Dutch Disease, Deindustrialization and Employment in South America

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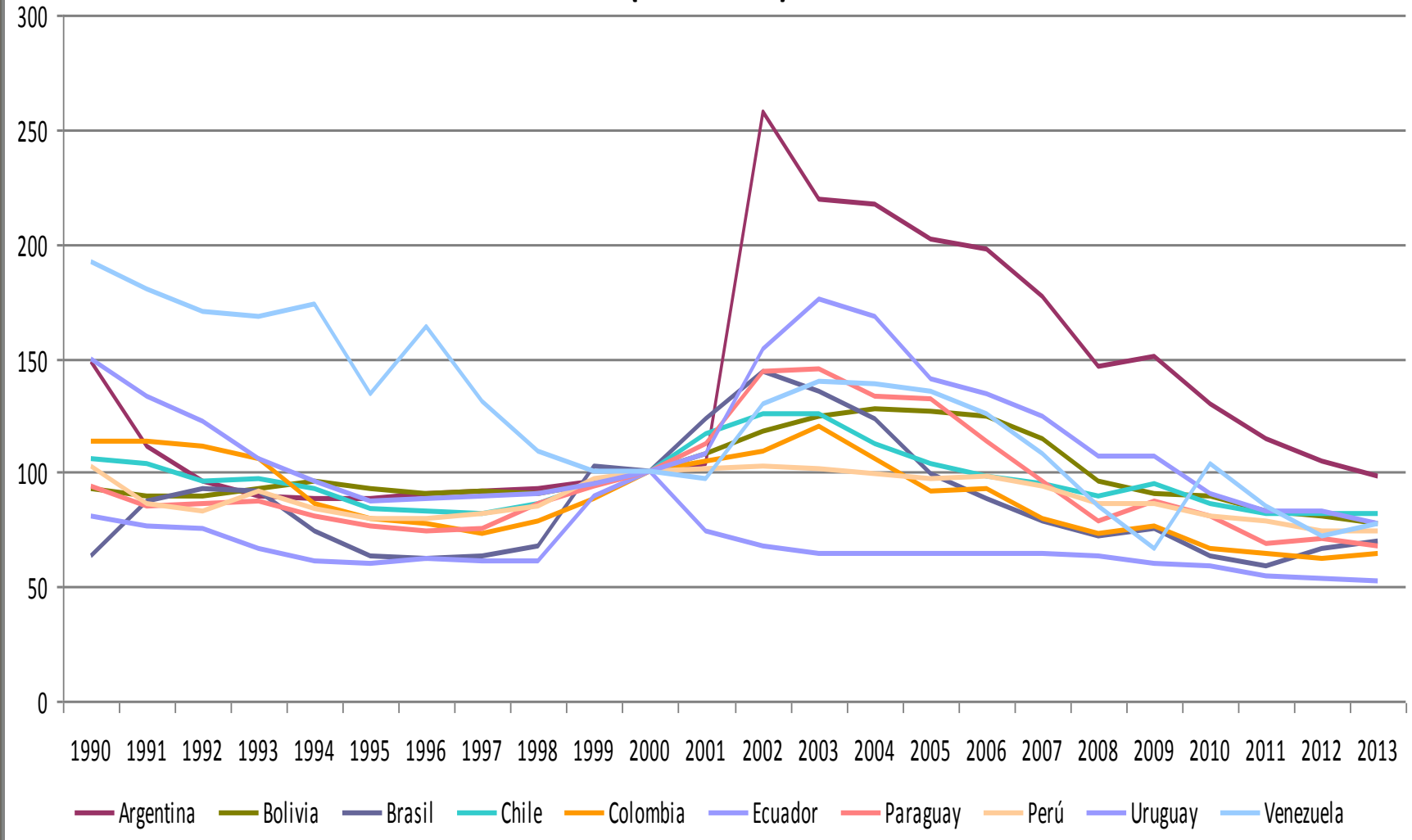
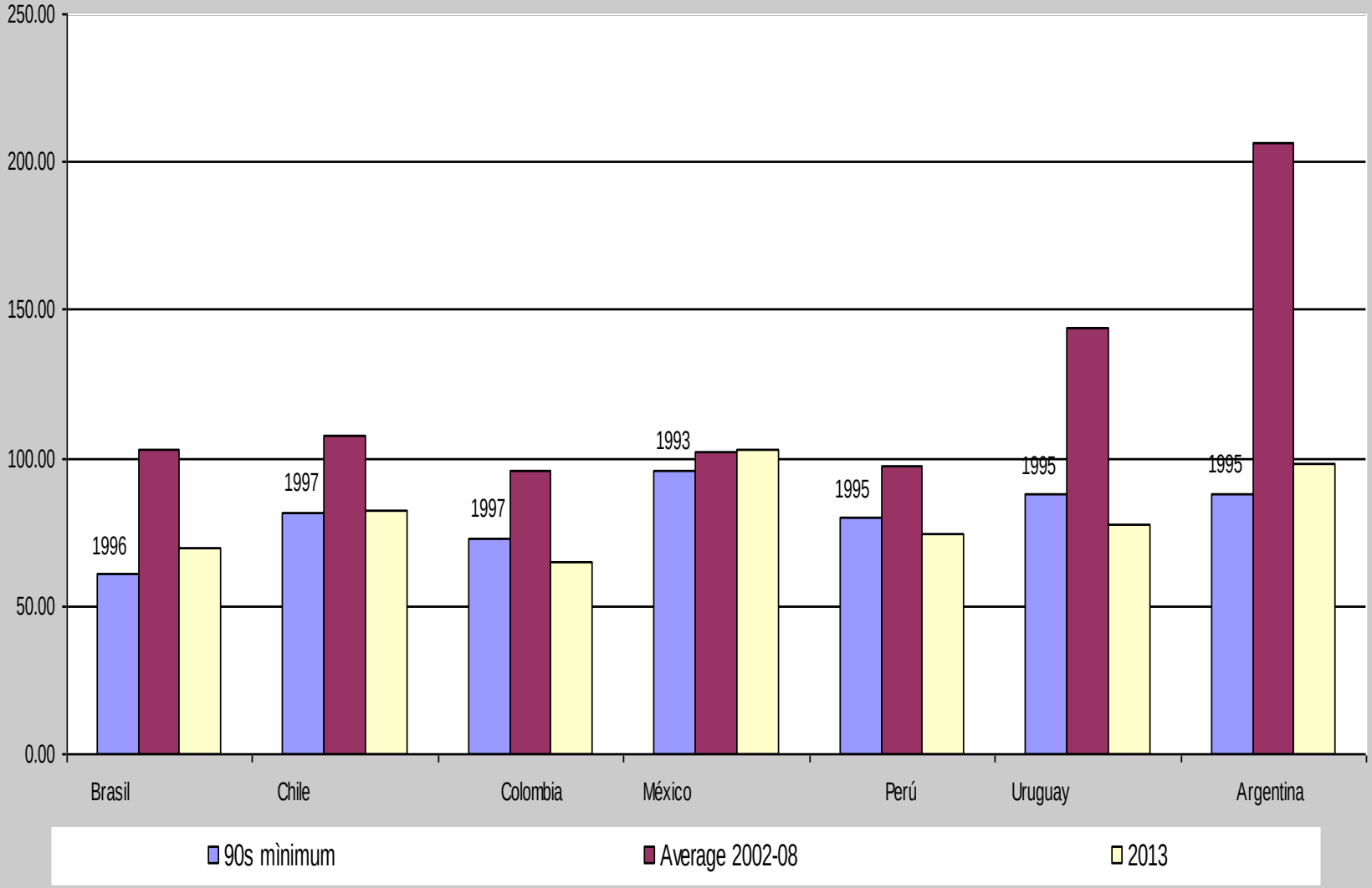
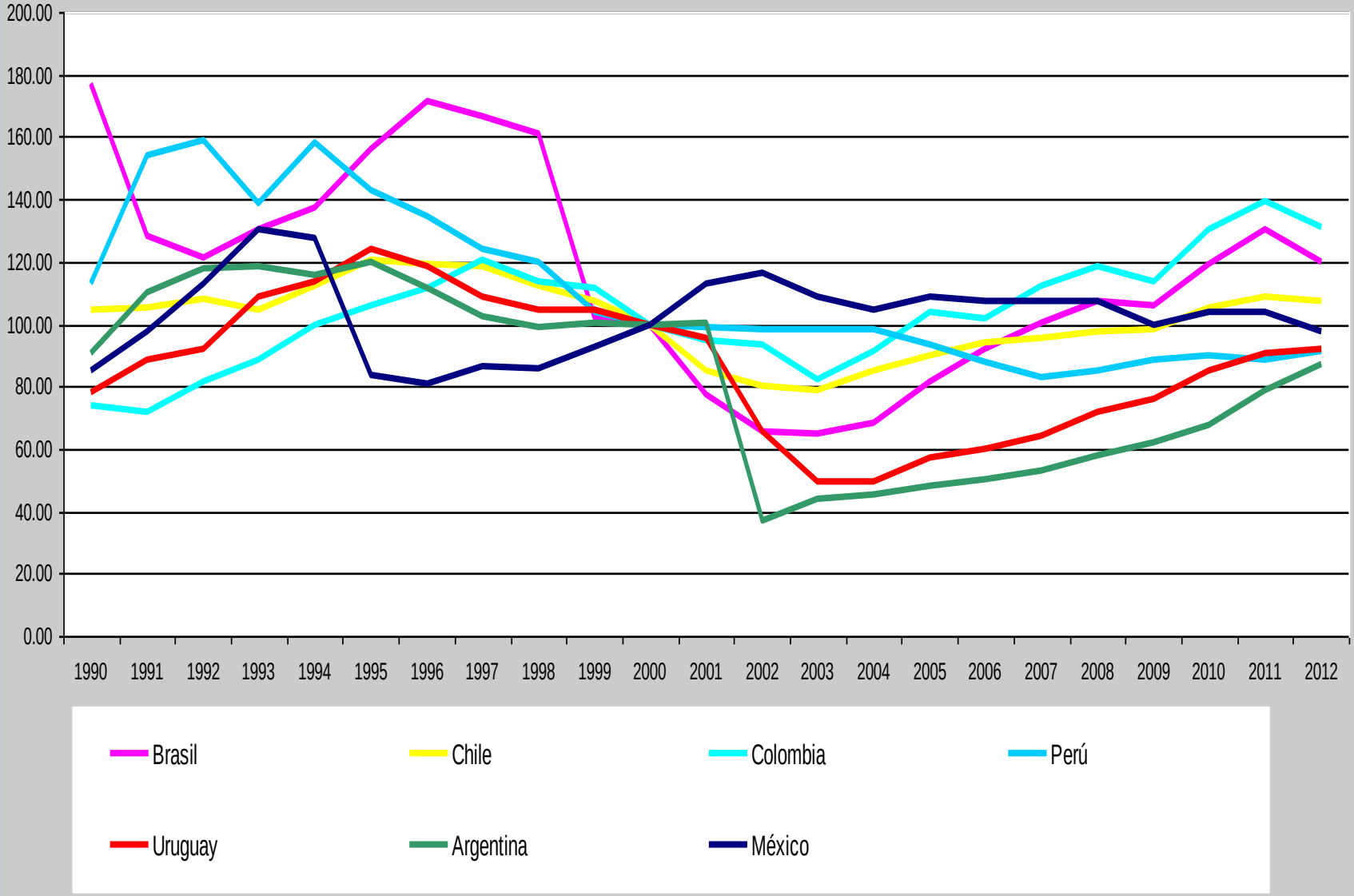
Real bilateral exchange rates against the US dollar, South America (2000=100)

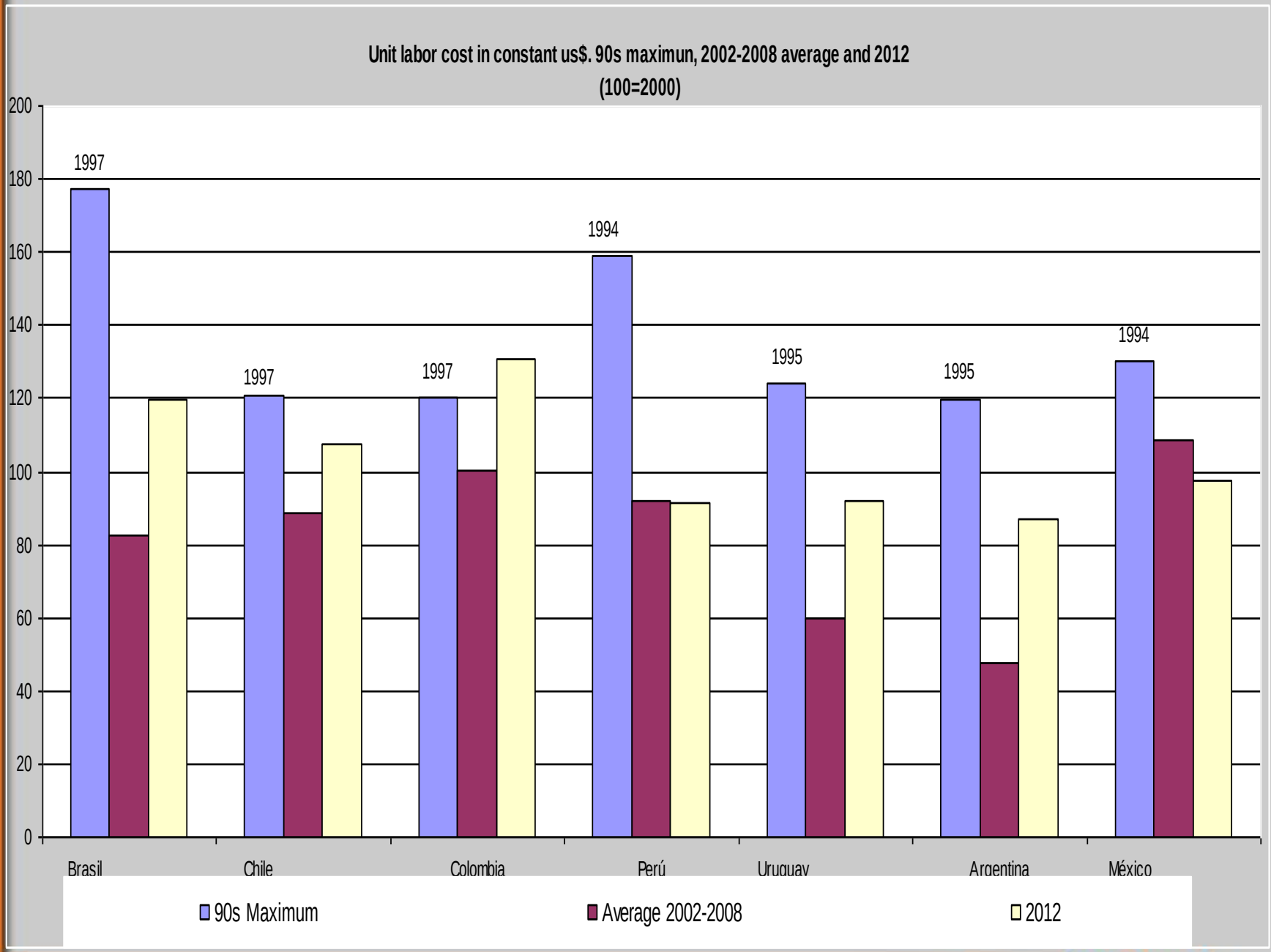


Real bilateral exchange rates against the US dollar. 90s mìnimum, average 2002-08 and 2013
(100=2000)

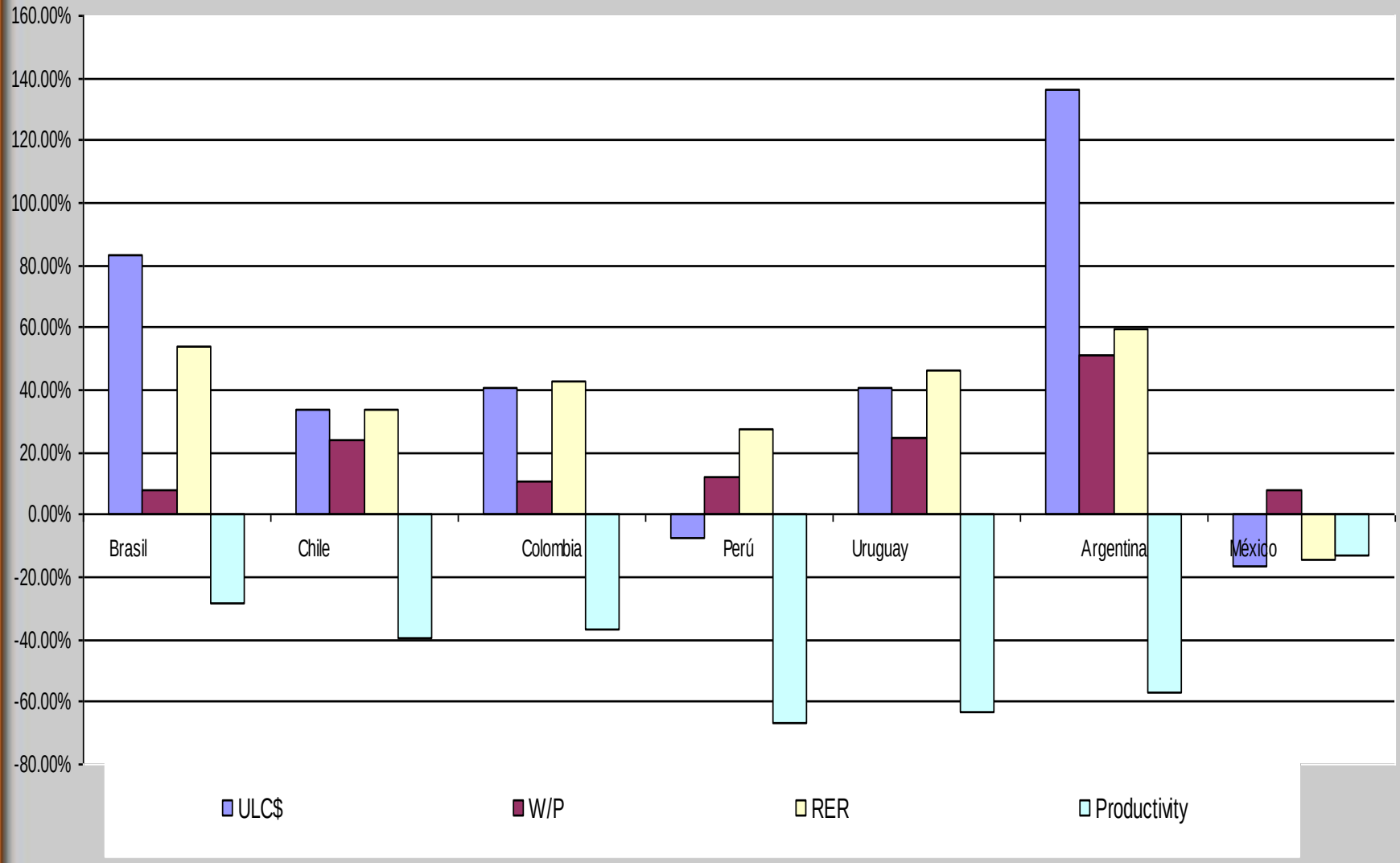


Unit labor cost in constant us$. Selected countries
(100=2000)

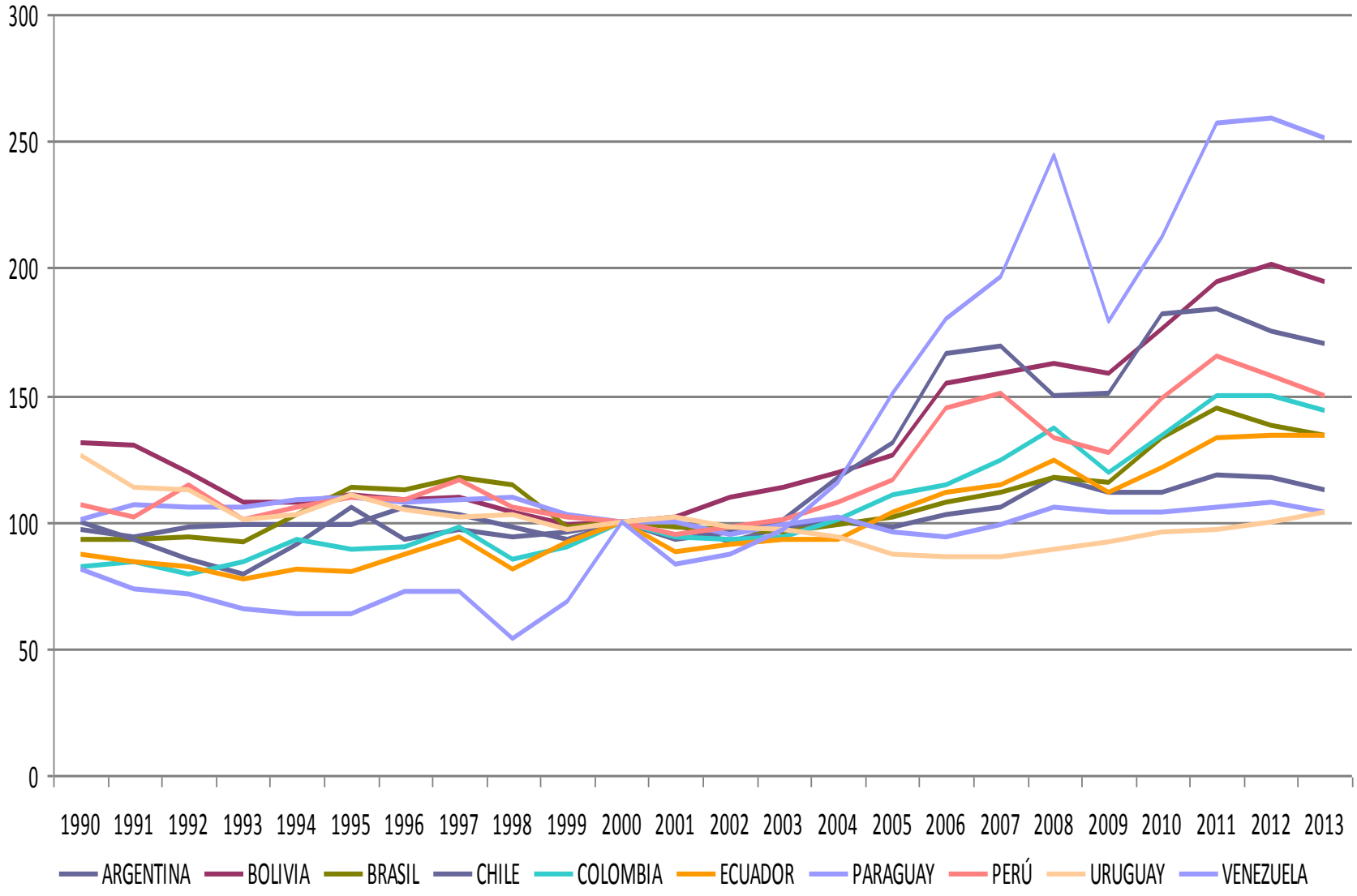



Unit labor cost in constant us$. 90s maximun, 2002-2008 average and 2012
(100=2000)
200
180
160
140
120
100
80
60
40
20
0
1997
1997
1997
1994
1995
1995
1994
Brasil
Chile
Colombia
Perú
Uruguay
Argentina
México
90s Maximum
Average 2002-2008
2012

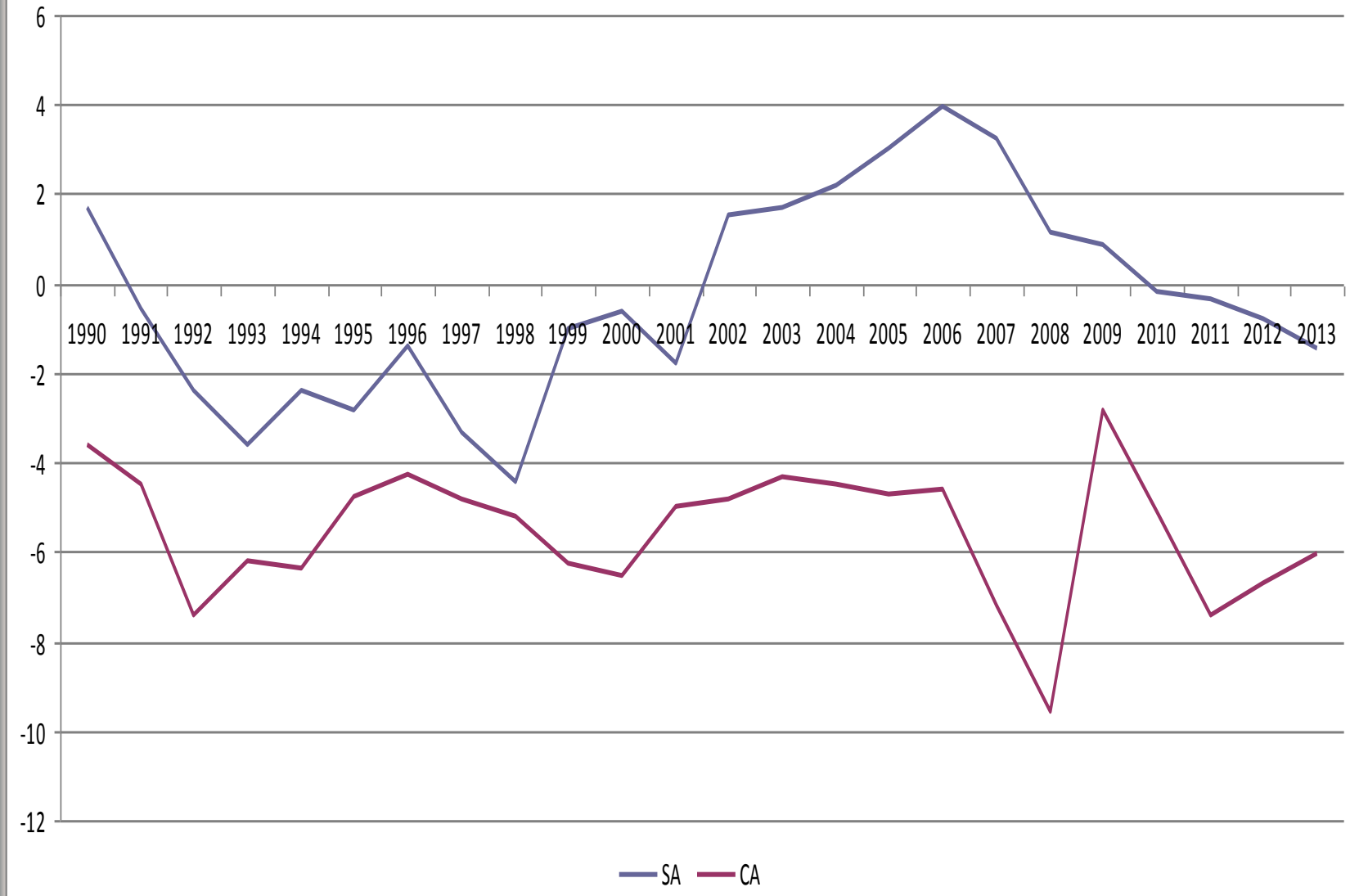
ULC% 2002 - 2012 increase: descomposition in explanatory factors
(in %)



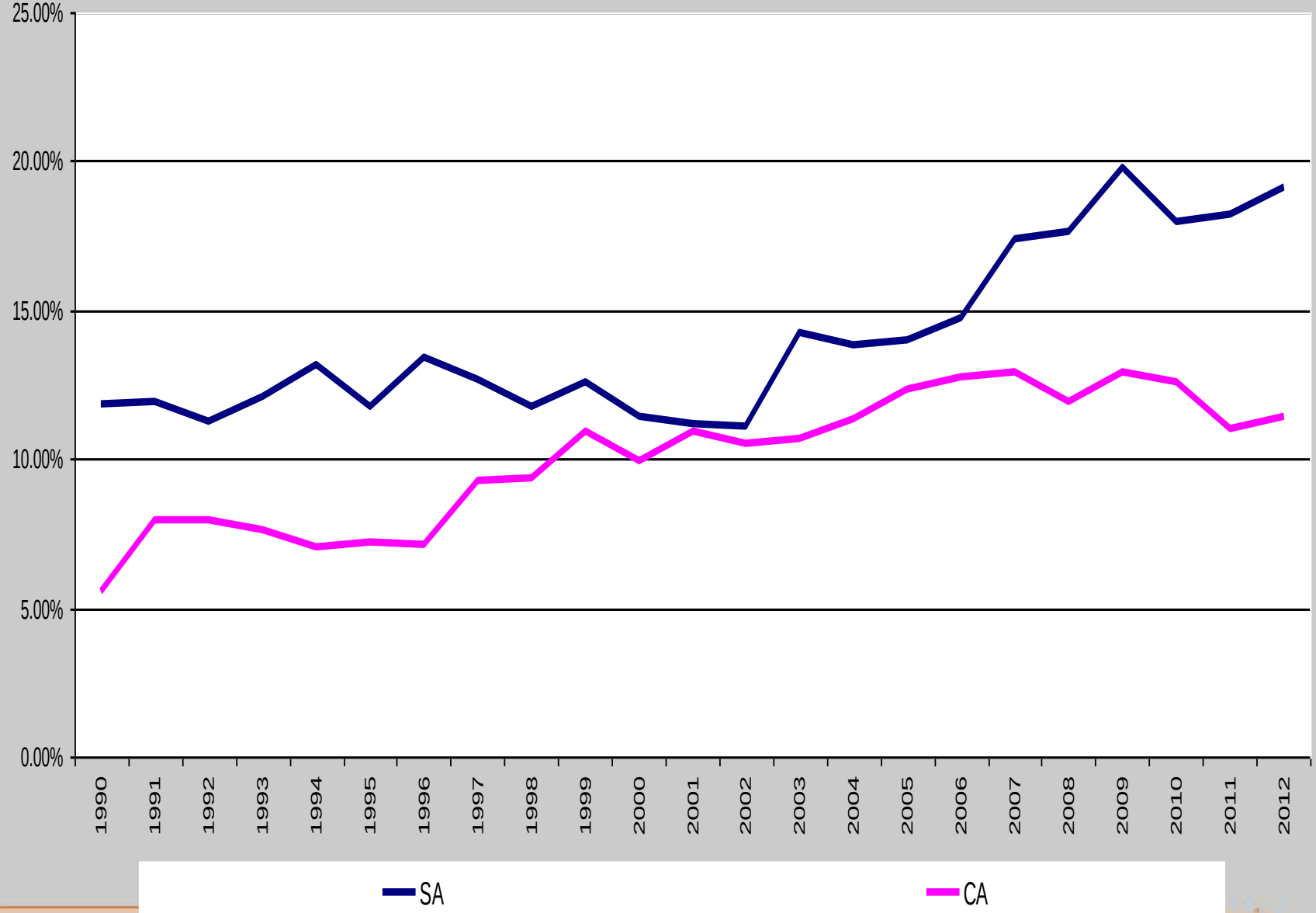
Terms of trade indexes for South American countries (2000=100)



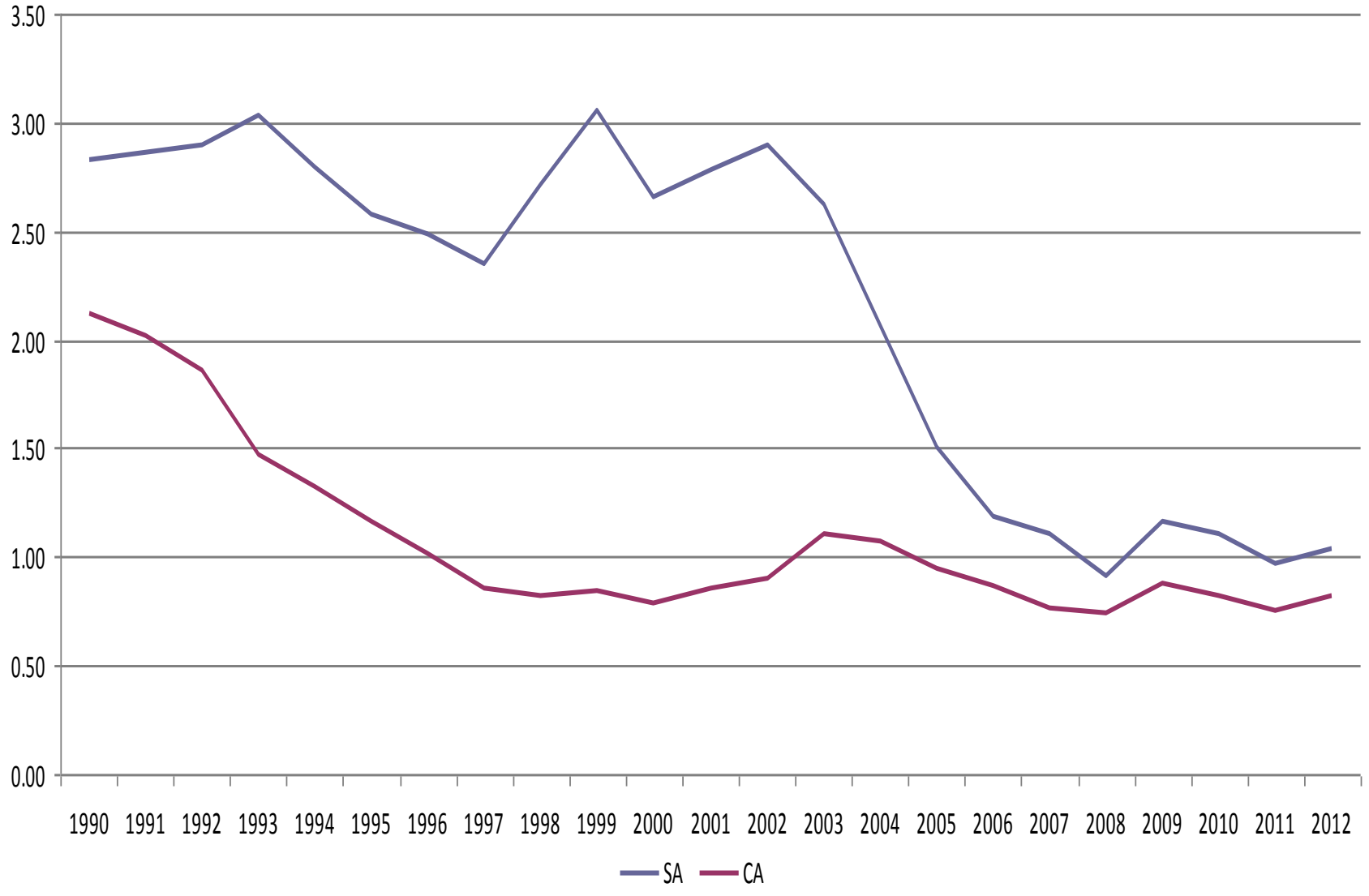
Current account result, average by subregion (% of GDP)



Foreign reserves as % of GDP average by subregions

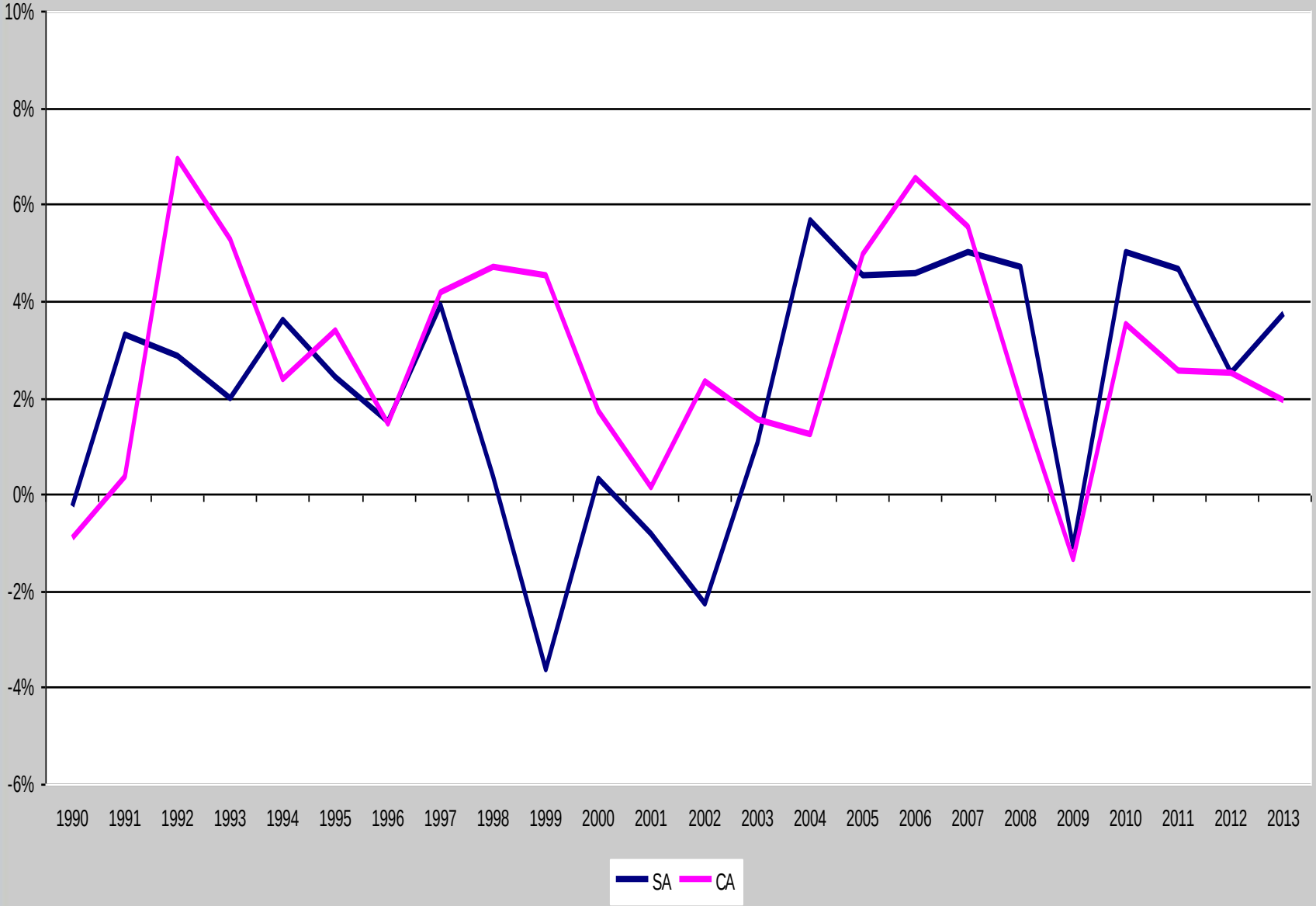


Ratio of foreign debt to total exports, average by subregions

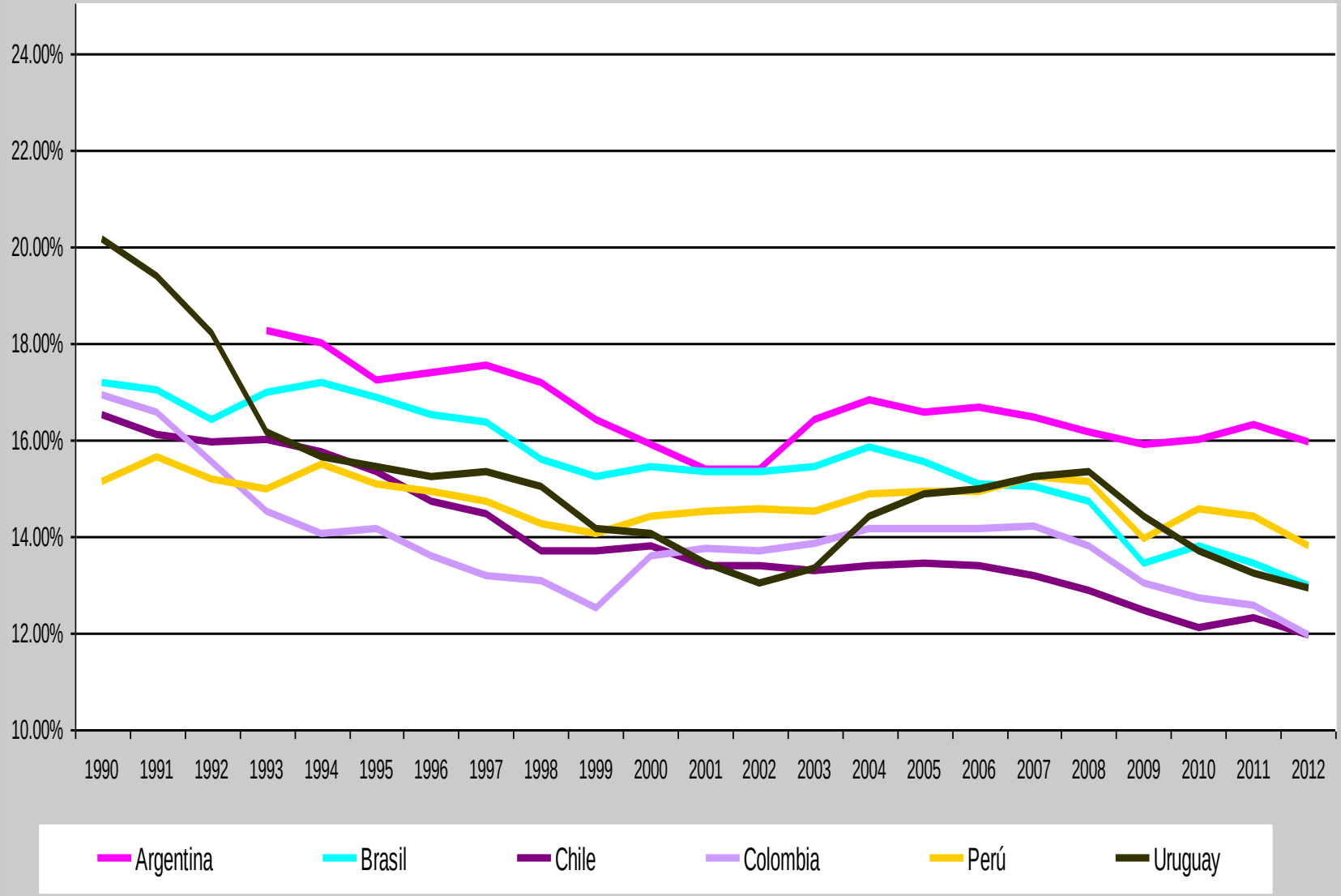


GDP growth rates for emerging and developing economies, advanced economies and Latin American economies

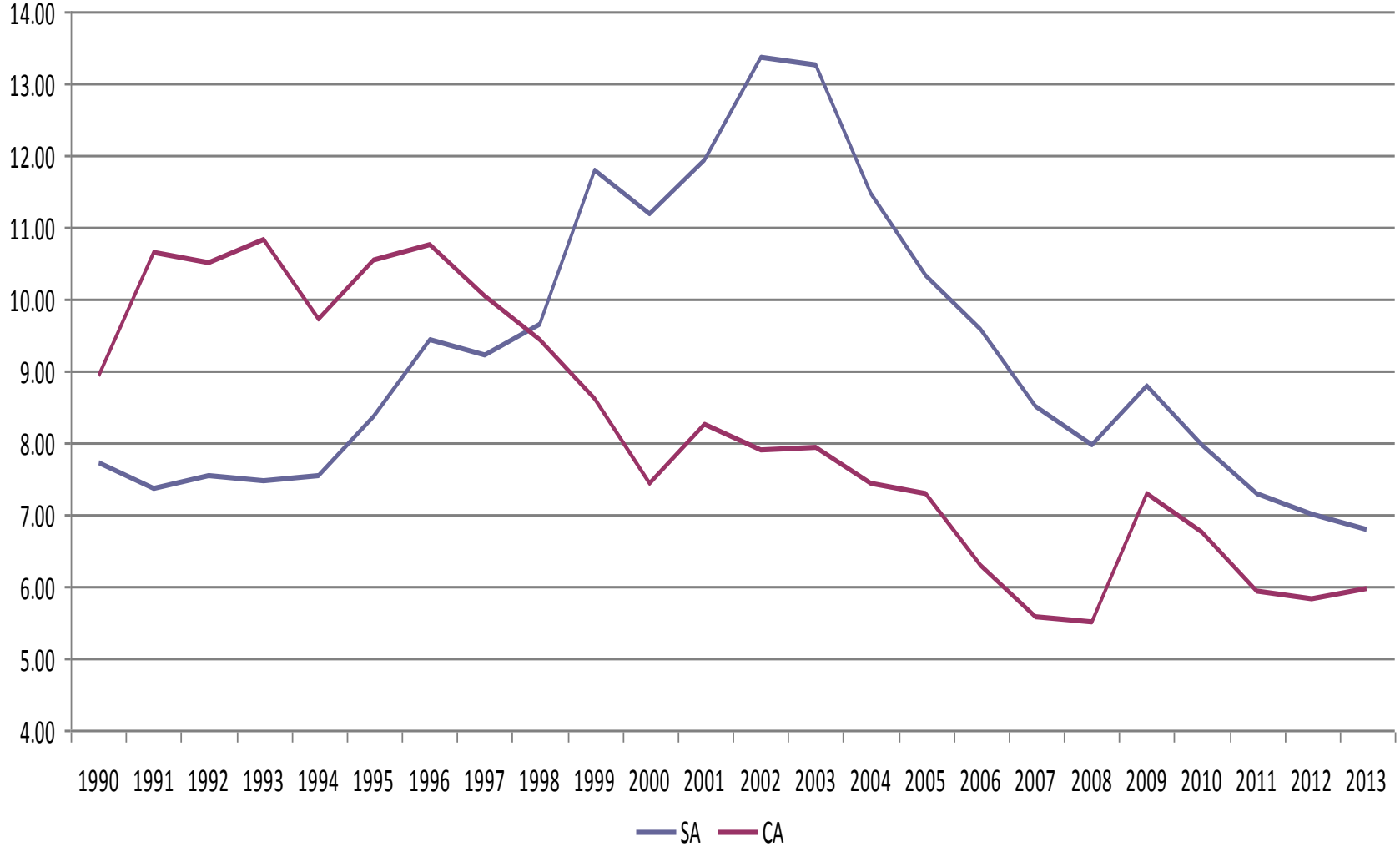
Average rate of growth of per capita GDP (SA and CA)



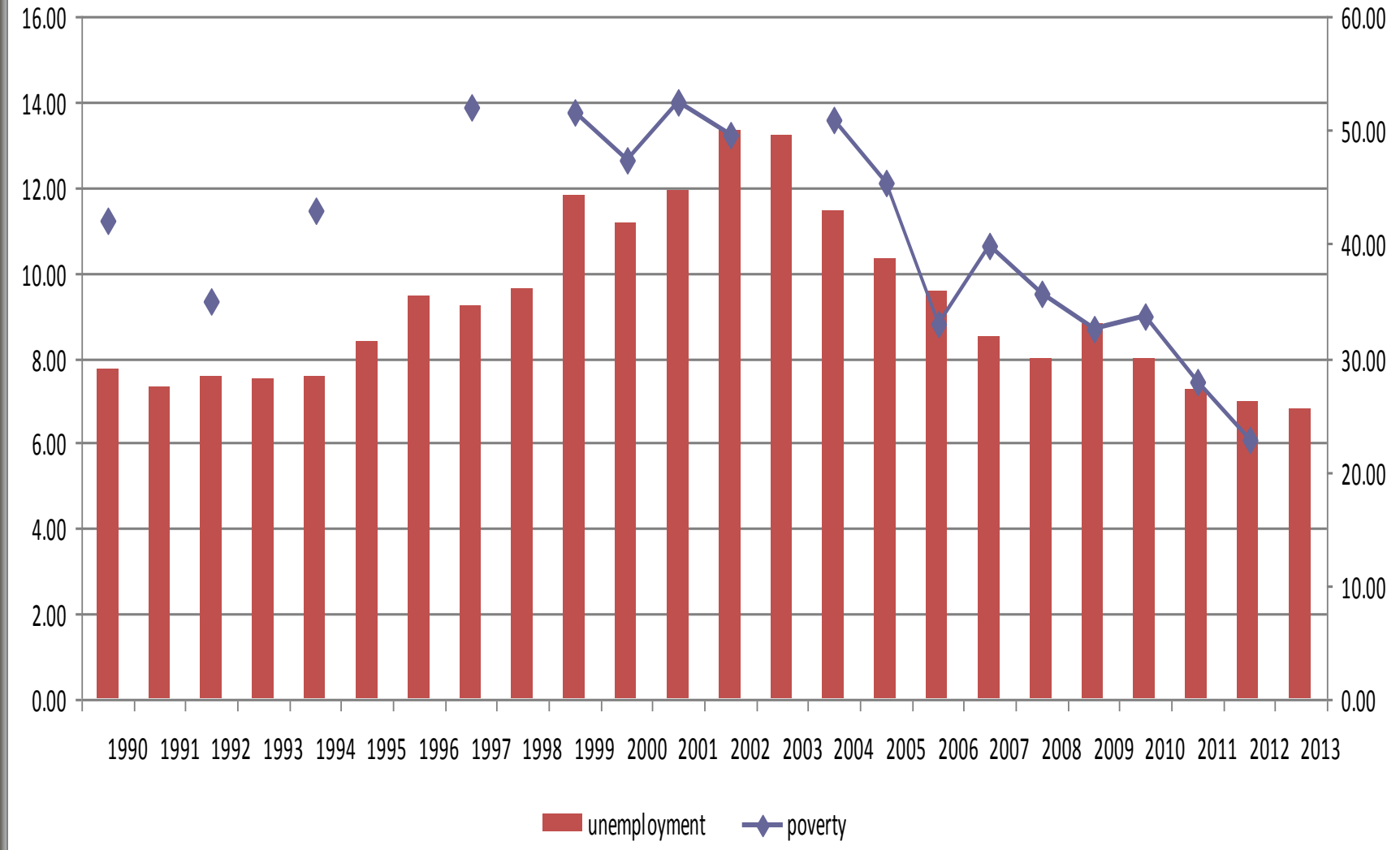
Manufacturing as a % of GDP at constant prices



Average unemployment rates in SA and CA countries (% of the active population)



Average unemployment rates (% of the active population) and proverty incidence (%of the population) in SA countries



Damill, Mario and Roberto Frenkel “Macroeconomic Policies, Growth, Employment, and Inequality in Latin America” Mario) in UNU-WIDER Working Paper No. 2012/23. UNU-WIDER World Institute for Development Economic Research, Helsinki, February 2012.

Damill, Mario and Roberto Frenkel “Macroeconomic Policies, Growth, Employment, Poverty and Inequality in Latin America” in G.A. Cornia (ed.) Falling Inequality in Latin America: Policy Changes and Lessons. Oxford University Press, 2014.

The estimated model is:

$$u(t) = g\, y(t) + e\, r(t-i) + k + \varepsilon u(t) \qquad (1)$$

$$V(t) = f\, U(t) + h\, p(t) + j + \varepsilon V(t) \qquad (2)$$

U is the unemployment rate, Y represents the GDP and R is the bilateral real exchange rate with USA (u, y and r represent, respectively, the annual rates of variation of U, Y and R), V is the poverty rate, and p is the inflation rate. The coefficients to be determined are g, e, k, f, h; i is a time lag to be determined and εu and εV are stochastic shocks.

We also used the equation

$$y(t) = a\, r(t-i) + b + \varepsilon y(t) \qquad (3)$$

only to obtain estimations of εy(t) to be used in place of y(t) in estimating Equation (1).

Dependent Variable: DLOG(U)
Method: Panel Least Squares
Sample (adjusted): 1993 2010
Cross-sections included: 10
Total panel (balanced) observations: 180
White diagonal standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000409	0.010473	-0.039084	0.9689
RESEQ01 (DLOG(Y))	-1.013994	0.346317	-2.927937	0.0039
DLOG(R(-2))	-0.327285	0.098329	-3.328484	0.0011

Effects Specification
Period fixed (dummy variables)

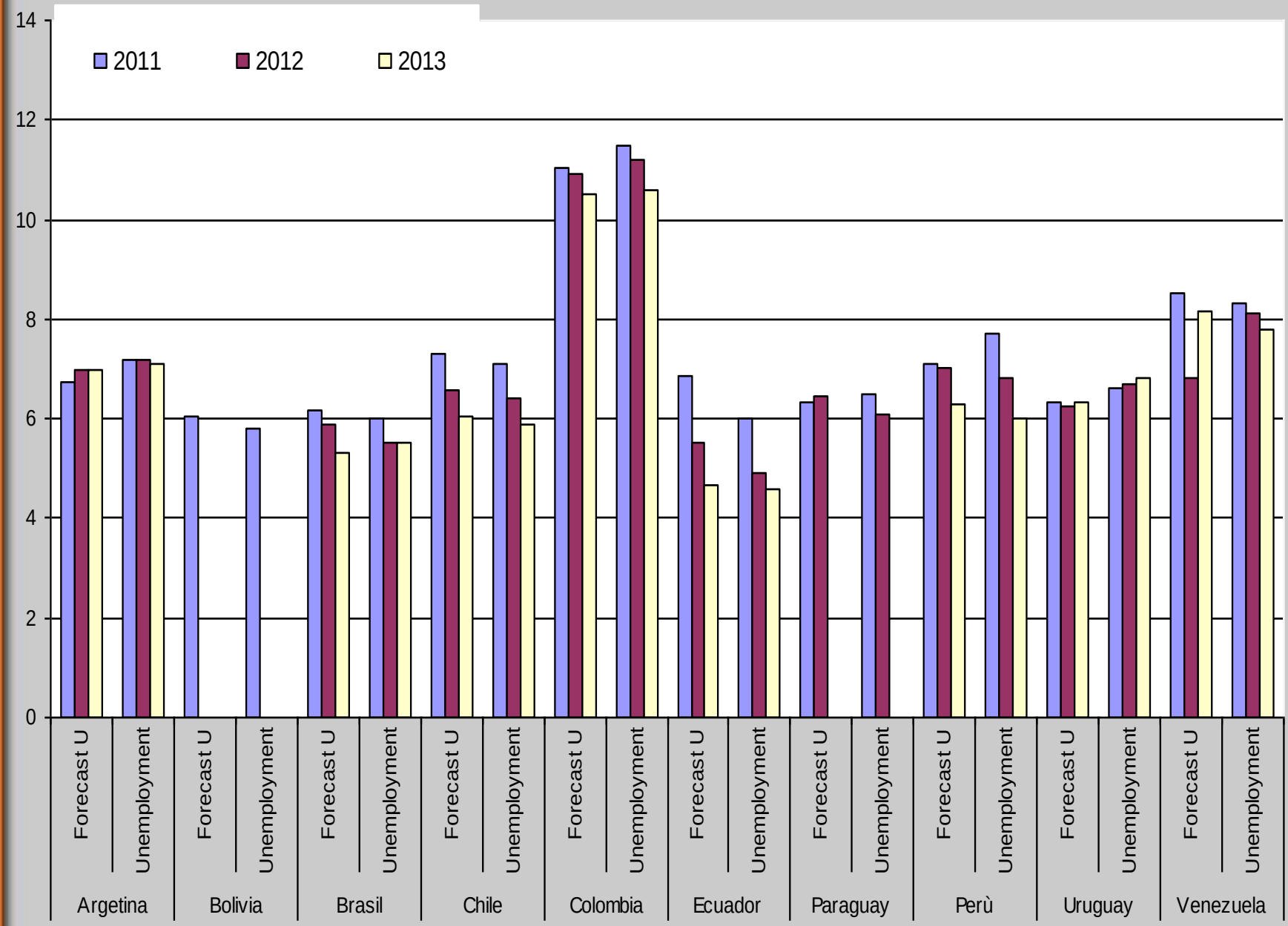
R-squared	0.381087	Mean dependent var	0.003560
Adjusted R-squared	0.307592	S.D. dependent var	0.169742
S.E. of regression	0.141244	Akaike info criterion	-0.972218
Sum squared resid	3.191973	Schwarz criterion	-0.617445
Log likelihood	107.4996	F-statistic	5.185155
Durbin-Watson stat	2.367284	Prob(F-statistic)	0.000000

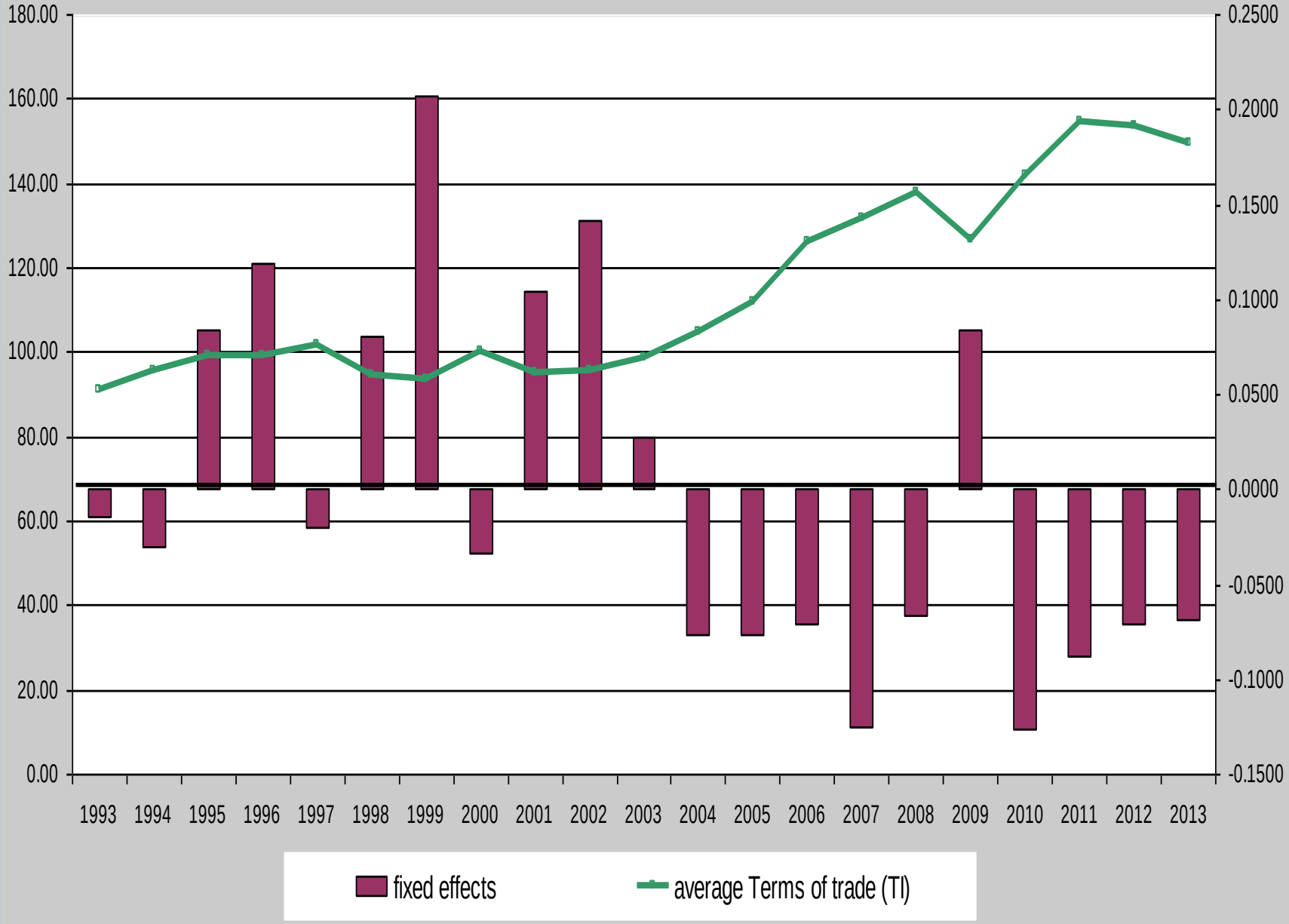
Dependent Variable: DLOG(U)
Method: Panel Least Squares
Sample (adjusted): 1993 2013
Cross-sections included: 10
Total panel (unbalanced) observations: 207
White diagonal standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.011209	0.009308	-1.204228	0.2300
RESEQ03 (DLOG(Y))	-0.985059	0.330387	-2.981534	0.0033
DLOG(R(-2))	-0.272845	0.086708	-3.146717	0.0019

Effects Specification
Period fixed (dummy variables)

R-squared	0.386209	Mean dependent var	0.006303
Adjusted R-squared	0.312821	S.D. dependent var	0.161736
S.E. of regression	0.134073	Akaike info criterion	1.076429
Sum squared resid	3.307492	Schwarz criterion	0.706127
Log likelihood	134.4104	F-statistic	5.262552
Durbin-Watson stat	2.326757	Prob(F-statistic)	0.000000


14
12
10
8
6
4
2
0
2011
2012
2013
Forecast U
Unemployment
Argetina
Bolivia
Brasil
Chile
Colombia
Ecuador
Paraguay
Perù
Uruguay
Venezuela


180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
0.2500
0.2000
0.1500
0.1000
0.0500
0.0000
-0.0500
-0.1000
-0.1500
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2013
fixed effects
average Terms of trade (TI)

The estimated model is:

$$u(t) = g\, y(t) + e\, r(t-i) + a\, ti(t)\, k + \varepsilon u(t) \qquad (1)$$

U is the unemployment rate, Y represents the GDP, R is the bilateral real exchange rate with USA and TI are the terms of trade (u, y, r and ti represent, respectively, the annual rates of variation of U, Y, R and TI). The coefficients to be determined are g, e, a; i is a time lag to be determined and εu are stochastic shocks.

We also use the equation

$$y(t) = b\, r(t-i) + c\, ti(t) + \varepsilon y(t) \qquad (2)$$

only to obtain estimations of εy(t) to be used in place of y(t) in estimating Equation (1).

Dependent Variable: DLOG(U)
Method: Panel Least Squares
Sample (adjusted): 1993 2010
Cross-sections included: 10
Total panel (balanced) observations: 180
White diagonal standard errors & covariance (d.f. corrected)

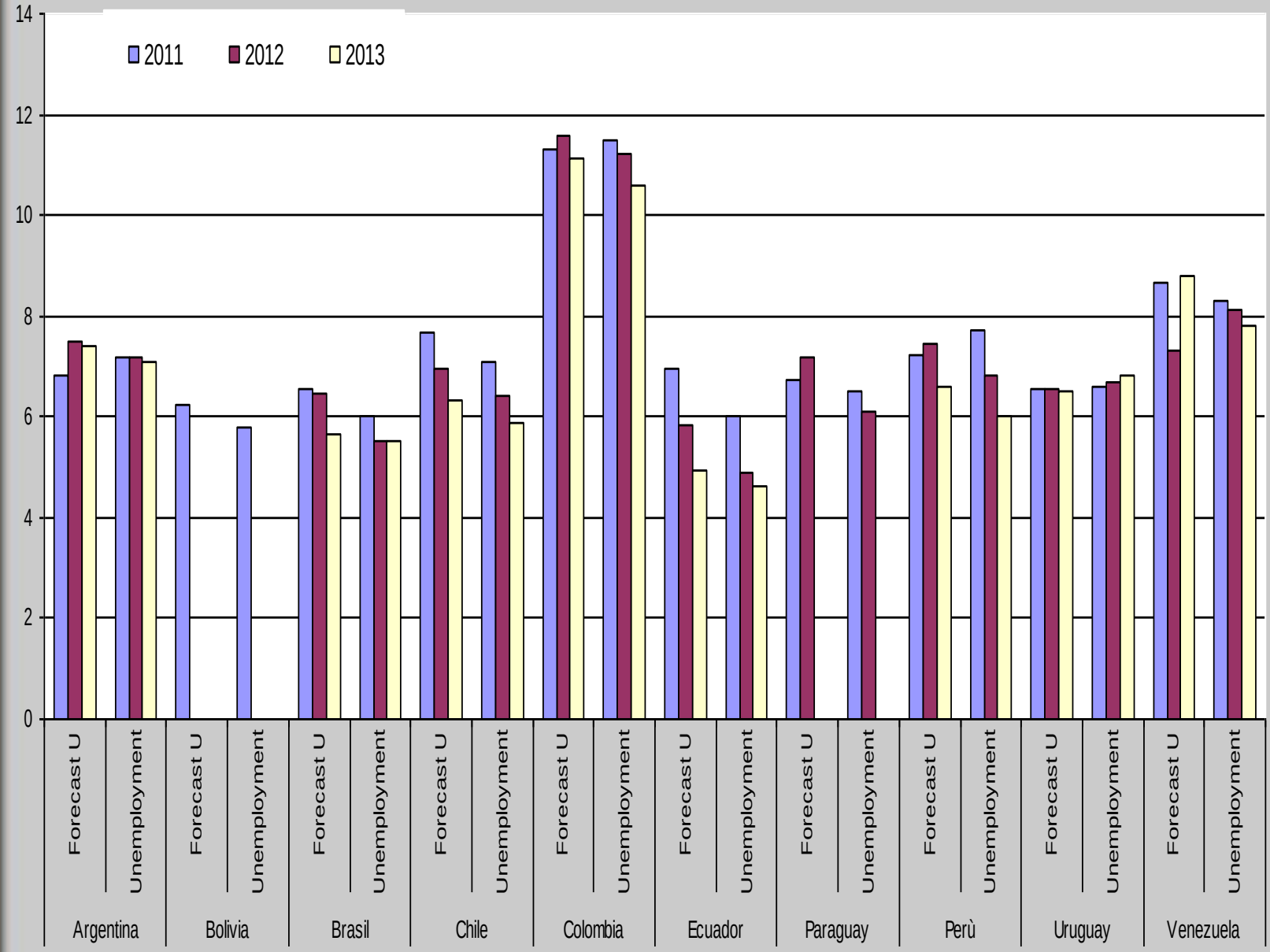
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.009281	0.011363	0.816757	0.4152
RESEQ01DTI	-1.853309	0.225480	-8.219380	0.0000
DLOG(R(-2))	-0.267061	0.068690	-3.887899	0.0001
DLOG(TI)	-0.432308	0.098456	-4.390890	0.0000

R-squared	0.269165	Mean dependent var	0.003560
Adjusted R-squared	0.256707	S.D. dependent var	0.169742
S.E. of regression	0.146342	Akaike info criterion	0.983772
Sum squared resid	3.769203	Schwarz criterion	0.912817
Log likelihood	92.53945	F-statistic	21.60676
Durbin-Watson stat	2.262417	Prob(F-statistic)	0.000000

Dependent Variable: DLOG(U)
Method: Panel Least Squares
Sample (adjusted): 1993 2013
Cross-sections included: 10
Total panel (unbalanced) observations: 207
White diagonal standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.003027	0.010126	-0.298964	0.7653
RESEQ03DTI	-1.864894	0.218599	-8.531135	0.0000
DLOG(R(-2))	-0.213009	0.060209	-3.537830	0.0005
DLOG(TI)	-0.391467	0.090229	-4.338581	0.0000

R-squared	0.259058	Mean dependent var	-0.006303
Adjusted R-squared	0.248108	S.D. dependent var	0.161736
S.E. of regression	0.140244	Akaike info criterion	-1.071737
Sum squared resid	3.992658	Schwarz criterion	-1.007337
Log likelihood	114.9248	F-statistic	23.65856
Durbin-Watson stat	2.177015	Prob(F-statistic)	0.000000


14
12
10
8
6
4
2
0
2011
2012
2013
Forecast U
Unemployment
Argentina
Bolivia
Brasil
Chile
Colombia
Ecuador
Paraguay
Perù
Uruguay
Venezuela