



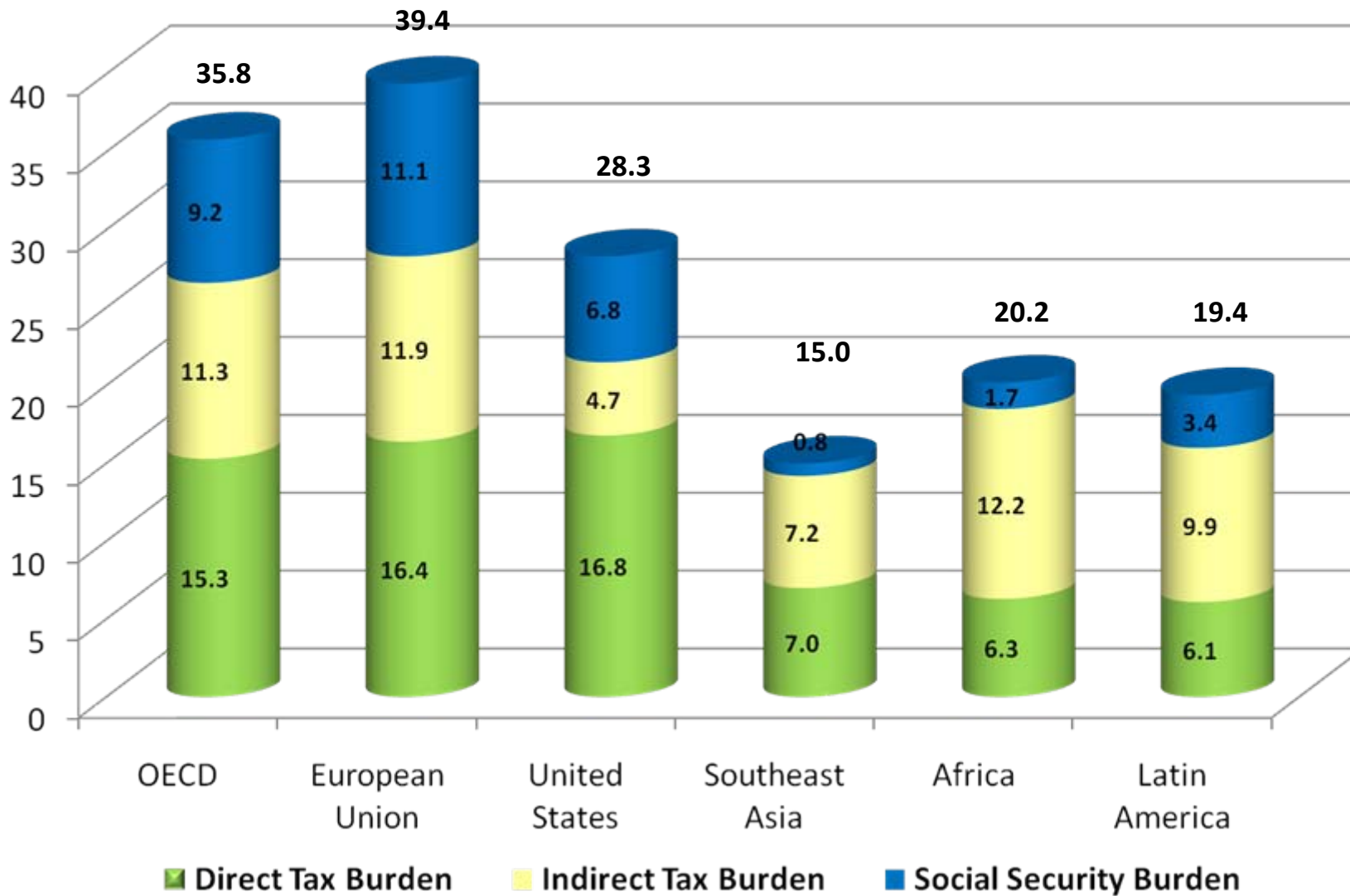
BID

**FISCAL EQUITY AND PERSONALIZED
VAT
IN LATIN AMERICA**

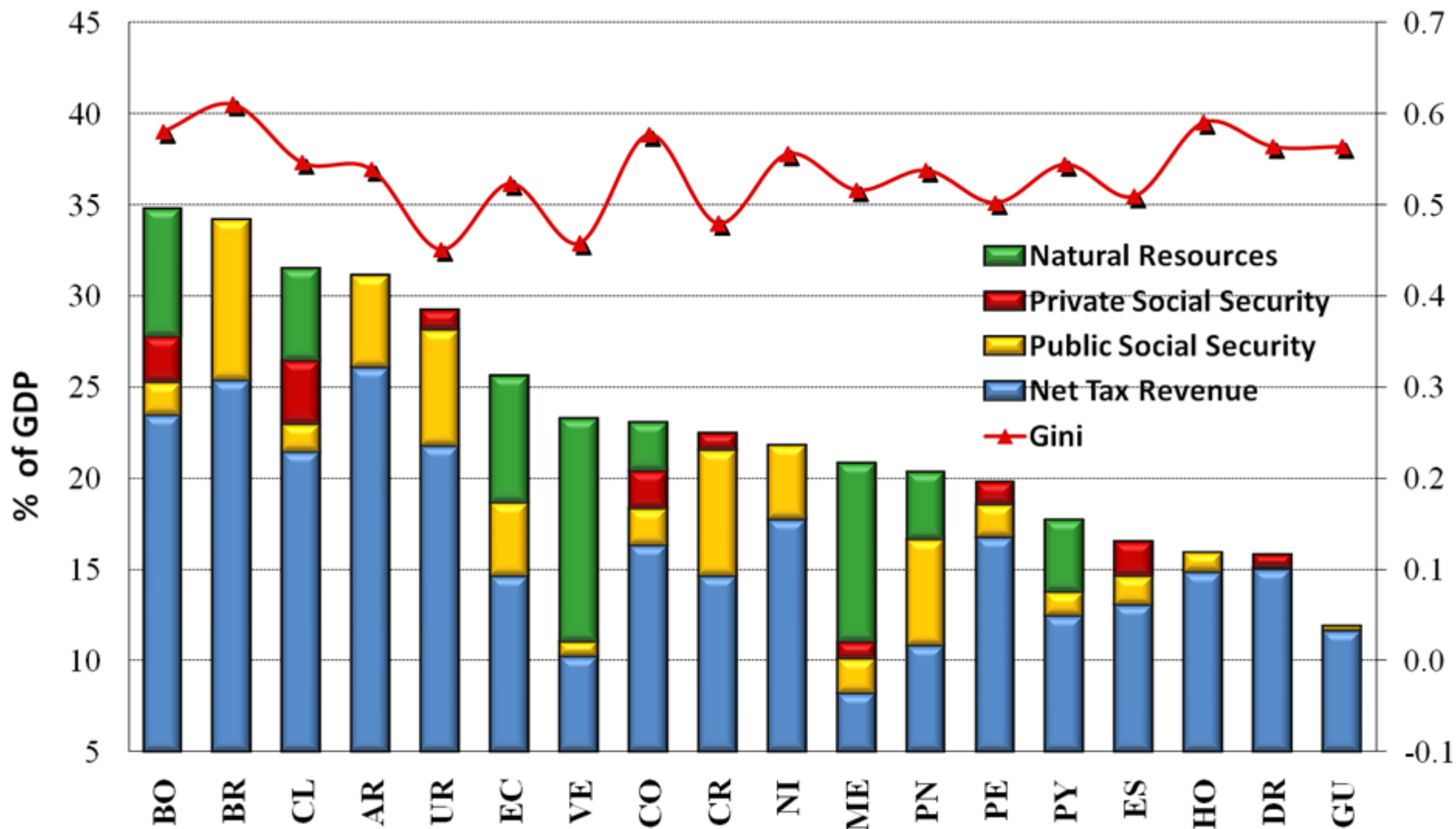
*Martin Bès
Jerónimo Roca
Alberto Barreix*

*Woodrow Wilson Institute
May 2011*

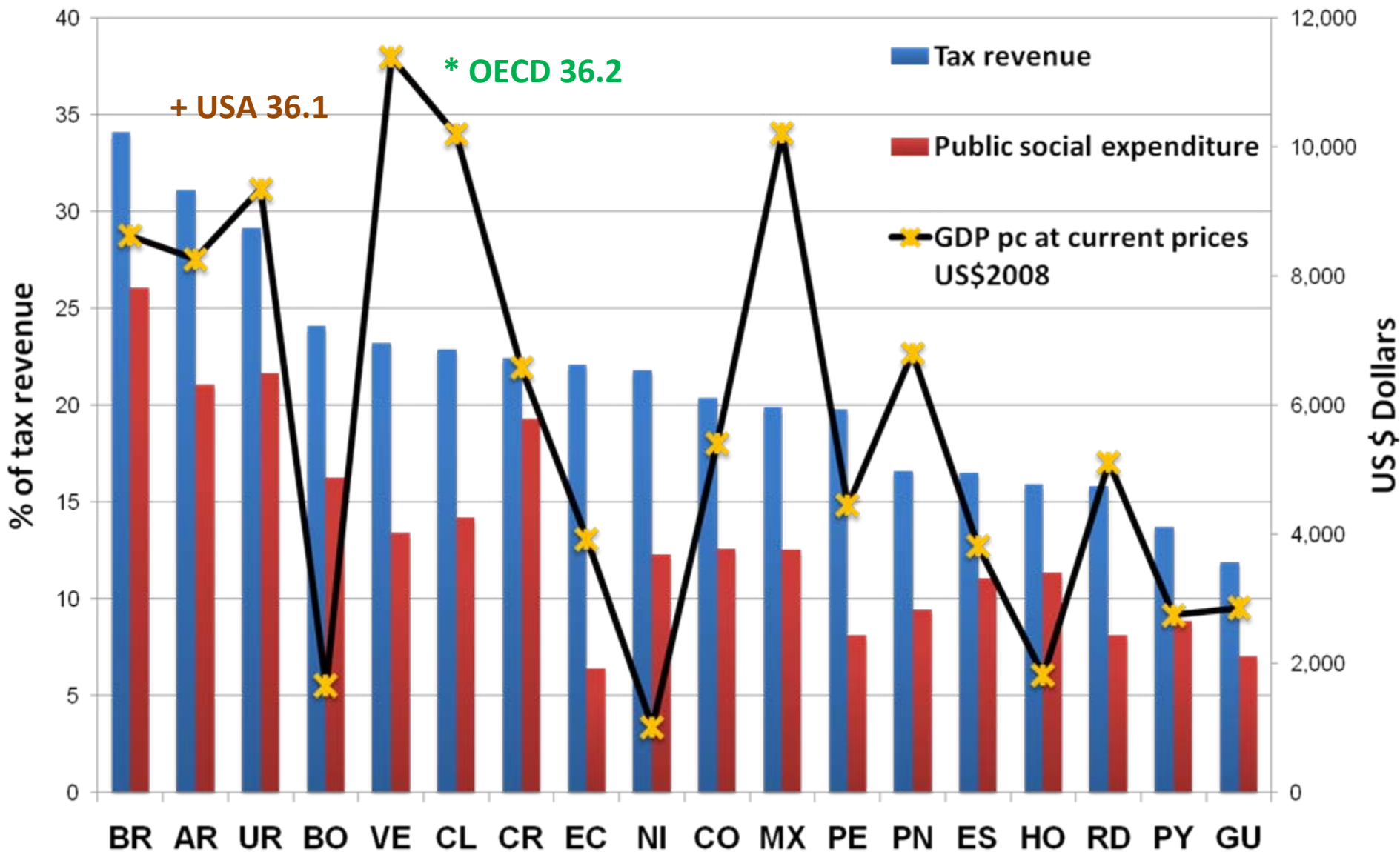
INTERNATIONAL COMPARISON OF FISCAL BURDEN AND STRUCTURE 2006-2008 (as % of GDP)



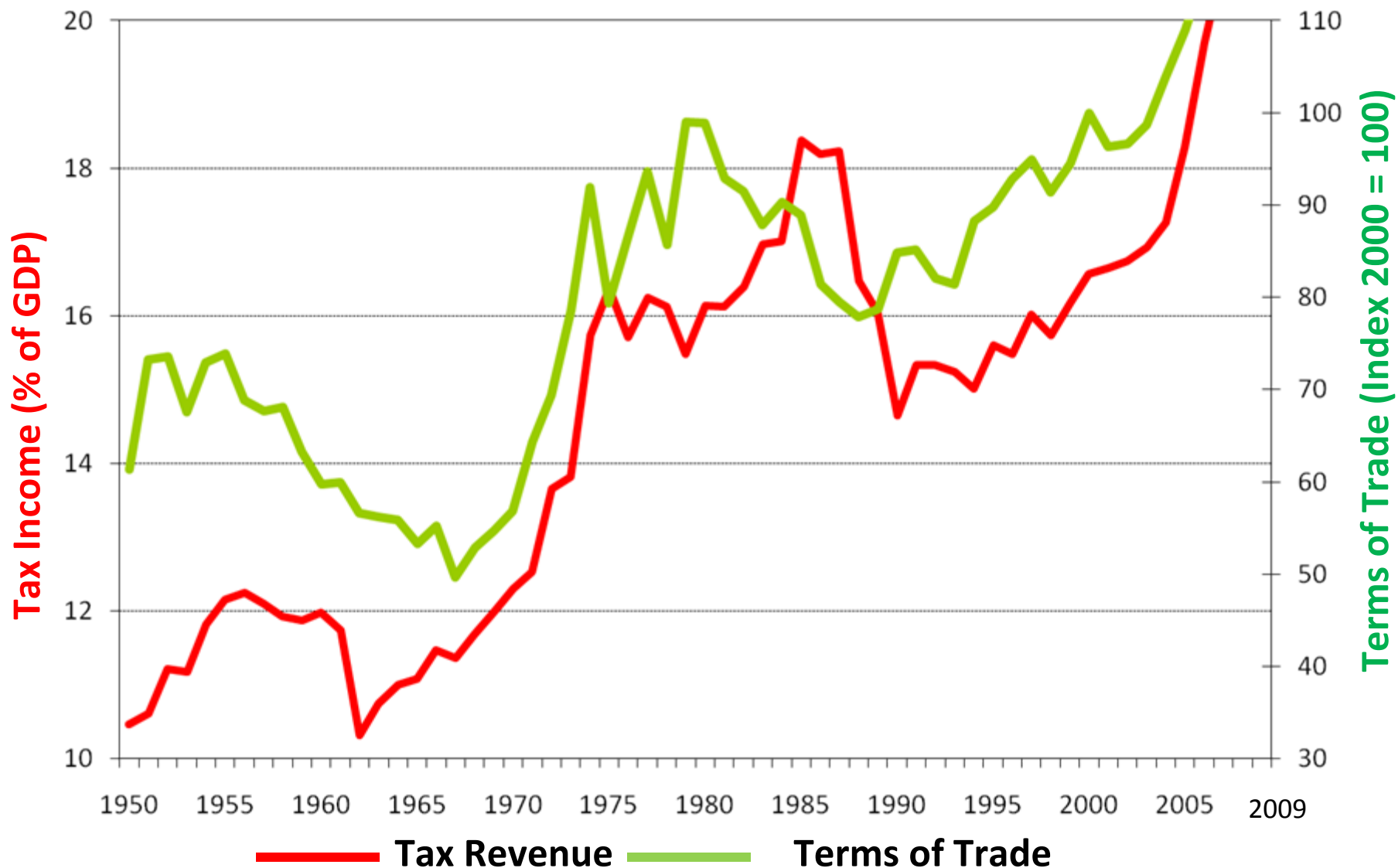
FISCALES NORMALIZED REVENUE (*) & GINI (2008)



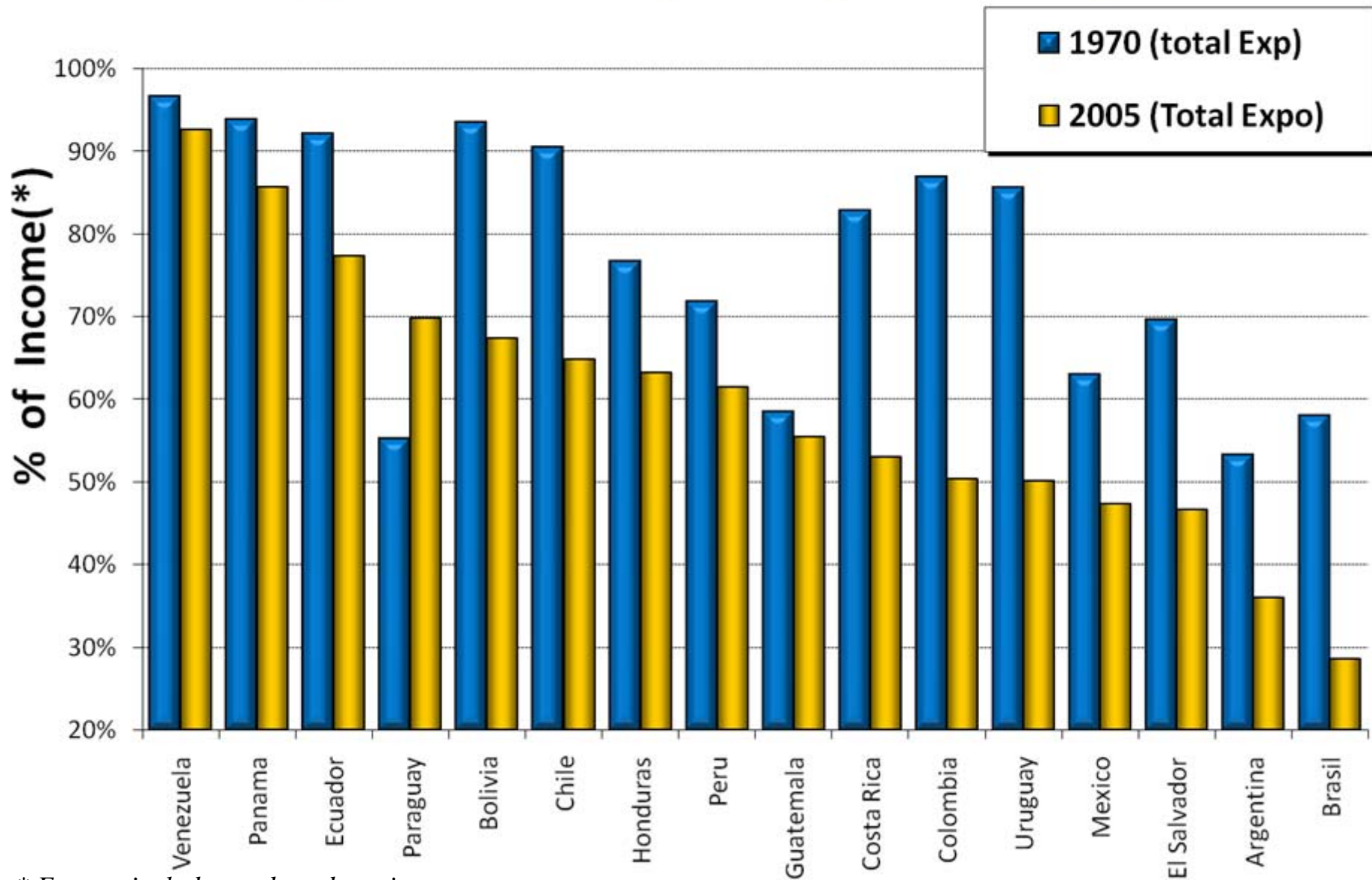
...or with the GDP per capita. But conditions the level public expenditure.



Latin America: Tax Revenue and Terms of Trade (1950 – 2009)

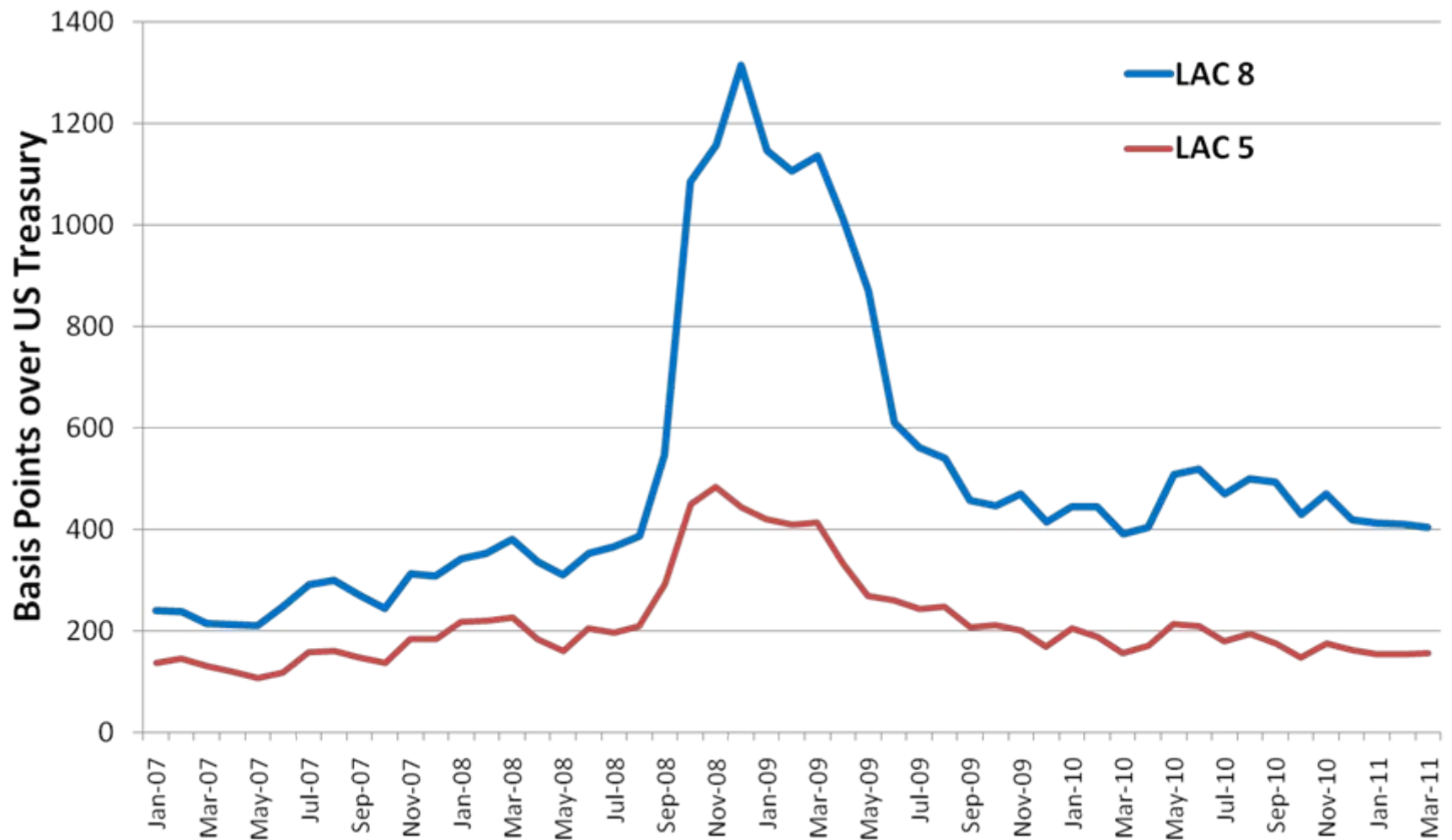


Participation of the 5 main items exported over Exports* (1970-2005)



* Exports include goods and tourism.

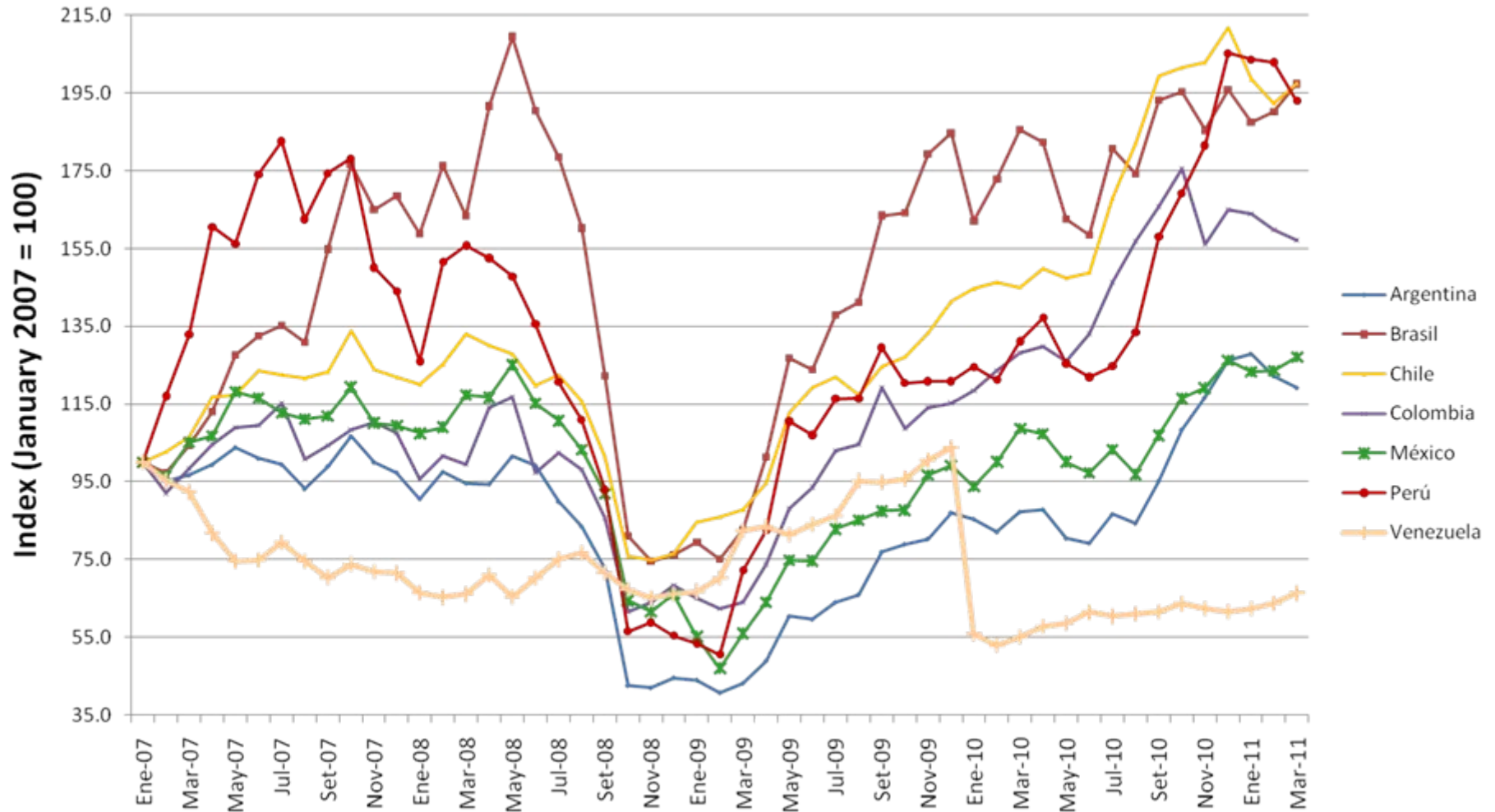
Implied Risk Premiums: Public Debt in LAC 8 and LAC 5



Source: Bloomberg

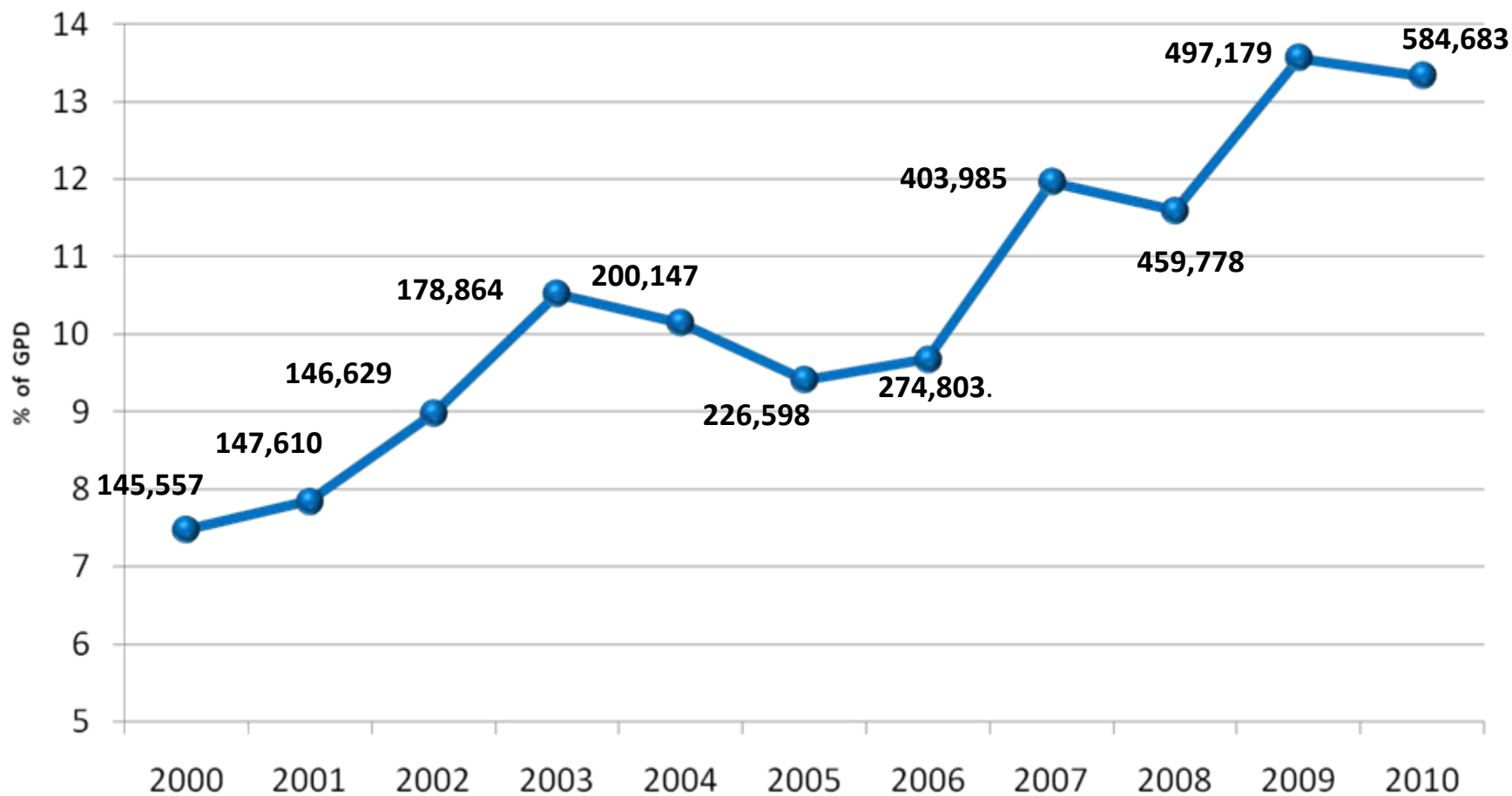
Note: LAC 8 encompasses Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela. While LAC 5 excludes Argentina, Ecuador and Venezuela.

Market Capitalization Rate Index in Latin America (in US\$)



Source: Bloomberg

International Reserves from LAC 7 as % of LAC 7 GDP

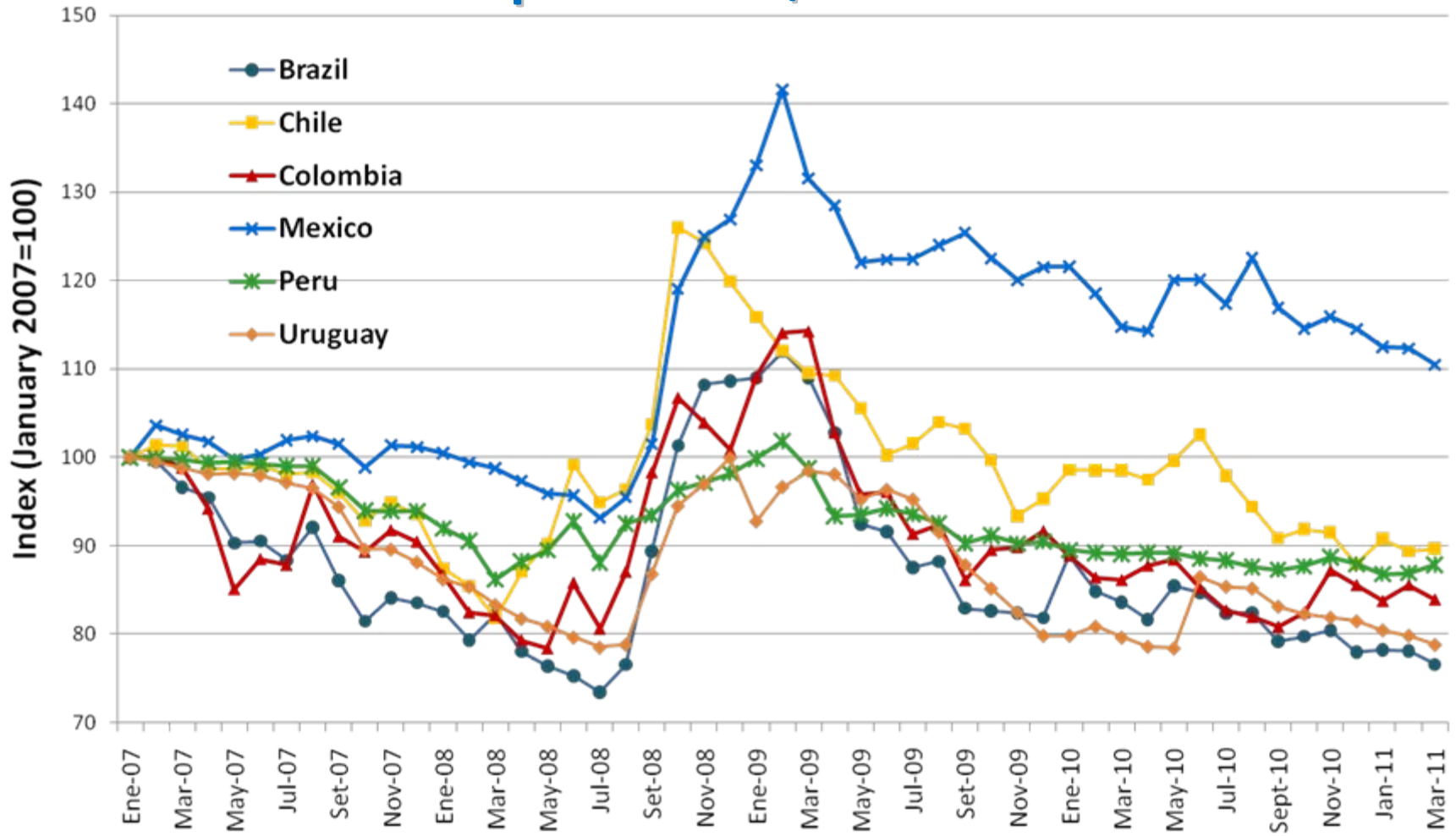


Source: IDB/ Latin American and Caribbean Macro Watch Data Tool

LAC 7 is composed by Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.

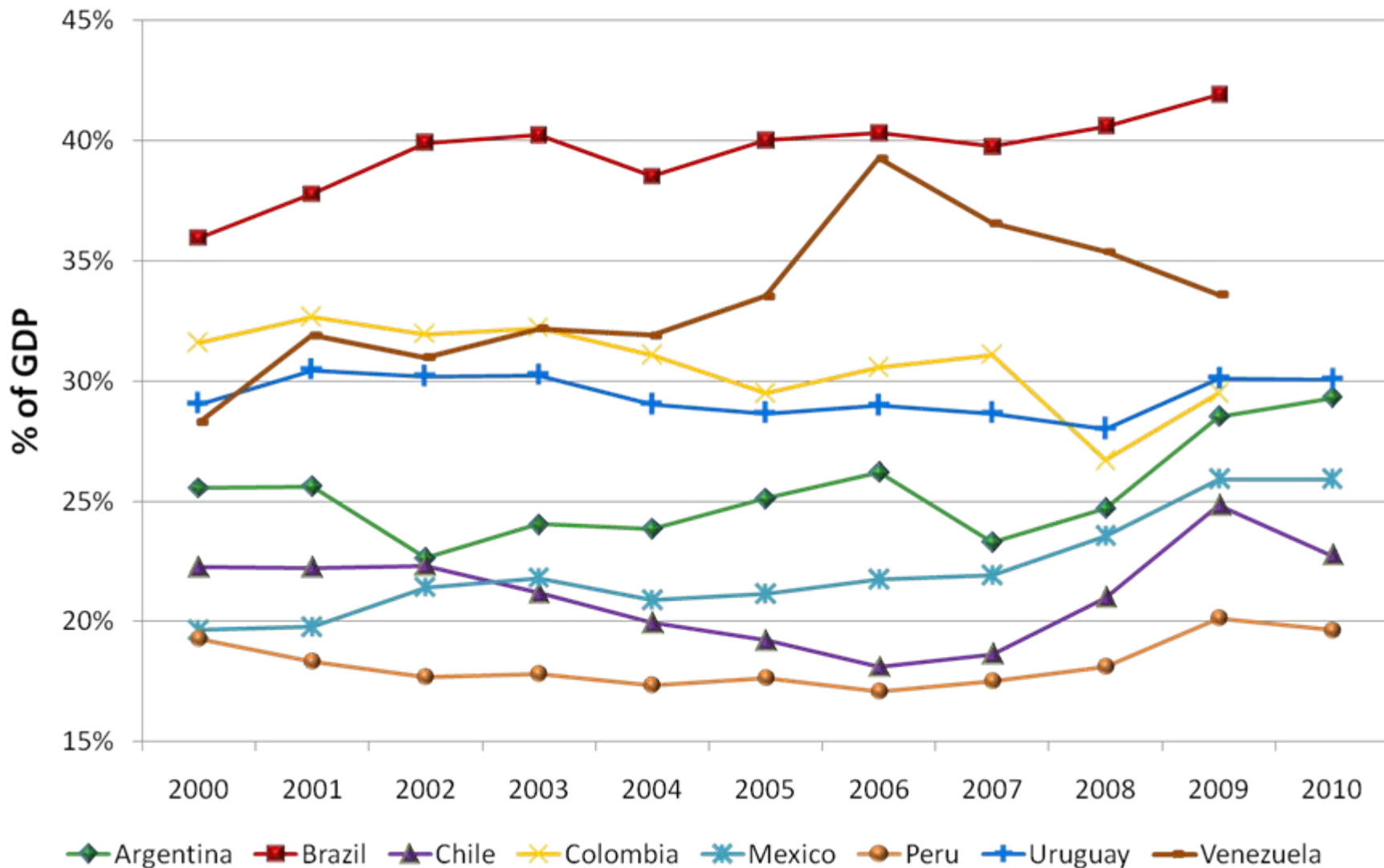
The amounts presented are expressed in Millions of US\$

Bilateral Nominal Currency Exchange Index with respect to US\$ Dollars

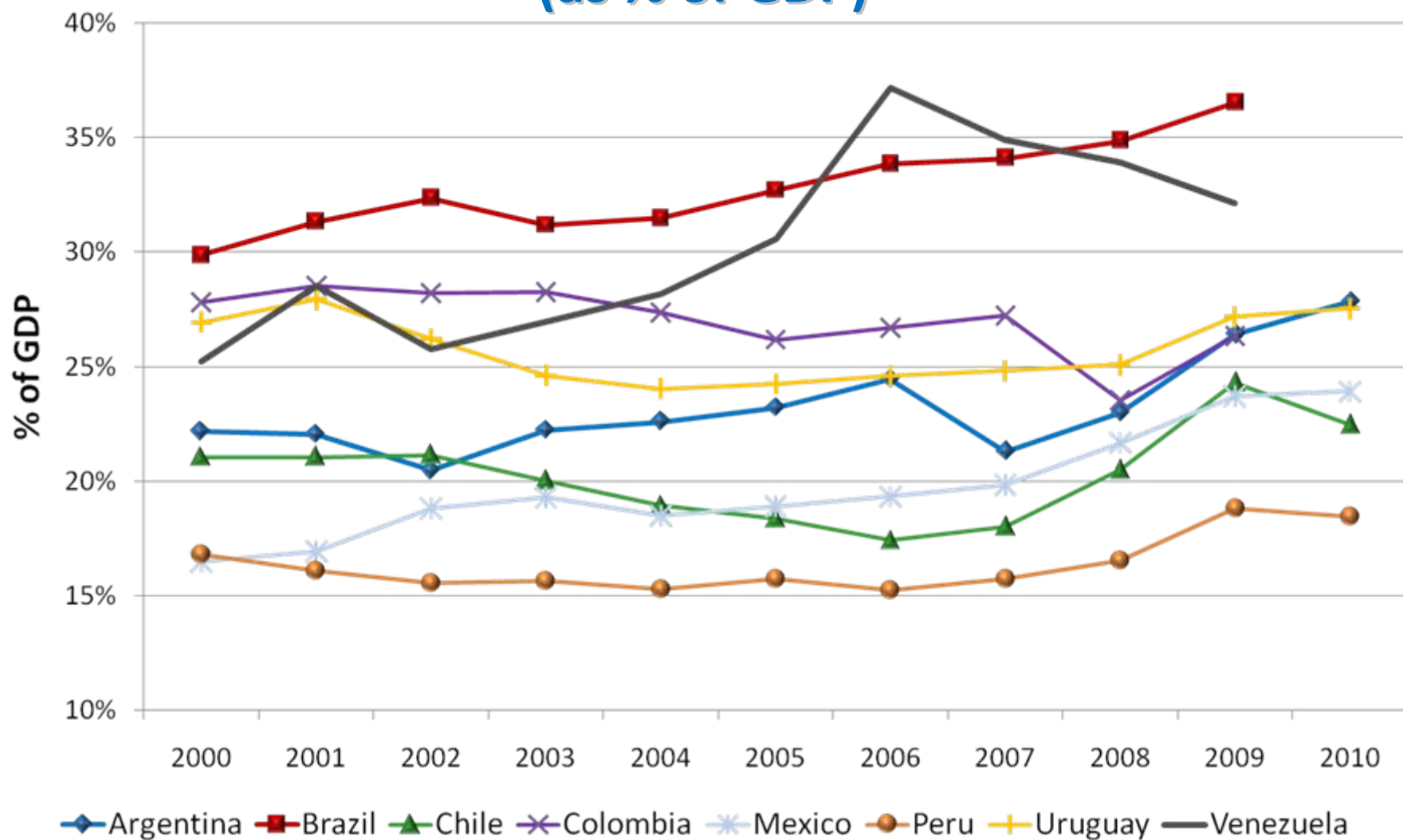


Source: Bloomberg

General Government Total Expenditure 2000 – 2010 (as % of GDP)



General Government Primary Expenditure, 2000 – 2010 (as % of GDP)



Source: IDB/ Latin American and Caribbean Macro Watch Data Tool

...based only on two pillars

Tax Pillars			
OECD, Latin America and Central America, Panama and Dominican Republic (2008 as a % of the GDP)			
	OECD	Latin America ^b	Brazil
Tax revenue ^a	36.2	23.1	34.12
VAT ^c	6.7	6.5	12.5
Income tax	12.5	4.8	8.7
<i>Corporate Income tax</i>	3.5	3.2	6.3
<i>Personal Income tax</i>	9.0	1.6	2.4
Social Security ^d	9.0	3.4	8.3

Source: OECD, ECLAC, IDB and IMF. a: Includes private and public social security (pensions) and natural resources income. b: includes income due to oil in Colombia, Ecuador, Mexico and Venezuela; minerals in Chile and Bolivia; and hydroelectricity in Paraguay. c: Includes ICMS in Brazil. d: Includes private and public social security (pensions).

Source: Barreix and Roca (2008)

Fiscal Policy and Equity in Central America and DR

Tax System: Value Added Tax

VAT: Deciles According to Income of Individuals							
1. Progressivity	CR	DR	ES	GU	HO(*)	NI	PN
Effective tax/income ratio (as a %)							
1 st —	5.4	8.8	24.0	20.2	10.2	8.6	4.4
2 nd —	4.2	5.5	15.2	9.1		5.1	1.7
2 nd +	3.5	3.0	7.0	5.4		3.4	1.2
1 st +	3.0	2.0	6.5	4.9	5.0	3.4	1.4
Kakwani (if < 0 => regressive; if > 0 => progressive)	-0.085	-0.185	-0.141	-0.136	-0.089	-0.093	-0.089
2. Redistribution							
Reynolds - Smolensky	-0.003	-0.005	-0.013	-0.008	-0.005	-0.003	-0.001
Losers	1 to 9	1 to 9	1 to 7	1 to 8	Quintiles 1 to 4	1 to 9	1 to 5 & 10
3. Who pays the tax?							
40% -	9.4%	18.9%	24%	16.5%	13%	12.6%	9.9%
20% +	62.2%	46.1%	37%	50.3%	54%	55.8%	60%
20%/40%-	6.6	2.4	1.5	3.0	4.2	4.4	6.1
Memo: VAT revenue (as % of GDP)	4.9	3.9	7.0	4.8	6.2	6.4	1.6
(*) Quintiles							
Source: based on Trejos (2007); Díaz (2008); ICEFI (2007a y 2009); Garriga et al (2007); Roca (2007); & Rodríguez (2007)							

Fiscal Policy and Equity in Andean Countries

Tax System: Value Added Tax

VAT: Deciles According to Income of Individuals					
1. Progressivity	Bolivia (*)	Colombia	Ecuador	Peru	Venezuela
Effective tax/income ratio (as a %)					
1 st —	7.0	10.8	4.6	29.7	6.4
2 nd —		8.6	4.2	13.3	7.2
2 nd +		5.4	4.9	5.8	8.8
1 st +	8.0	4.7	5.2	4.3	9.5
Kakwani (if < 0 => regressive; if > 0 => progressive)	-0.009	-0.068	0.038	-0.177	0.050
2. Redistribution					
Reynolds - Smolensky	-0.001	-0.004	0.002	-0.012	-0.004
Losers	2 & 3	1 to 6 & 9	9 & 10	1 to 8	10
3. Who pays the Tax?					
40%-	7.0%	13.9%	14.1%	18.8%	9.8%
20%+	62%	55.4%	51.8%	43.8%	60.5%
20%+/40%-	8.9	4.0	3.7	2.3	6.2
Memo: VAT revenue (as % of GDP)	5.6	6.3	6.4	4.9	4.7
(*) Quintiles					
Source: elaboration based on Cossio (2005); Zapata and Ariza (2005); Arteta (2005); Haughton (2005); Garcia and Salvato (2005).					

Fiscal Policy and Equity in MERCOSUR and Chile

Tax System: Value Added Tax

VAT: Deciles According to Income of Individuals					
1. Progressivity	Argentina	Brazil	Chile	Paraguay	Uruguay
Effective tax/income ratio (as a %)					
1 st —	11.7	23.9	35.3	24.6	21.6
2 nd —	9.2	20.1	19.7	6.4	12.7
2 nd +	7.8	11.9	12.9	4.9	7.6
1 st +	6.8	8.5	8.8	4.6	6.5
Kakwani (if < 0 => regressive; if > 0 => progressive)	-0.042	-0.145	-0.130	-0.108	-0.108
2. Redistribution	Argentina	Brazil	Chile	Paraguay	Uruguay
Reynolds - Smolensky	-0.006	0.023	-0.018	-0.005	-0.010
Losers	1 to 9	-	1 to 9	1 to 7	1 to 7
3. Who pays the Tax?					
40%-	N/A	13%	14.9%	16.5%	16.3%
20%+	N/A	54.9%	51.4%	49.1%	45.5%
20%+/40%-	N/A	4.2	3.5	2.9	2.8
Memo: VAT revenue (as % of GDP)	8	12.1	7.7	6.1	10
(*) Quintiles					
Source: based on Fiscal Equity Series in Latin America of the IDB (Preliminar version 2010) and Gomez Sabaini 2000.					

Improving Equity in Fiscal Policy in LA

Personalizing VAT

1. Attempts to counterbalance the VAT regressive nature

2. Universal System (Indirect)

- i. Identifies items with incidence in the consumption basket of lower income groups (i. e. food and medicines)
- ii. Instrumented through exemptions and multiple rates (i.e. reduced rates or 0 rate) to that group of goods and services considered of social merit
- iii. In practice, this measure is more beneficial for those who spend more
- iv. In LA we try to solve the fiscal inequity associated with VAT and we end up destroying the revenue capacity of the tax

3. Requirements

- a. Costly in administration and revenue
- b. It does not benefit who it is supposed to as it does not intend to personalize

Improving Equity by Personalized VAT

Uruguay - Consumption Taxes and Exempted from VAT before Tax Reform

Deciles	Basic Rate	Minumum Rate	Exemption
1	1.4	2.9	1.2
2	2.5	4.5	2.1
3	3.7	5.6	2.9
4	4.6	6.9	4.2
5	6.0	8.2	5.3
6	7.6	9.5	7.1
7	9.6	10.6	9.6
8	12.3	12.9	12.2
9	17.3	15.0	18.1
10	34.9	23.9	37.3
Total	100	100	100
40- (poorer)	12.3	19.9	10.4
20+ (richer)	52.3	38.9	55.4
Gini or cuasi-gini	c-G=0.476	c-G=0.318	c-G=0.513

Source: Barreix, Bes. and Roca (2009)

URUGUAY

URUGUAY			
1. VAT Revenue Increase and Transfer	Present	Reform	Variation
VAT Revenue Increase - % Current Collection		13.3	
Transfer/Revenue Increase VAT - in %		100	
Transfer/Revenue Current VAT - in %		13.3	
2. Who pays the net VAT (new VAT - Transfers)?	Present	Reform	Variation
Deciles 1 to 4 (40-)	15.5	6.0	-9.4
Deciles 5 to 6	15.1	17.0	1.8
Deciles 7 to 8	23.1	25.1	2.1
Deciles 9 and 10 (20+)	46.4	51.8	5.5
Total	100.0	100.0	
3. Income Distribution	Present	Reform	Variation
Gini	0.4887	0.4769	-0.0118
Share in Total Income			
Deciles 1 to 4 (40-)	11.5	12.3	0.8
Deciles 5 to 6	13.6	13.4	-0.2
Deciles 7 to 8	21.9	21.7	-0.2
Deciles 9 and 10 (20+)	53.0	52.5	-0.5
4. Indigence	Present	Reform	Variation
Number of indigents	227,096	155,408	-71,688
% of indigents	7.2	5.0	-32%
Indigence gap	2.9	1.5	-50%
5. Poverty	Present	Reform	Variation
Number of poor individuals	915,597	838,200	-77,397
% of poor individuals	29.2	26.7	-8%
Poverty gap	12.7	10.4	-18%

URUGUAY

PERSONALIZED VAT

1) Generalization of the VAT and unification of tax rate to 19% (today 22, 10 and exemptions)

2) Transfer of 100% of the return of the VAT reform to individual under the poverty line (fixed sum)

Notes:

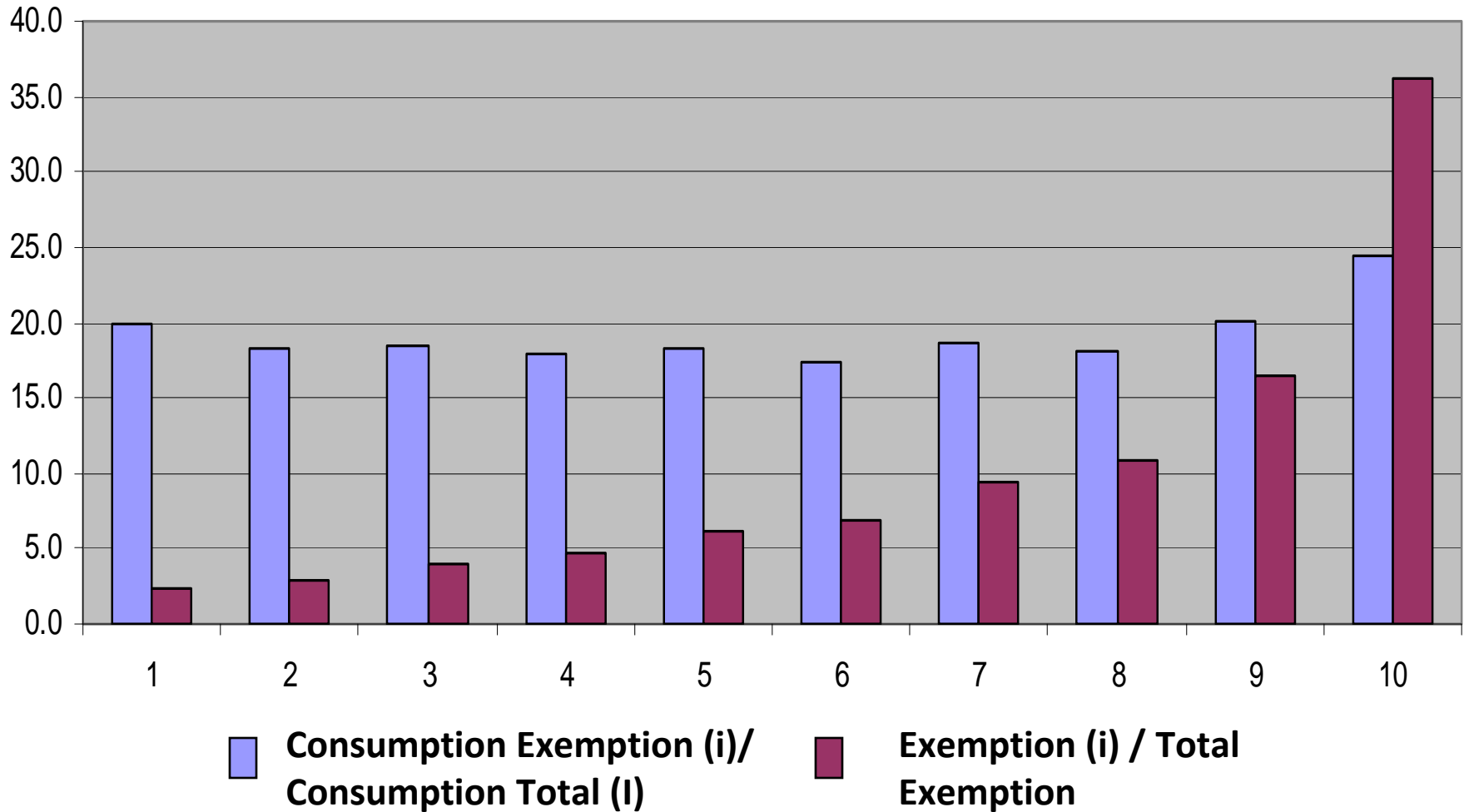
1) Year of simulation: 2004

2) Increase in VAT Revenues discounting for evasion (25%) and for VAT from purchases currently exempted (15%)

Source: based on Roca (2009)

The Inclusion error of Costa Rica's VAT

Who benefits the most (by decil)?



Improving Equity in Fiscal Policy in LA

Personalizing VAT: Inclusion error ... disqualifies for redistribution

VAT Redistribution vs. PSE Redistribution

	Honduras	Nicaragua
VAT tax expenditure (% of GDP)	2.3	3.1
Gini variation x 100	0.80	0.44
Gini Variation per 1% of GDP of Tax Expenditure	0.35	0.14
Public Social Expenditures (PSE as % of GDP)	0.50	1.7
Gini Variation x 100	0.40	1.5
Gini variation per 1% of GDP of PSE	0.89	0.88
PSE effect / VAT effect	2.5	6.2

PSE Honduras = Family allowances, PRAF (2005)

PSE Nicaragua = Primary Education (2001)

Source Barreix, Bes and Roca (2009)

CHILE

CHILE			
1. VAT Revenue Increase and Transfer	Present	Reform	Variation
VAT Revenue Increase - % Current Collection		8.3	
Transfer/Revenue Increase VAT - in %		100	
Transfer/Revenue Current VAT - in %		8.3	
2. Who pays the net VAT(new VAT - Transfers)?	Present	Reform	Variation
Deciles 1 to 4 (40-)	15.7	8.5	-7.2
Deciles 5 to 6	13.6	14.5	1.0
Deciles 7 to 8	20.4	21.9	1.5
Deciles 9 and 10 (20+)	50.3	55.1	4.8
Total	100.0	100.0	
3. Income Distribution	Present	Reform	Variation
Gini	0.5026	0.4888	-0.0138
Share in Total Income			
Deciles 1 to 4 (40-)	13.3	14.3	1.0
Deciles 5 to 6	11.9	11.7	-0.1
Deciles 7 to 8	18.3	18.1	-0.2
Deciles 9 and 10 (20+)	56.5	55.8	-0.7
4. Indigence	Present	Reform	Variation
Number of indigents	728,100	502,588	-225,512
% indigents	4.7	3.2	-31%
5. Poverty	Present	Reform	Variation
Number of poor individuals (including indigents)	2,907,700	2,312,050	-595,650
% poor individuals	18.6	14.8	-20%

CHILE

PERSONALIZED VAT:

- 1) Generalization of VAT and increase in one percentage point to current rate (**20%**)
- 2) Transfer of **100%** of the return of the reform to the **poorest 3 deciles**

Notes:

- 1) Year of simulation: 2003
- 2) Increase in revenues from VAT without discounting for evasion or for VAT from purchases currently exempted

Source: based on Jorratt (2009)

EL SALVADOR - PERSONALIZED VAT

- 1) One percentage point increase to current rate (**14%**)
- 2) Transfer of **100%** of the return of the VAT reform to **3 poorest**

1. VAT Revenue Increase and Transfer	Present	Reform	Variation
VAT Revenue Increase - % Current Collection		4.9	
Transfer/Revenue Increase VAT - in %		100	
Transfer/Revenue Current VAT - in %		4.9	
2. Income Distribution	Present	Reform	Variation
Gini	0.512	0.496	-0.016
3. Indigence	Present	Reform	Variation
Number of indigents	698.000	601.000	-97.000
% indigents	10.0	8.6	-14%
4. Poverty	Present	Reform	Variation
Number of poor individual (includes indigents)	1:925	1:842	-0:83
% poor individuals	27.6	26.4	-4%

Notes: 1) Year of simulation: 2006; 2) Increase in VAT Revenues discounting for evasion, without discounting for VAT from expenditures currently exempted.

Source: based on Cabrera (2009)

Personalizing VAT: Conclusions

- 1. Proposal provides relief to low income groups**
 - a) Country simulations are promising in terms of poverty outcomes
 - b) Avoids costly generalizations to those that do not need it
- 2. Implementation would employ proven administrative processes and technology**
 - a. Conditional Cash Transfers (CCT) beneficiary targeting mechanisms
 - b. Transfer amount determined by incidence of VAT on decile's consumption basket (household survey data)
- 3. Preserves VAT's revenue potential**
 - a) Tax base generalization generates resources that will be re-distributed
 - b) Tax base generalization improves tax administration
- 4. *Limitations:*** Administrative (high poverty levels) and composition of the basket.

Personalizing VAT: Conclusions 2

1. “Personalized” means based on the average consumption a determined decil based on data from income and consumption household surveys. In all cases, there is no rate differential.
2. There are 4 types of compensation (for the extra revenue from the generalization of the VAT):
 - a. Progressive: a Conditional Cash Transfer (CCT) for the amount of the extra burden obtained by the generalization of the VAT awarded to the deciles below the poverty line
 - b. Pro (pension) Savings: a transfer for a determined amount to all taxpayers to the personal pension account (Levy, 2010)
 - c. Bureaucratic: a Conditional Cash Transfers (CCT) determined as the incremental burden, or more, of the decile where the poverty line strikes (VAT P proposal).
 - d. Regressive: a % of the VAT is credited to consumers who operate with “smart cards” or similar. Impacts: **i)** it generates a significant fiscal cost and, **ii)** tend to be regressive (the poor usually do not hold credit cards. However, in some cases it may help to enforce invoicing (diminishing evasion) and in this cases will promote horizontal equity.

Fiscal Policy and Equity in CA, PN and RD

Tax System: Personal Income Tax

Personal Income Tax- Progressivity							
<i>Deciles according to individuals' income</i>							
1. Progressivity	CR	DR	ES	GU	HO	NI	PA
Effective tax/ income ratio (as %)							
1 st -	0.0	0.0	0.0	0.1	0.0	0.0	10.7
2 nd -	0.0	0.0	0.1	0.1		0.0	0.5
2 nd +	1.1	0.6	1.9	0.1		0.5	1.3
1 st +	3.6	2.6	4.1	0.5	2.2	2.6	4.0
Kakwani ((if < 0 => regressive; if > 0 => progressive)	0.333	0.395	0.325	0.316	0.330	0.348	0.244
2. Who pays the tax?							
40% -	0%	0%	1%	2%	0%	0%	2%
20% +	96%	97%	90%	93%	95%	94%	96%
20% + / 40% -	874.6	--	90.0	48.8	--	--	54.0
% of income of 20+ (*)	62.2	57.3	46.5	64.0	60.9	63.5	66.3
3. Redistribution.							
Gini of income before tax	0.577	0.511	0.503	0.596	0.570	0.596	0.636
Gini of income after tax	0.569	0.476	0.495	0.595	0.565	0.590	0.631
Reynolds-Smolensky	0.008	0.035	0.009	0.001	0.005	0.006	0.005
<i>Memo: Revenue as % of the GDP</i>	1.1	1.2	1.8	0.5	1.2	1.0	2.3
(*) Quintile 5							
<i>Source: elaboration based on Trejos (2007); Díaz (2008); ICEFI (2007a y 2009); Garriga et al (2007); Roca (2007); & Rodríguez (2007)</i>							

Fiscal Policy and Equity in MERCOSUR

Tax System: Personal Income Tax

Income Personal Tax - Progressivity			
<i>Deciles according to individuals' income</i>			
1. Progressivity	Brasil	Chile	Uruguay
Effective tax/ income ratio (as %)			
1 st -	0.1	0	0
2 nd -	0.2	0	0
2 nd +	9.1	0.77	2.6
1 st +	31.6	10.3	7
Kakwani ((if < 0 => regressive; if > 0 => progressive)	0.3063	0.3887	0.3635
2. Who pays the tax	Brasil	Chile	Uruguay
40% -	1%	0%	0%
20% +	91%	99%	92%
20% + / 40% -	--	--	--
% of income of 20+ (*)	-	62.45	52.5
3. Redistribución	Brasil	Chile	Uruguay
Gini of income before tax	0.651	0.5791	0.4995
Gini of income after tax	0.618	0.5584	0.4874
Reynolds-Smolensky	0.033	0.0206	0.0121
Losers	9 & 10	10	10

Source: elaboration based on Fiscal Equity Series in Latin America of the IDB (Preliminar version 2010).

Fiscal Policy and Equity in Andean Countries

Tax System: Personal Income Tax

Income Personal Tax - Progressivity				
<i>Deciles according to individuals' income</i>				
1. Progressivity	Colombia	Ecuador	Peru	Venezuela
Effective tax/ income ratio (as %)				
1 st -	0.02	0.01	3.11	0
2 nd -	0.08	0.04	1.06	0
2 nd +	0.05	0.89	1.11	0
1 st +	3.07	2.56	1.67	0.99
Kakwani ((if < 0 => regressive; if > 0 => progressive)	0.357	0.423	0.047	0.417
2. Who pays the tax	Colombia	Ecuador	Peru	Venezuela
40% -	0%	0%	0%	0%
20% +	99%	93%	64%	100%
20% + / 40% -	497.00	311.00	6.7	--
<i>Source: elaboration based on Cossio (2005); Zapata and Ariza (2005); Arteta (2005); Haughton (2005); Garcia and Salvato (2005).</i>				

IDB Series on FISCAL EQUITY

Equidad Fiscal en Centroamérica, Panamá y República Dominicana / Fiscal Equity in Central America, Panama and Dominican Republic

<http://biblioteca.programaeurosocial.eu/PDF/Fiscalidad/Fiscal9.pdf>

Fiscal Policy and Equity: Estimation of the Progressivity and Redistributive Capacity of Taxes and Social Public Expenditure in the Andean Countries

www.iadb.org/document.cfm?id=113463

Equidad Fiscal en Brasil, Chile, Paraguay and Uruguay / Fiscal Equity in Brazil, Chile, Paraguay and Uruguay

<http://www.eurosocialfiscal.org/uploads/documentos/centrodoc/6449893fc621b9dbdf16df6e7a3ca293.pdf>

El IVA Personalizado / Personalized VAT

http://www.eclac.org/ilpes/noticias/paginas/1/41751/alberto_barreix_El_IVA_Personalizado_BID_Eurosocial_IEF_2010_doc.pdf