More Work to Do? Taking Stock of Latin American Labor Markets

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What We Do in the Paper

- ► Analyze the performance of labor markets in LatAm since the 1990s through a series of simple exercises.

- ► Decompose changes in unemployment rate into demand and supply factors.

- ► Revisit Okun's law and how it is affected by institutions and characteristics of the labor market.

- ► Examine the impact of selected reforms using the synthetic control method.

Preview of Takeaways

- ▶ Labor markets marked by strong duality - well-protected formal sector jobs versus de facto highly flexible informal jobs.

- ▶ Unemployment rate reacts less to output changes than in AEs.

- ▶ Certain dimensions of labor market rigidity increase informality.

- ▶ Case studies: mixed results in terms of impact of structural changes in labor market institutions on key outcome variables.

To bear in mind - Labor market institutions

- ▶ Labor market institutions multi-dimensional and not easy to measure.

- ▶ In the paper we only focus on minimum wages and employment protection legislation (EPL).

- ▶ EPL: Hard data on Laws and Regulations (L and Rs) versus perception-based indicators (PBIs).

- ▶ We do not address collective bargaining, active labor market programs or working conditions.

Stylized Facts

- Employment growth has been strong over the 2000s. But has moderated since the end of the t-o-t boom.

- Output per worker around 30 percent of AE level in SA and 20 percent in CA.

- Informality is high relative to AEs, but comparable to other EMDEs.

- Both "hard" data and perception-based indicators point to rigid labor market institutions.

Employment Growth (Annual Average; Percent)

Legend: ■ 1997–2000 ■ 2001–07 ■ 2008–11 ■ 2012–17

Categories: AE, EMDE, EM, SA, CA+MEX
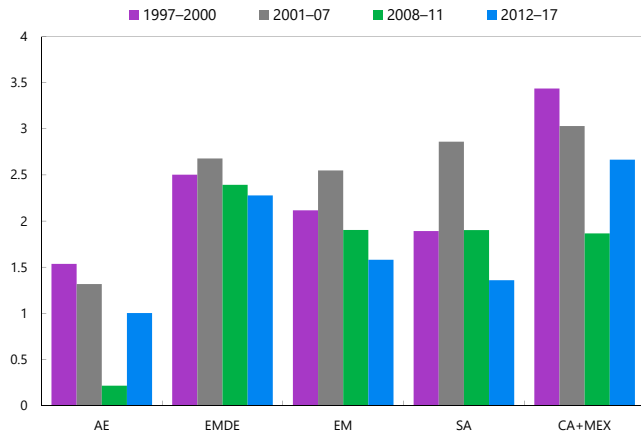
Sources: International Labour Organization; and authors' calculations.
Note: Annual figures are averaged over the period indicated. Median value by country grouping.

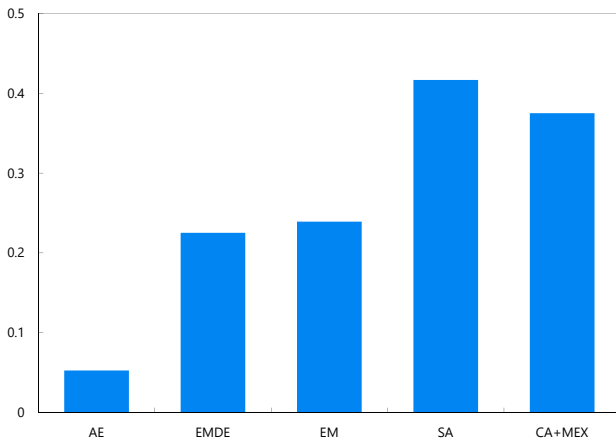# Median Share of Informal Employment to Total Non-Agricultural Employment
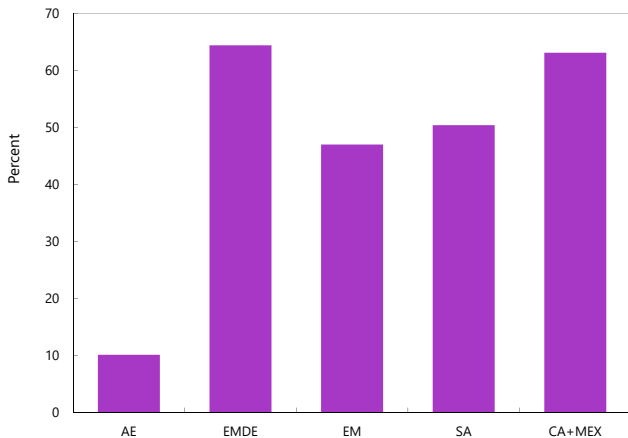
Sources: International Labour Organization; and Inter-American Development Bank (SIMS).

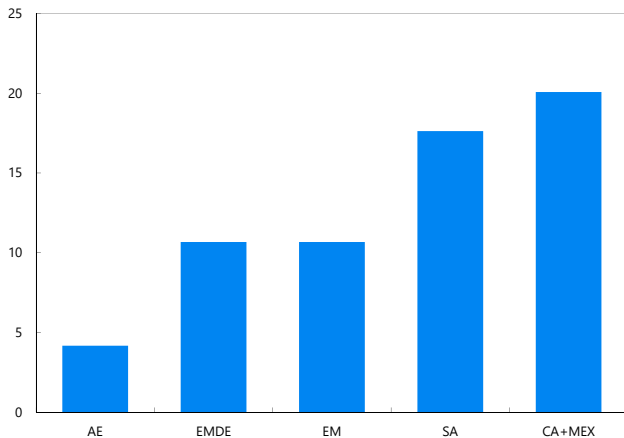# Informality Decreases with Income Level
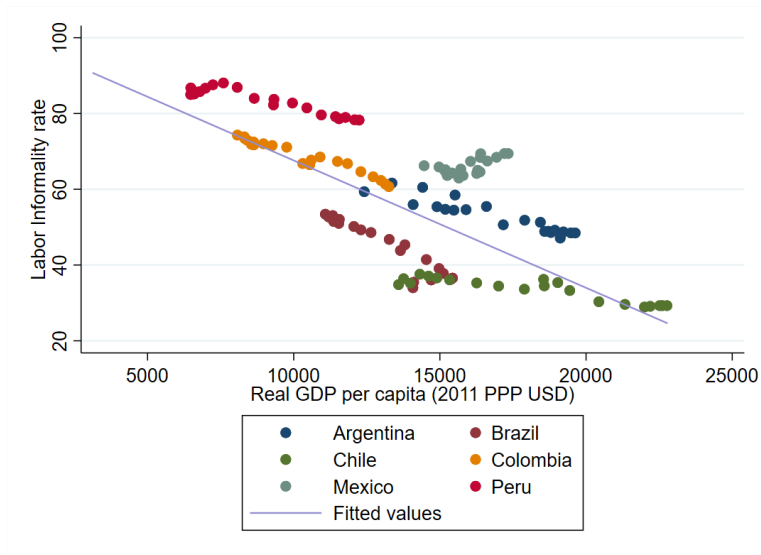
Third-party Approval for Dismissal of 1 Worker Required? (Average, 2017)
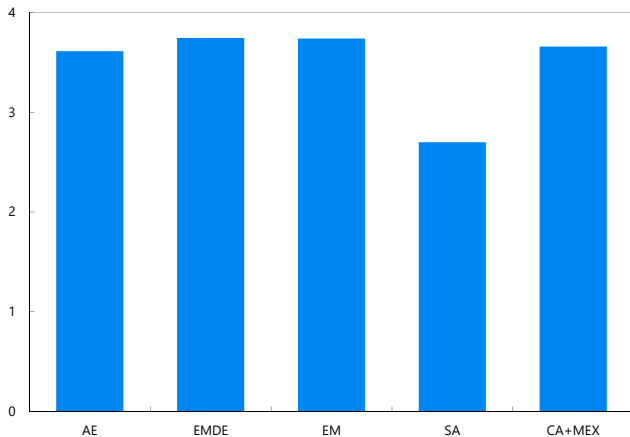

Sources: World Bank, Doing Business Indicators

Median Redundancy Costs (Weeks of Salary, 2017)

WEF: Hiring and Firing Practices (Median for 2017)

Decomposing Unemployment Dynamics

- Follow Hijzen et al. (2017) approach to decompose changes in unemployment for largest LatAm countries.

- Consider four distinct periods: 1997-2000; 2000-2007; 2007-2011; 2011-2017.

$$u - u^* \approx -(y - y^*) + (z - z^*) + (part - part^*) + (wap - wap^*) \qquad (1)$$

- Changes in labor demand captured by changes in output and changes in productivity.

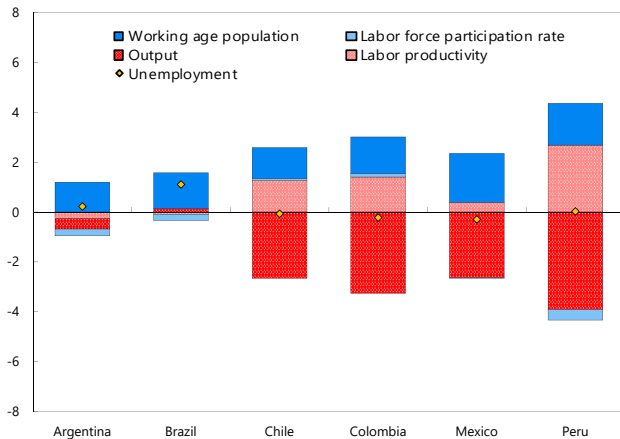- Changes in labor supply captured by changes in the participation rate and working age population.

2000-2007: Labor Demand Growth Outpacing WAP
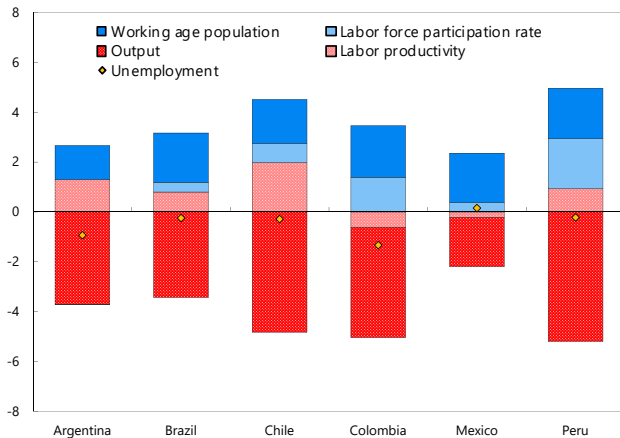
2007-2011: Labor Market Resilience
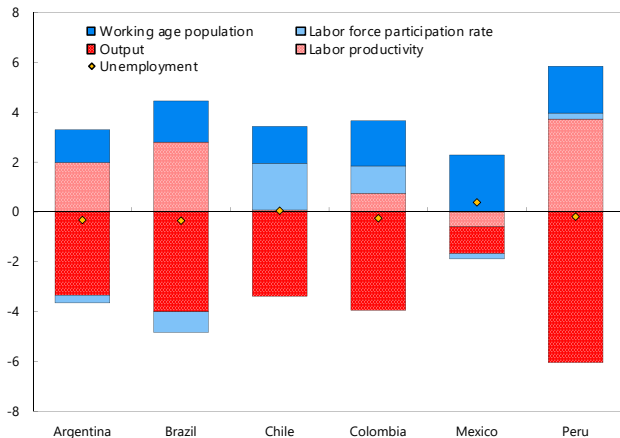
2011-2017: Changes in Productivity and Participation Limit Rise in Unemployment

Decomposing Unemployment Dynamics

- ▶ Fall in unemployment in Latin America over 2000-2007 was driven by labor demand growth outpacing an expanding working age population.

- ▶ The positive contribution of output growth dominated the negative contribution of labor productivity growth.

- ▶ The global financial crisis slowed these positive trends, but labor markets proved resilient overall.

- ▶ Changes in labor productivity and labor force participation have helped to limit the rise in unemployment in downturns or during periods of growth slowdown.

- ▶ Limited average annual fluctuations in the unemployment over the various phases of the business cycle.

Informality as a Margin of Adjustment

- Extend previous decomposition to account for changes along the formal/informal margin.

$$u - u^* \approx -(l_F - l_F^*) + (f - f^*) +$$
$$(part - part^*) + (wap - wap^*) \qquad (2)$$

- l_F is the log of formal employment and f is the log of the ratio of formal to total employment.

- Colombia illustrates how informality dampens response of unemployment to output. Similar patterns in Argentina, Chile, and Peru. Less so in recent periods in Brazil and Mexico.

Colombia
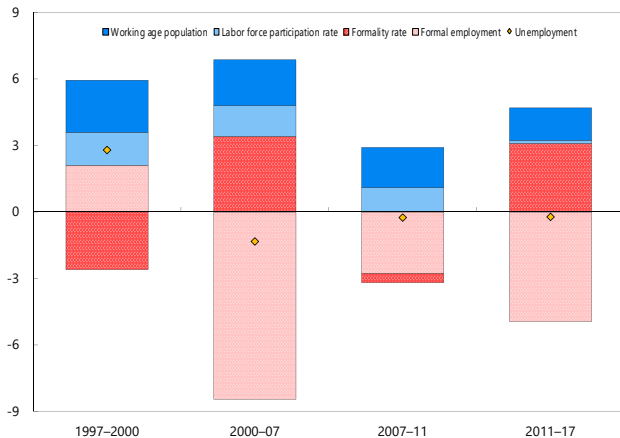
Brazil

Revisiting Okun's Law

- Estimate Okun's Law for 127 countries over the period 1990-2017 using a heterogeneous panel approach accounting for common factors.

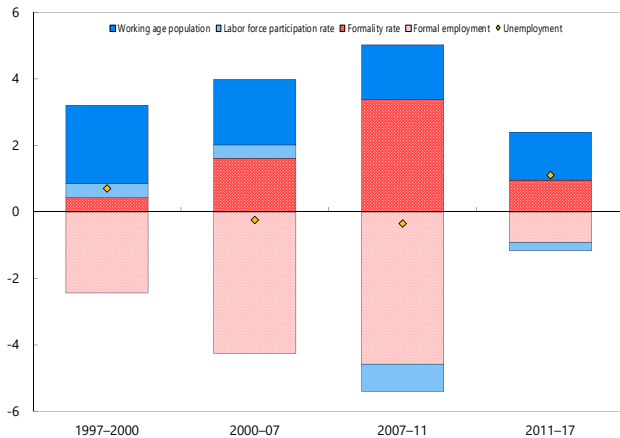- Okun's law relates changes in output to short-run charges in unemployment.

- The benchmark specification is as follows:

$$u_{i,t} - u_{i,t-1} = \beta_i \left(y_{i,t} - y_{i,t-1} \right) + \vartheta_{i,t}$$
$$\vartheta_{i,t} = \alpha_i + \sum_{m=1}^{p} \lambda_{i,m} f_{m,t} + \varepsilon_{i,t} \tag{3}$$

Okun's Coefficient (average)
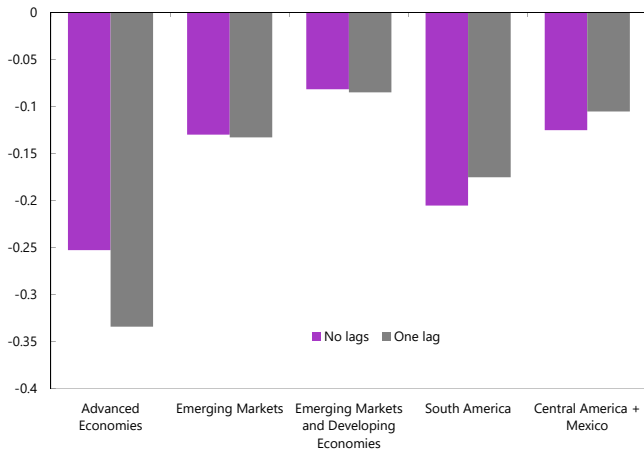
Okun's Law and Informality

okun = -.33237 + .0038 ilo_info.. R^2 = 36.0%

n = 92   RMSE = .1534467
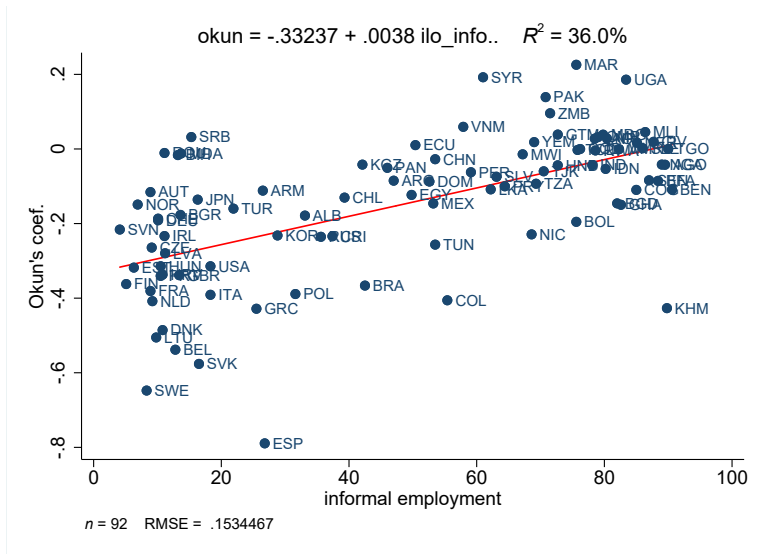
Okun's Law and Wage Flexibility

okun = -.88374 + .26948 wef_flex~l - .02391 wef_flex~l^2 R^2 = 6.1%
okun = -.4207 + .05507 wef_flex~l R^2 = 5.0%

n = 117 RMSE linear = .1799078 quad = .1796637
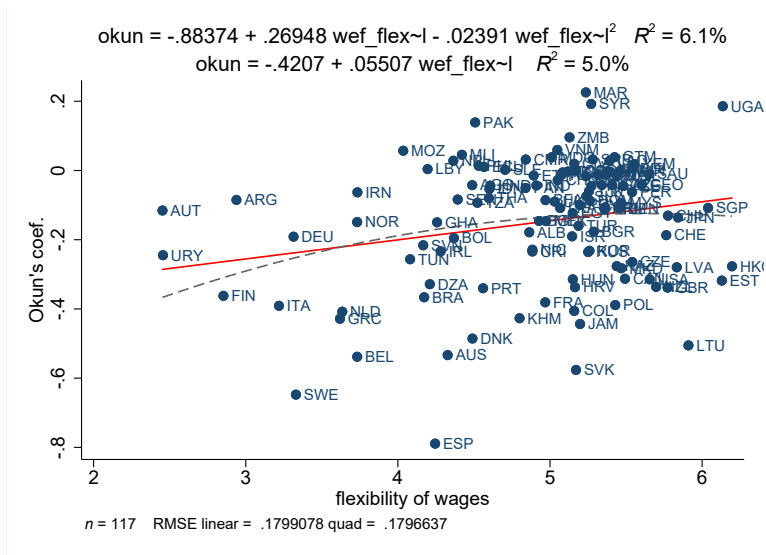
Okun's Law and Redundancy Costs

$okun = -.20115 + .00562\ db\_redun\text{\textasciitilde}s - 4.1e\text{-}05\ db\_redun\text{\textasciitilde}s^2$ $R^2 = 6.5\%$

$okun = -.18959 + .00375\ db\_redun\text{\textasciitilde}s$ $R^2 = 6.2\%$

$n = 125$ RMSE linear = .176112 quad = .1765467
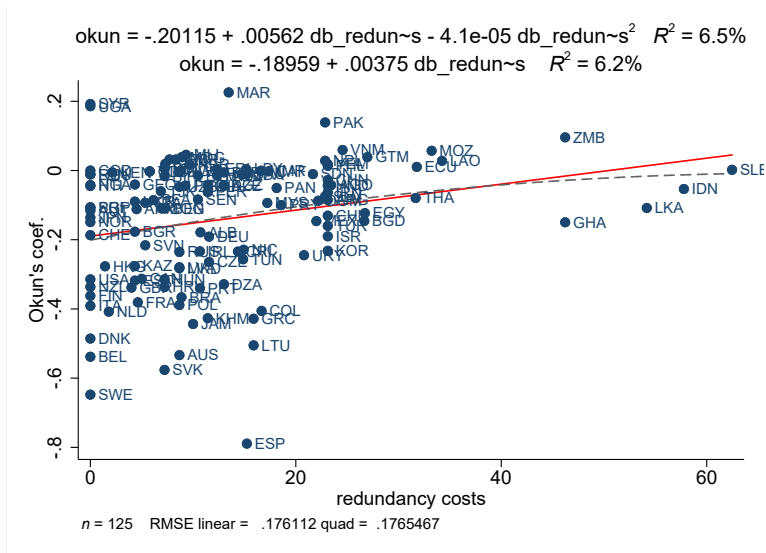
Labor Market Institutions and Okun's law

VARIABLES	(1) okun	(2) okun	(3) okun	(4) okun
Informality	0.00368***	0.00368***	0.00354***	0.00353***
	(0.000487)	(0.000518)	(0.000644)	(0.000843)
Wage flexibility		0.0419**	0.0442*	0.0829***
		(0.0203)	(0.0235)	(0.0276)
Hiring and firing			0.0128	-0.0118
			(0.0291)	(0.0350)
Dismissal approval			0.0122	-0.000733
			(0.0444)	(0.0527)
Fixed-term contract			0.0621*	0.0640
			(0.0326)	(0.0409)
Redundancy costs			0.000456	0.000285
			(0.00135)	(0.00169)
Employment protection index				-0.0276
				(0.190)
Constant	-0.314***	-0.518***	-0.614***	-0.686***
	(0.0275)	(0.0984)	(0.120)	(0.160)
Observations	93	90	89	65
R-squared	0.385	0.414	0.440	0.475

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Outlier robust regressions following Li (1985)

Links Between Informality and Labor Market Institutions

- Informality is an important factor driving the responses of unemployment to output fluctuations.

- But what is the link between informality and labor market institutions?

$$informality_i = c + \gamma_1 GDP_i + \gamma_2 Schooling_i +$$
$$\sum_{j=3}^{k} \gamma_j X_{j,i} + \varepsilon_i \tag{4}$$

- Results confirmed by BMA exercise to deal with model uncertainty (based on estimation of 256 different models).

Outlier Robust Regressions

VARIABLES	(1) Informality	(2) Informality	(3) Informality
GDP per Capita	-11.87***	-11.70***	-8.908***
	(2.096)	(2.095)	(1.900)
Schooling	-4.398***	-4.215***	-4.865***
	(0.768)	(0.765)	(0.700)
Wage Flexibility		2.596	2.438
		(1.668)	(1.515)
Hiring and Firing		0.536	0.607
		(1.809)	(1.736)
Dismissal Approval		8.391**	5.815*
		(3.440)	(3.156)
Fixed-term Contract			-2.889
			(2.568)
Redundancy Costs			0.403***
			(0.0996)
Ratio Minimum Wage to Value Added			-3.759
			(5.050)
Constant	192.7***	173.1***	150.7***
	(14.73)	(19.13)	(18.86)
Observations	94	89	88
R-squared	0.819	0.837	0.877

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Outlier robust regressions following Li (1985)

Case Studies: Assessing the Impact of Selected Labor Market Reforms

- ▶ Synthetic control method (Abadie and Gardeazabal, 2003) to study the impact of labor market reforms.

- ▶ Data-driven way to construct the relevant counterfactual. Select control unit as the linear combination of all potential comparison units that have the similar characteristics to those of the treated country.

- ▶ Then compares the difference in outcomes before and after the treatment.

- ▶ We use several databases to identify reforms and donor pools: Duval et al. (2018); Adascalitei and Pignatti (2015); Campos and Nugent (2012); Aleksynska and Schindler (2011).

Mexico 2012 Labor Reform

- In November 2012 the Mexican government approved a reform overhauling labor laws dating from the 1970s.

- Measures to lower the costs of hiring and firing workers, to stimulate formal employment as well as introduction of new types of flexible labor contracts (IMF, 2013 and OECD, 2015).

- Also provided more judicial certainty for dismissals (simplifying legal dispute settlement and imposing ceilings on compensation).

Mexico 2012 Labor Reform

- ▶ Consider a sample period going from 2001 to 2017. We exclude from the donor pool countries that have implemented major labor market reforms in a 10-year window around the intervention date.

- ▶ Reforms identified by Duval et al. (2018) and Adascalitei and Pignatti (2015).

- ▶ We also chose to exclude LICs and Iraq from the donor pool.

- ▶ Predictors: the average value of the variable itself; average GDP growth; labor force growth; the level of informality, and redundancy costs (in terms of weeks of salary).

Impact of 2012 Reform
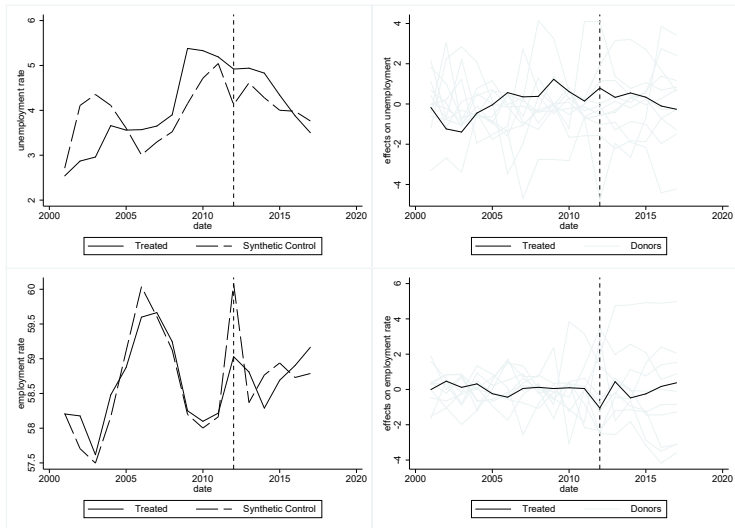
Chile 2001 Reform

- ▶ The labor reform enacted in Chile in 2001 increased rigidities, by increasing firing costs and strengthening the rights of trade unions (IMF, 2002 and OECD, 2003).

- ▶ Sample period going from 1991 to 2006. We exclude from the donor pool countries that have implemented reforms in a 10-year window around the intervention date. We also exclude LICs and Iraq.

- ▶ Reforms identified using the episodes described in Duval et al. (2018) and large changes in the index constructed by Campos and Nugent (2012).

- ▶ Similar predictors to the previous application.

Impact of 2001 Reform
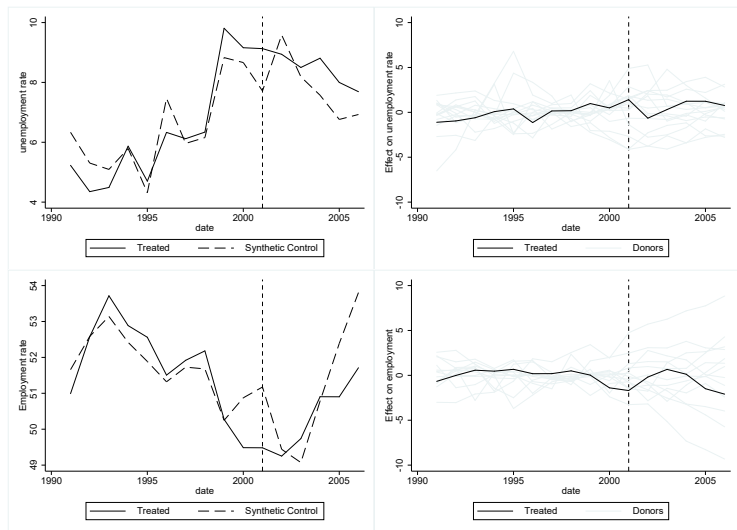
Uruguay 2005 Reform

- ► The government that took office in Uruguay in 2005 revived wage councils in the private sector.

- ► The reform completely changed the wage bargaining process (Mazzuchi, 2009). Since then, agreement on wages has usually been reached by consensus at the sector level.

- ► Workers covered by collective bargaining in the private sector went from around 28 percent in 2000 to over 97 percent in 2005.

Uruguay 2005 Reform

- ▸ Consider a sample period going from 1995 to 2010. Exclude from the donor pool countries that have implemented major labor market reforms in a 10-year window around the intervention date.

- ▸ Reforms identified using the episodes described in Duval et al. (2018) and Adascalitei and Pignatti (2015) database.

- ▸ We also chose to exclude LICs and Iraq from the donor pool.

- ▸ Similar predictors to the previous application.

Impact of 2005 Reform
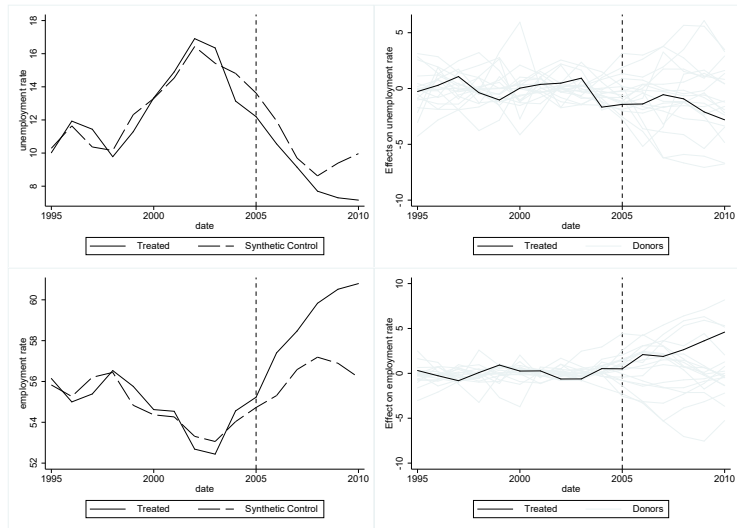
- ▶ A decomposition of changes in unemployment highlights the countercyclical role of informality.

- ▶ Okun's law analysis shows that the formal/informal adjustment margin reduces the importance of the employment/ unemployment margin.

- ▶ In economies with a high level of informality, reporting only the unemployment rate and job creation is not sufficient to capture labor market slack.

Conclusions

- ▶ Certain dimensions of stricter EPLs (higher redundancy costs and cumbersome dismissal regulations) increase informality.

- ▶ This supports the recommendation in Duval and Loungani (2018) favoring reducing the expected cost of firing procedures, making them more transparent and predictable and less administratively burdensome.

- ▶ The case studies indicate that reforms had mixed results. Mexico and Chile muted, some evidence of positive impact of collective bargaining in Uruguay.

- ▶ Highlight the importance of the specific design and context in driving the success or failure of reforms in improving labor market functioning.

Thank you.