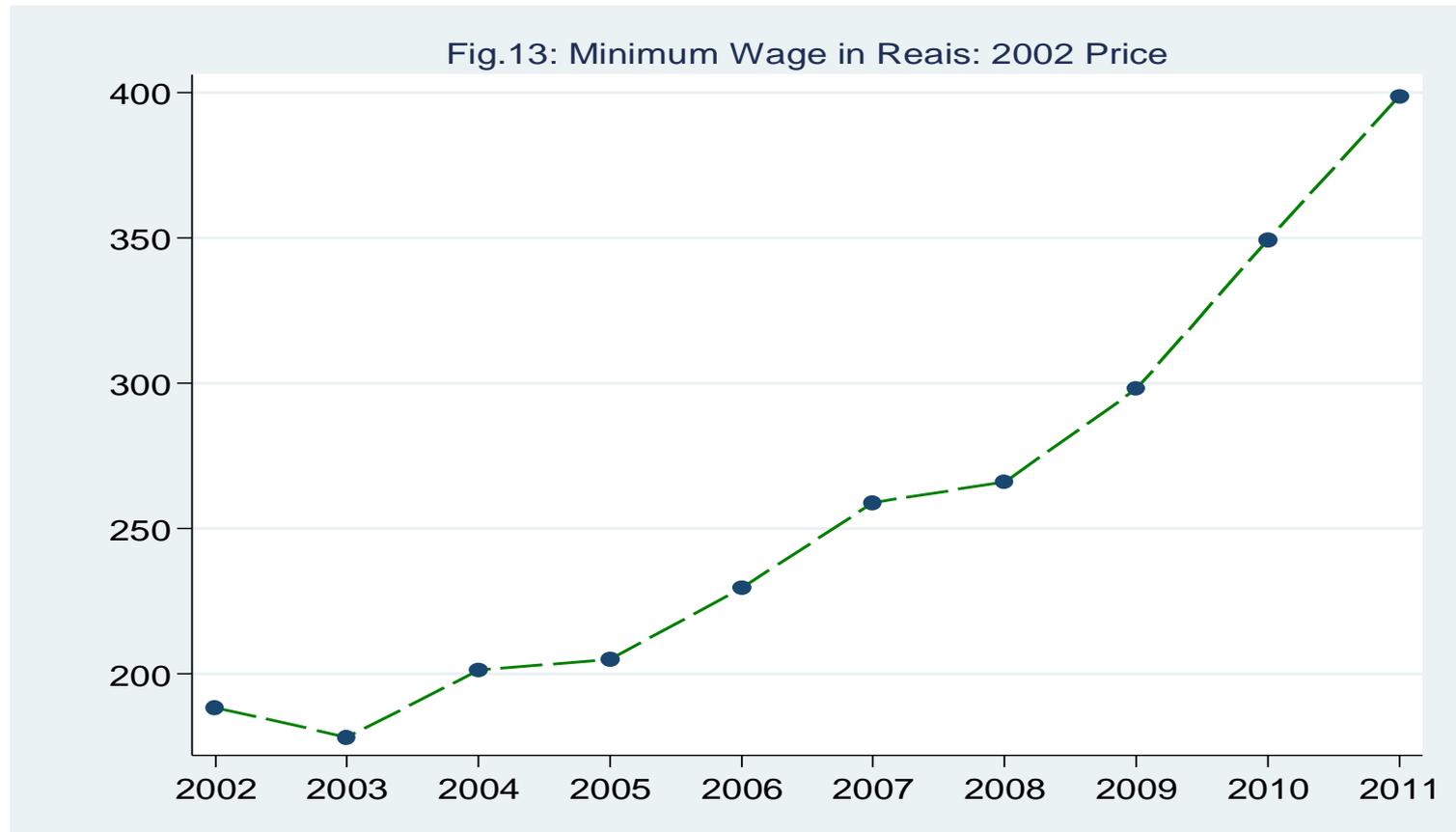


Wang, Yang. 2013. "Decomposing the Changes in Male Wage Distribution in Brazil." Tulane University, Ph.D. field paper

Zooming in: Brazil

- Proximate determinants (PNAD 2002-2011/13: decomposing changes for all workers, Ferreira, Firpo & Messina, 2014; for male wage earners only Wang, 2013):
 - *Wage structure effect* (distribution of relative wages) **equalizing**
 - *Composition effect* (distribution of workers' characteristics) slightly **unequalizing** (Bourguignon et al., 2005, “paradox of progress” due to convexity of returns to education)

Brazil: Rising minimum wage

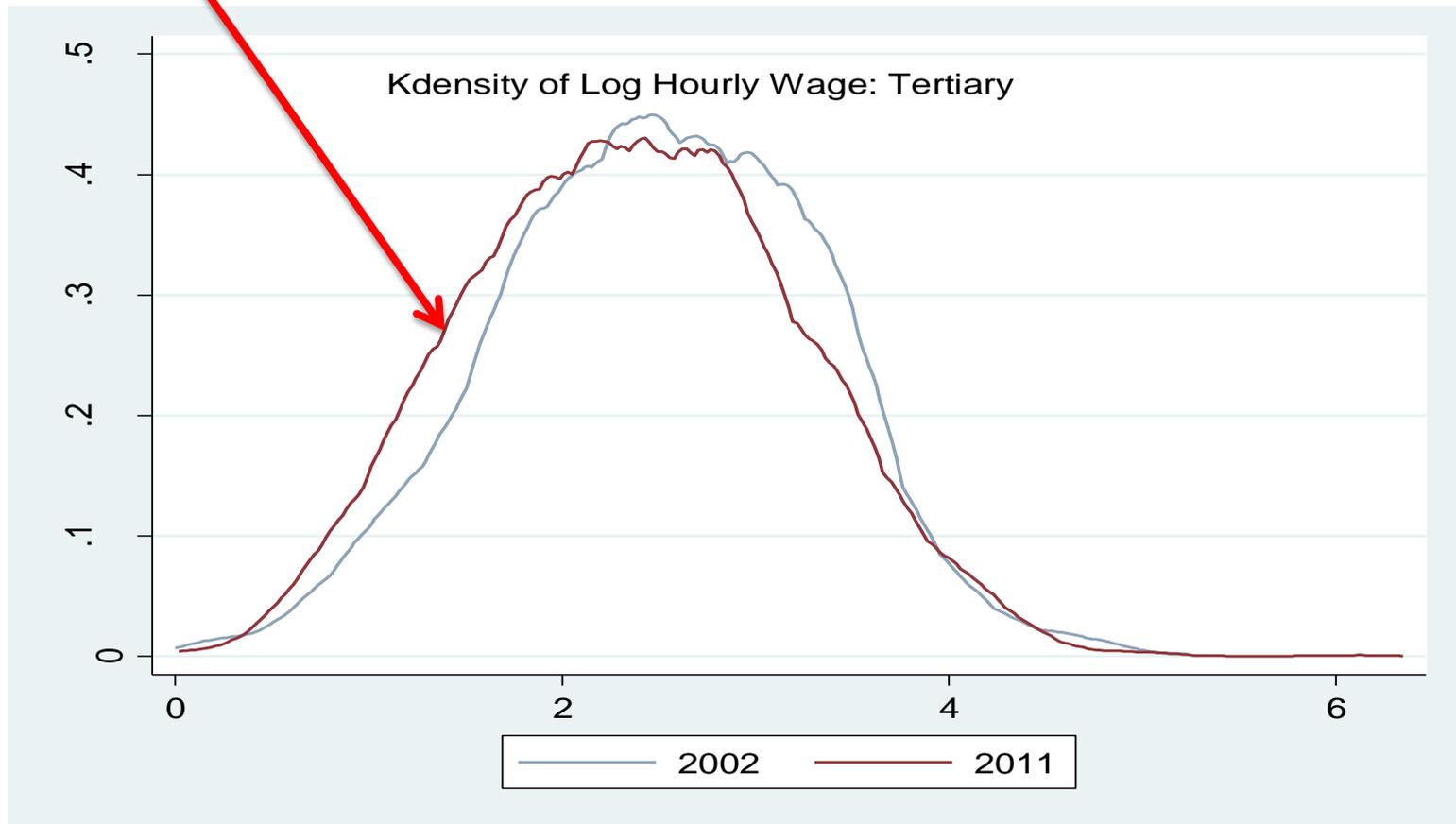


Wang, Yang. 2013. "Decomposing the Changes in Male Wage Distribution in Brazil." Tulane University, Ph.D. field paper

Zooming in: Brazil

- Wage structure effect:
 - Rising real minimum wages => affects (favorably) relative position of workers at the bottom (Ferreira, Firpo & Messina)
 - Reduction in male and urban wage premium => affects (favorably) relative position of workers at the bottom (Ferreira, Firpo & Messina)
 - Tinbergen's race: for male wage earners increase in relative supply of workers with more years of education associated with decline in education premium => affects (unfavorably) relative position of workers at the top (Yang, 2013)
 - Reduction in return to education for new cohorts due to a decline in the quality of workers with tertiary education?
 - Did skill premium decline uniformly (i.e., the distribution shifted to the left) or did the earnings distribution for workers with tertiary change in shape? The latter appears to be the case (Yang, 2013)

“Degraded” Tertiary? Brazil 2002-2011



Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper

Zooming in: Mexico

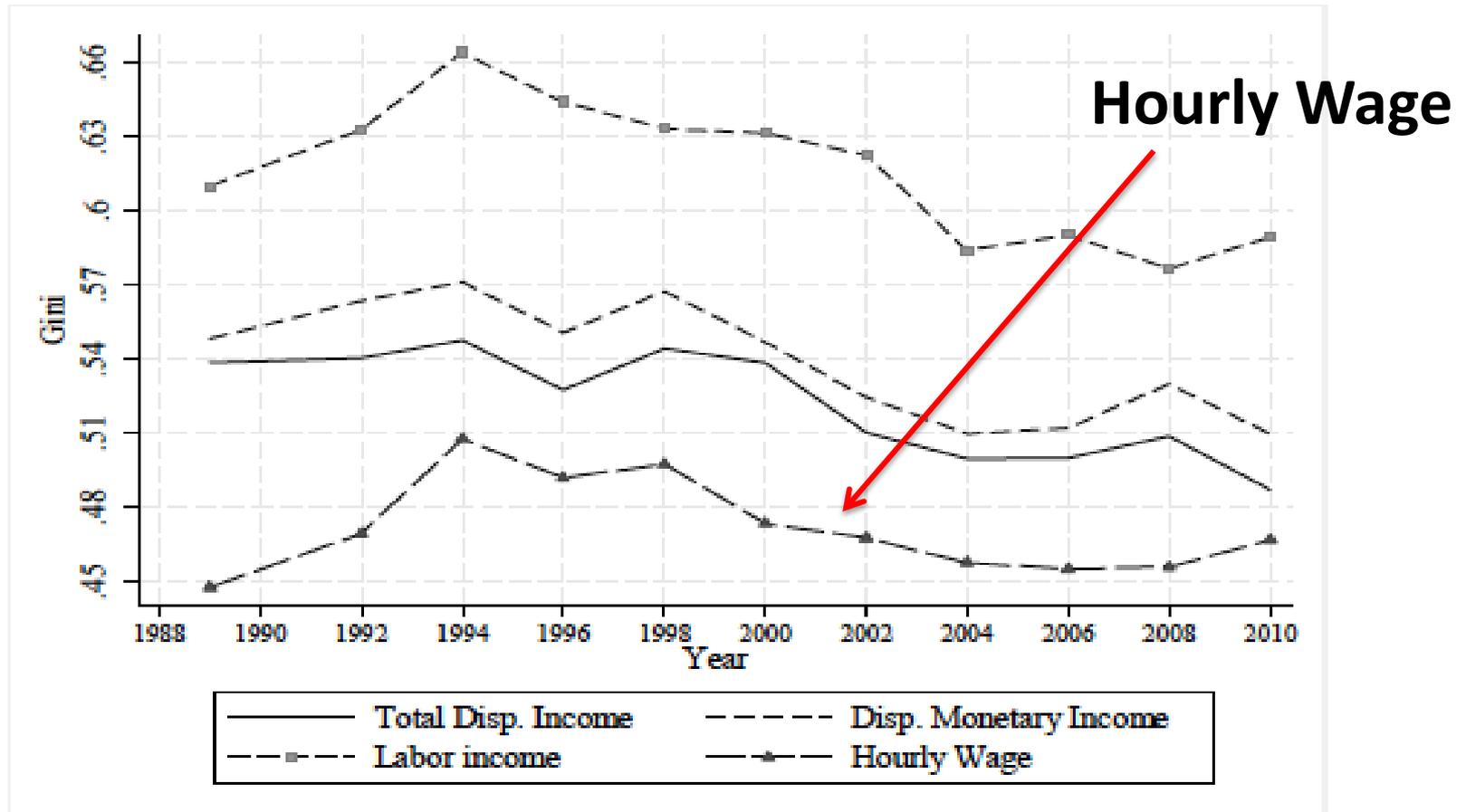
Proximate determinants (decomposition earnings inequality to ENIGH 1996-2010, Campos, Esquivel and Lustig, 2014):

Same as in Brazil:

- *Wage structure effect* (distribution of relative wages by education) **equalizing**
- *Composition effect* (distribution of workers' characteristics) slightly **unequalizing** (Bourguignon et al., 2005, “paradox of progress” due to convexity of returns to education)

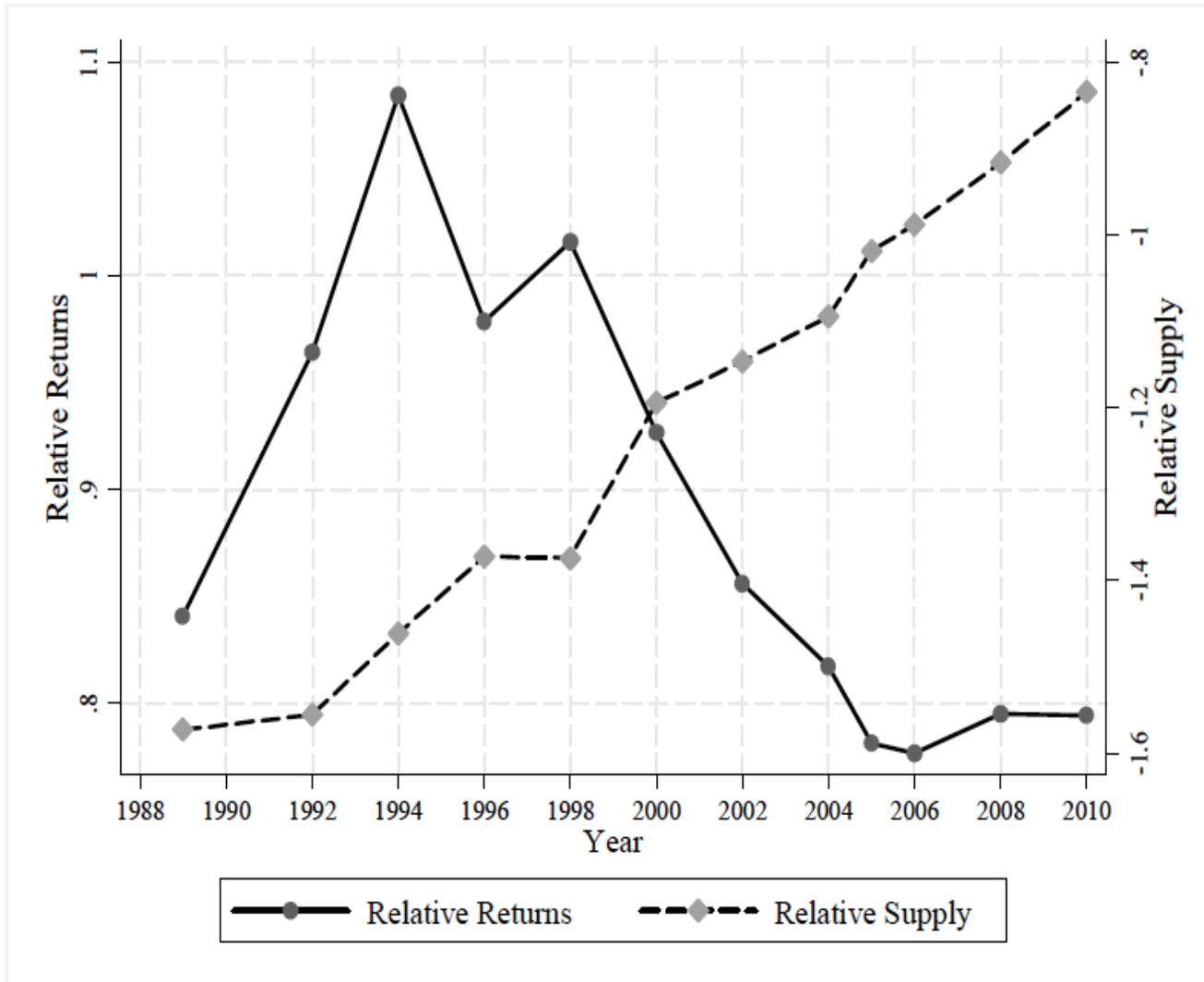
Mexico: Decline in Inequality (Gini)

Figure 1
Mexico: Evolution of the Gini Coefficient, 1989-2010



Campos, R., G. Esquivel and N. Lustig. 2014. "The Rise and Fall of Income Inequality in Mexico, 1989–2010," Chapter 7 in Giovanni Andrea Cornia, ed., *Falling Inequality in Latin America: Policy Changes and Lessons*, WIDER Studies in Development Economics, Oxford University Press,

Mexico: Relative returns and relative supply, 1989-2010
(High school and more vs. secondary or less)

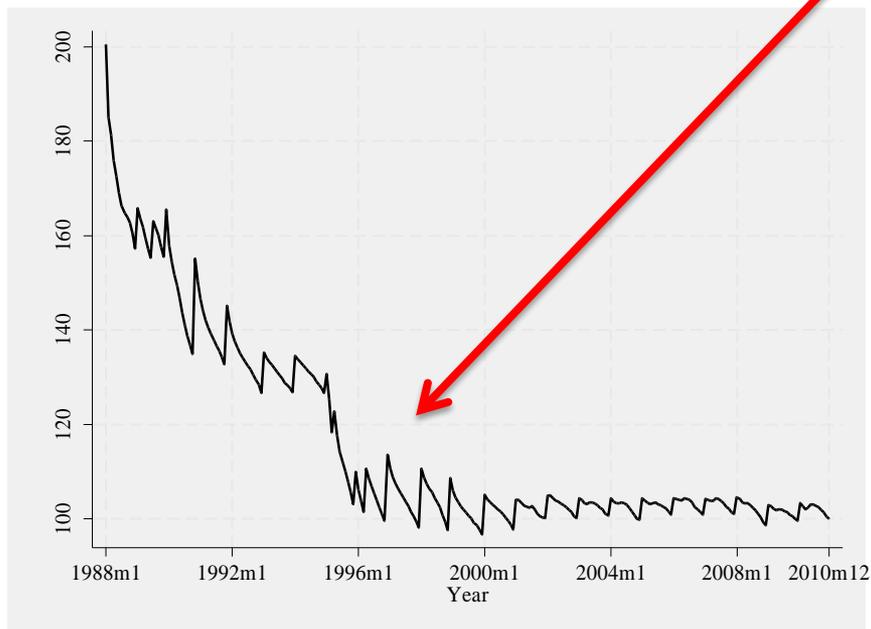


Mexico:
Decline in
skill premium
coincides with the
expansion of the
relative supply of
workers with post
secondary
education

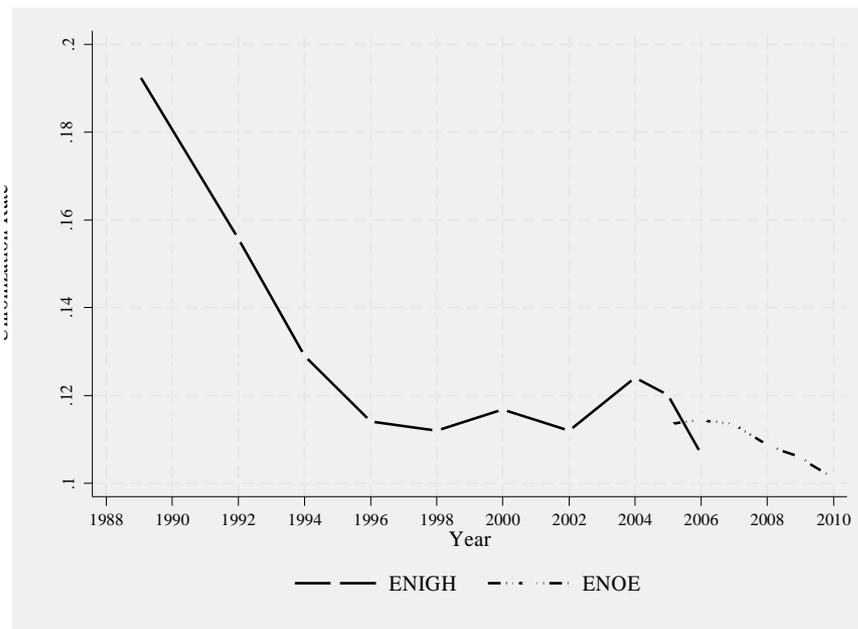
In contrast to Brazil, in Mexico minimum wages did not increase at all...

Real Minimum Wage and Unionization: 1988-2010

A. Real Minimum Wage Index (December 2010=100)



B. Unionization Rate



Campos, R., G. Esquivel and N. Lustig. 2014. "The Rise and Fall of Income Inequality in Mexico, 1989–2010," Chapter 7 in Giovanni Andrea Cornia, ed., *Falling Inequality in Latin America: Policy Changes and Lessons*, WIDER Studies in Development Economics, Oxford University Press,

Zooming in: Mexico

- Wage structure effect:
 - Real minimum wages flat since the early 1990s=> no effect
 - Tinbergen's race: increase in relative supply of workers with more years of education associated with decline in education premium => affects (unfavorably) relative position of workers at the top (Yang, 2013)
 - Reduction in return to education for new cohorts due to a decline in the quality of workers with tertiary education?
 - Did skill premium decline uniformly (i.e., the distribution shifted to the left) or did the earnings distribution for workers with tertiary change in shape? No immediate evidence of this in the case of Mexico

Mexico: Effects of supply on relative wage, 1989-2010

	Change Returns	Supply	= Rest
Panel A. $\sigma=1$			
1989-94	0.240	0.111	0.351
1994-2006	-0.310	0.474	0.164
2006-10	0.020	0.154	0.174
Panel B. $\sigma=2$			
1989-94	0.240	0.055	0.295
1994-2006	-0.310	0.237	-0.073
2006-10	0.020	0.077	0.097

Source: Authors' estimates based on ENIGH, several years.

Demand and Supply of Skills

If $\sigma = 1$

- Relative supply could account for as much as 47 per cent of changes in relative returns; dominate even in the face of rising demand

If $\sigma = 2$

- Supply still important but demand for skilled workers declines 1994-2006 and started to rise again for the period 2006-10.

Concluding Remarks

- Although declining earnings inequality is pervasive, causes appear to be heterogeneous
- Common factors in Brazil and Mexico: wage structure effect is equalizing and composition effect is unequalizing
- However, determinants of changes in wage structure differ
- Brazil: rising minimum wages (institutions favored low-skilled workers), lower male and urban wage premia (lower labor market segmentation) and rising inequality in the distribution of returns to workers with tertiary (degraded tertiary)
- Mexico: mainly a story of rising supply of skilled workers
- However, must understand better the dynamics of labor demand

References

- Azevedo, Joao Pedro, Maria Eugenia Dávalos, Carolina Diaz-Bonilla, Bernardo Atuesta, and Raul Andres Castañeda. 2013. “Fifteen Years of Inequality in Latin America: How Have Labor Markets Helped?” Policy Research Working Paper 6384, The World Bank.
- Bourguignon, F., F. Ferreira and N. Lustig. 2005. *The Microeconomics of Income Distribution Dynamics in East Asia and Latin America*, Oxford University Press, Washington, DC.
- Campos, R., G. Esquivel and N. Lustig. 2014. “The Rise and Fall of Income Inequality in Mexico, 1989–2010,” Chapter 7 in Giovanni Andrea Cornia, ed., *Falling Inequality in Latin America: Policy Changes and Lessons*, WIDER Studies in Development Economics, Oxford University Press, Oxford, United Kingdom .
- Ferreira, Francisco H.G, Julian Messina, Jamele Rigolini, Luis F. Lopez-Calva, Maria Ana Lugo and Renos Vakis. 2013. “Economic Mobility and the Rise of the Latin American Middle Class.” Washington, D.C: The World Bank.
- Ferreira, Francisco H.G, Sergio Firpo and Julian Messina. 2014. “Education, Labor Market Institutions and Wage Inequality: Brazil 1996-2012,” work-in-progress.
- Gasparini, Leonardo, Sebastian Galiani, Guillermo Cruces, and Pablo Acosta. 2011. “Educational Upgrading and Returns to Skills in Latin America. Evidence from a Supply-Demand Framework, 1990–2010.” Policy Research Working Paper 5921, The World Bank.
- Lopez-Calva, L. F. and N. Lustig. 2010. *Declining Inequality in Latin America: A Decade of Progress?*, Brookings Institution Press and UNDP.
- Lustig, N., L. F. Lopez-Calva, E. Ortiz-Juarez. 2014. “Deconstructing the Decline in Inequality in Latin America,” chapter in Devlin, Machinea, Chavarria (eds.),
- Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper.

Thank you!