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The New Structuralist Macroeconomics
and Income Inequality

G. A. Cornia

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The New Structuralist Macroeconomics and Income Inequality[1]

Abstract. The paper compares and assesses the income inequality impact of three macroeconomic policy approaches, that is the theoretical Washington Consensus codified by John Williamson, the 'real-life' Washington Consensus and the structuralist macro approach which evolved during the last decade in several countries of Latin America, Sub-Saharan Africa and South East Asia, though not in those of the OECD and Eastern Europe. The paper argues that while the 'real-life' Washington Consensus raised income disparity in the countries which adopted such approach during the last three decades, the new structuralist macroeconomics helped reducing income inequality during the last decade in the countries that adopted such approach. The paper presents initial econometric evidence in this regard.

Keywords: macroeconomic policies, Washington Consensus, structuralist macroeconomics, income inequality, developing countries

JEL classification: D31, E44, E5, E61, E62, F32.

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1. Introduction

During the last decade several developing countries adopted a new set of open economy macroeconomic policies which – though sharing some elements with the liberal approach (e.g. a focus on low budget deficit and inflation) differ substantially from it in several other respects. In some of these developing countries, such new approach appears to have improved growth, financial stability and income inequality while helping to preserve a reasonable macro stability in the face of the severe external shocks of 2008-2011. This paper aims at distilling the common elements of this new approach – which, following Bresser Pereira (2011), we name 'the new structuralist macroeconomics' – and at analyzing its impact on income inequality.

The region which most frequently adopted in recent times this new approach is Latin America, in particular South America, but a few Sub-Saharan African and a South East Asian countries also introduced macroeconomic policy changes that helped reducing income inequality (Cornia and Martorano 2012). In other countries (such as China and Vietnam), macroeconomic policy continued to differ, as in prior decades, from the orthodox approach. In these state-controlled selectively-open economies, trade integration progressed fast but controls on imports, capital movements and the domestic financial sector remained in place. In contrast, several economies of Eastern Europe and the Former Soviet Union (EE-FSU) adopted during the 2000s liberal macroeconomic policies featuring fixed exchange rates, large current account balance deficits and heavy reliance on external indebtedness, that is approaches which exacerbated their crisis in 2009.

As noted, the new approach is not a radically new model but important differences exist in relation to the *theoretical* Washington Consensus (WC henceforth) approach codified in the early 1990s by John Williamson. The differences are even greater when considering the *real life* WC which dominated policy making in the 1980s and 1990s (see later). Three key differences stand out in relation to the latter. They concern: the domestic macro policy regimes,

the regulation of the domestic financial sector, and the modalities of integration into the international financial system.

In parallel to the introduction of these macroeconomic policy changes, the last decade witnessed a fall in income inequality in most Latin American countries, 13 Sub-Saharan countries and some Asian economies (Table 6). The question therefore spontaneously arises about the relation between macroeconomic changes and improvements in income inequality in developing countries.

2. Liberal Macroeconomics in Theory and in Real Life

There is considerable ambiguity about the nature of the liberal macroeconomic and development model adopted on a grand scale in the developing countries during the 1980s and 1990s, the transitional economies in the 1990s and 2000s, and most OECD countries during the current decade. Such approach is normally referred to as the 'Washington Consensus' (WC) i.e. a set of ten policies on which a broad consensus had formed among Washington-based institutions (Williamson 1990). However, as noted by Birdsall et al. (2010), in contrast to the popular perception, Williamson's ten policy points were quite different from the market-fundamentalist policies introduced in many countries in the 1980s, 1990s and –at times – the 2000s. Paradoxically, as shown in Table 1, actual policy implementation in many countries was much more extreme, particularly with respect to taxation, financial liberalization and exchange rate policy. Williamson (2003) himself noted later on, "the Consensus [developed into] …. an unjust set of neoliberal policies … imposed on hapless countries by the Washington-based international financial institutions". Thus, popular references to the WC relate to policies implemented <u>in practice</u> by many countries, i.e. policies that - as shown by Colum 3 of Table 1 – were often at odds, not only with the new structuralist macroeconomics which has slowly emerged during the last decade, but also with Williamson's original Decalogue of 1990.

The scope of the liberal macroeconomic package applied in the advanced economies and exported to many developing countries was quite narrow and

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the number of its instruments quite limited (Blanchard et al., 2010). Macro policy had a main target – low inflation (2 percent) – which had to be achieved through one key instrument, i.e. the policy rate set by an independent Central Bank focussing on inflation targeting and the stabilization of inflationary expectations. The deep seated belief was that as long as inflation was low and stable, the economy operated close to its output frontier while avoiding at the same time a rise of the twin deficits and public debt beyond sustainable thresholds. In such approach fiscal policy plaid a secondary role, due to lags in tax collection and expenditure cuts, the limited depth of domestic bond markets and – especially – skepticism about the ability of governments to withstand the political pressures of interest groups. In any case, deficits had to be reduced mainly through expenditure cuts rather than tax increases which were seen as a cause of economic inefficiency. Such approach made little attempts to use discretionary countercyclical fiscal policies, while financial regulation and banking policies aiming at promoting domestic savings,financial intermediation and financial stability were seen as largely outside the scope of macroeconomic policy (*ibid*)[2].

In brief, the standard measures included in the *de facto* WC liberal package included (Table 1, column 3): (a) a low budget deficit to be achieved quickly, including in periods of recession (a fact that entailed a strong pro-cyclicality of fiscal policy); (b) low deficits were to be achieved by cutting expenditure, as tax policy during this period was influenced by the belief that "It may be more appropriate to reduce the size of government …. than to increase the level of

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[2] The IMF itself – for long the enforcer of orthodox macroeconomics – has gone through some re-thinking (Blanchard et al. 2010) and has been playing since 2009 a more positive role as a lender of last resort and in managing the recent crisis. The extent of this rethinking has however been questioned by a number of commentators. McKinley (2010), for instance, noted that while Blanchard et al argued that policymakers should monitor multiple macroeconomic targets (and not just the inflation rate) and use multiple instruments - including discretionary fiscal policies, exchange-rate policies and financial regulation in addition to monetary policies - in the end it appears that low-inflation remained the IMF top priority. (McKinley 2010:2) thus concluded that 'the IMF remains a long way from jettisoning the neoliberal underpinnings of its governing macroeconomic framework' leaving in this way virtually no 'policy space' for governments to determine their own macroeconomic policies.

taxation significantly above historical levels" (World Bank, 1991: 18)[3]; (c) a public debt/GDP ratio below a sustainable threshold of 60 percent (or similar level); (d) a restrictive monetary policy inspired by inflation-targeting focused on reaching a stable and low inflation; (e) an exchange rate regime which – in view of the liberalization of the capital account and spreading global financial integration – had to adopt either one of the two 'corner solutions', i.e. a pure float or hard peg (Table 2); (f) acceptance of sustainable large current account deficits funded by stable aid, FDI and liberalized portfolio inflows which however led to a growing dependence on foreign finance in many countries – including in several European economies in transition during the last decade; (g) limited scope for discretionary countercyclical fiscal policy; (h) neglect of financial regulation and financial intermediation by domestic banks as – given the enthusiasm for financial deregulation – regulation was seen as an inefficient intrusion in the functioning of credit markets. [4]

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[3] A panel study by Chu et al. (2004) points to an average drop of one percentage point in the tax/GDP ratio during the 1980s–1990s period, as opposed to a rise of 1.6 points between the 1970s and 1980s.

[4] During the 1980s and 1990s, a few countries experimented with alternative macro approaches. In 1985-7 Argentina, Peru and Brazil adopted 'populist macroeconomic policies' (Dornbusch and Edwards 1991) that emphasized fiscal and monetary expansion in the presence of large unused capacity, and paid less attention to inflation, deficit spending and the reaction of agents to administrative interventions. While Keynesian and structuralist theories suggest that it may work under conditions of low capacity utilization, such approach was continued also when the output gap had narrowed sharply, due to the search for short-term consensus or the inability to raise taxes. This approach lead to severe macro crises which offset its initial growth and distributive gains. Gradual stabilization approaches were experimented with success in the 1980s in Israel and Turkey and in the 1990s in Uzbekistan. A second alternative macro approach was followed in China which liberalized prices in steps using a dual track pricing system, redistributed state assets, used public banks to foster capital accumulation, controlled the capital account, managed the exchange rate, and retained high tariffs or contingents on imports. A third group followed the orthodox approach, but did so (as in Mauritius) after implementing for years a two-track system including a liberalized and a protected sector, and after having strengthened the domestic institutions and regulatory capacity. In turn, from 1992 to 1995, Chile introduced measures to discourage short-term portfolio inflows and managed the exchange rate. In Malaysia the key macro target was the growth of the tradable sector rather than price stability. Such goal was achieved by raising domestic public and private investment and attracting foreign direct investments by means of incentives and a liberal trading and capital account regime. Monetary policy was accommodating and allowed for some inflation, while fiscal policy was used to influence the level and allocation of public investment.

Table 1. Comparison between macroeconomic policy approaches

Policy area	Williamson's 1993 WC	The real-life WC	The new structuralist macroeconomics
1. Fiscal	- Low deficit (2-3%) as a precondition for growth. Not to be funded with the inflation tax	- low deficits - but large cyclical cuts → to 'illusory fiscal adjustment" - deficit to be closed by expenditure cuts and not by raising taxes	- Zero-small long term budget deficit - Countercyclical fiscal policy - stabilization funds/fiscal rules - Gradual budget cuts - Targeted safety nets as automatic stabilizers
2. Public expenditure: social prioritization	- Public spending to focus on areas with high economic returns (health, education and infrastructure)	- Deflationary adjustment policies lead to large cuts in spending on social sector and public investment	- Gradual increase in public social and infrastructural expenditure - Sizeable increases in 'income transfer programmes'
3. Foreign indebtedness (public and private)	Not included	- Large rise in public debt (from the 1970s) often leading to defaults	- Reduce public debt/GDP - Control rise of private debt - Mobilize domestic savings
4. Taxation	- Reduce efficiency cost of taxation - Horizontal equity	- Cut direct/trade taxes - Expand scope of VAT - Frequent drop in tax/GDP	- Raise tax/GDP to 'potential level' - Greater use of progr. taxes - Cuts in regressive excises
5. Monetary	- Interest rate liberalization	- Large and persistent deflationary rises in interest rates	- Low inflation not enough to minimize output gap - Moderate & countercyclical stance
6. Exchange rate	- Unified and competitive	- Either of the "two corner solutions" – i.e. hard pegs and free floats	- BCC-SCRER in most cases - Reserve accumulation - Intervention in currency markets
7. Trade	- Quantitative trade restrictions to be replaced by tariffs of around 10 %	- Similar	- Free trade policy with temp. control in case of crises - Diversification of exports/destinations - South–south trade
8. Current account	- Not included	- A 'sustainable' deficit financed by stable aid, FDI and portfolio flows	- Long term equilibrium or /surplus
9. Openness to FDI	- Barriers to FDI to be abolished - Equal treatment of FDIs	- Same - M&A- FDIs dominated	- Similar approach, in same cases with some selectivity
10. Openness to portfolio flows	- Not included	- Encouraged to finance development and for their disciplining role	- Introduce temp./permanent controls for inflows-outflows - Steer their allocation to traded sector - Sterilization growth money supply
11. Financial and banking regulation	Financial de-repression	- Financial de-repression - Financial regulation not a macro policy tool	- Prudential regulation and supervision is essential for micro/macro stability - Expand domestic credit during crises

Source: Author's compilation drawing in part on Rodrik (2007)

Table 2. *De jure* classification of exchange rate regimes, percentages of total observations from 167 countries (the data refer to 170 countries)

Exchange rate regime	1970–1979	1980–1989	1990–1999	2005-7
A. Pegged regimes[/1]	84.8	68.4	46.6	45.9
B. Intermediate regimes [/2]	11.0	22.5	26.4	46.6
C. Free floating[/3]	4.3	9.1	27.0	7.5

Source: Cornia (2006) for the first three columns and Ilzetzki, Reinhart and Rogoff (2008) for the latter period Note: 1/ includes hard pegs, and single currency and basket pegs; 2/ floats with ruled-based or discretionary interventions; /3 floats with light or no interventions

The success of this approach was to be assessed in terms of short term changes in output gap, inflation, twin deficits, and public debt/GDP. Sound levels of these indicators were considered pre-conditions for achieving private sector-led growth. The latter, however, was seen to depend on factors such as the availability of labour, physical and human capital and technology, on which – it was argued - macroeconomics had no influence. In this sense, liberal macroeconomics was 'growth neutral'. This view contrasts with the structuralist (development-oriented) macroeconomics which emphasizes public investments, competitive exchange rate, low dependence on foreign savings and directed credit allocations as ways to stimulate growth and development over the long term (Bresser Pereira, 2011).

During the last two decades the theory and practice of liberal macroeconomics has broadened its scope. In addition to the objectives mentioned above it set limits to private foreign indebtedness and introduced economy-wide measures which were thought to improve economic efficiency, such as the liberalization of domestic financial markets, foreign trade and capital account (which had remained broadly closed until 1990 in most developing countries), as well as the privatization of state assets (Table 3).

Such broader approach (which – if safety nets and institutional and governance measures are added – comes pretty close to the Augmented Washington Consensus) was not only expected to ensure macroeconomic balance but also to improve the allocation of resources and promote growth – and needed therefore to be assessed not only in terms of macro stability but also in terms of its

growth impact. This broadening of evaluation criteria, however, did not extend to income distribution, as it was believed that the latter was mainly influenced by the structural characteristics of each country rather than by the measures themselves and as distributive concerns were in any case to be addressed by means of appropriate safety nets.

**Table 3**. Changes in policy stance on domestic and external liberalization

Regions	1982-90	1991-1997	1998-2002	2002-2010
Average Import Tariff*				
South America	40.0	19.0	12.2	10.6
Central America and Mexico	46.6	18.1	8.8	7.2
Sub-Saharan Africa	26.7	24.9	14.5	13.2
MENA	29.7	21.9	17.3	16.2
South Asia	62.9	52.9	20.8	14.9
East and South East Asia	20.3	16.7	7.6	6.9
Asian economies in transition/1	44.5	38.9	15.5	12.6
EE-FSU	…..	11.0	9.0	6.0
Advanced economies	8.5	7.1	3.3	4.2
Trade/GDP ratio**				
South America	38.8	45.3	45.3	57.1
Sub-Saharan Africa	66.9	68.3	73.9	79.3
Central America and Mexico	63.0	79.4	84.5	89.3
MENA	64.1	68.1	62.9	78.7
South Asia	33.6	41.9	44.9	46.1
East and South East Asia	114.1	128.6	153.3	163.0
Asian economies in transition/1	29.5	58.1	75.2	106.0
EE-FSU	73.0	91.4	98.6	104.7
Advanced economies	60.6	62.3	74.1	77.5
Kaopen Index of Capital Account Openness***				
South America	-0.78	-0.17	0.76	1.00
Central America and Mexico	-0.84	0.29	1.18	1.67
Sub-Saharan Africa	-0.91	-0.82	-0.59	-0.56
MENA	-0.64	-0.35	0.02	0.36
South Asia	-1.29	-0.74	-0.93	-0.90
East and South East Asia	0.85	0.96	0.50	0.57
Asian economies in transition/1	-1.73	-1.31	-1.07	-1.00
EE-FSU	-1.84	-0.53	0.01	0.65
Advanced economies	0.83	1.89	2.28	2.32
Index of Domestic Financial Liberalization*				
South America	5.1	6.8	6.9	7.7
Central America and Mexico	6.7	7.3	7.5	8.4
Sub-Saharan Africa	4.5	5.1	6.6	7.4
MENA	3.6	4.6	5.8	6.5
South Asia	4.7	5.6	6.4	7.4
East and South East Asia	5.9	6.9	6.6	8.2
Asian economies in transition/1	0.0	2.9	4.6	8.0
EE-FSU	0.5	3.2	7.4	8.7
Advanced economies	7.6	8.2	8.6	8.8

Source: author's compilation on the basis of: *Economic Freedom Dataset (2011 version), ** World Development Indicators (2011 version), ***Chinn and Ito (2011). Notes: KAOPEN index is a positive function of the openeness. The Index of Domestic Financial Liberalization ranges from 0-10 where 10 corresponds to high degree of liberalization. 1/ China and Vietnam.

2.1 Results of the 'real-life' Washington Consensus

(i) extent of liberalization and macroeconomic balance. The adoption of WC-type reforms in developing and transitional economies faced various problems (see later). However, in most cases them it succeeded in opening up the economy, promoting greater trade and financial integration, and reducing budget deficits, inflation (Figure 1) and – to a lesser extent - public debt and the

**Figure 1**. Median inflation of developing regions for the period 1980-2010.
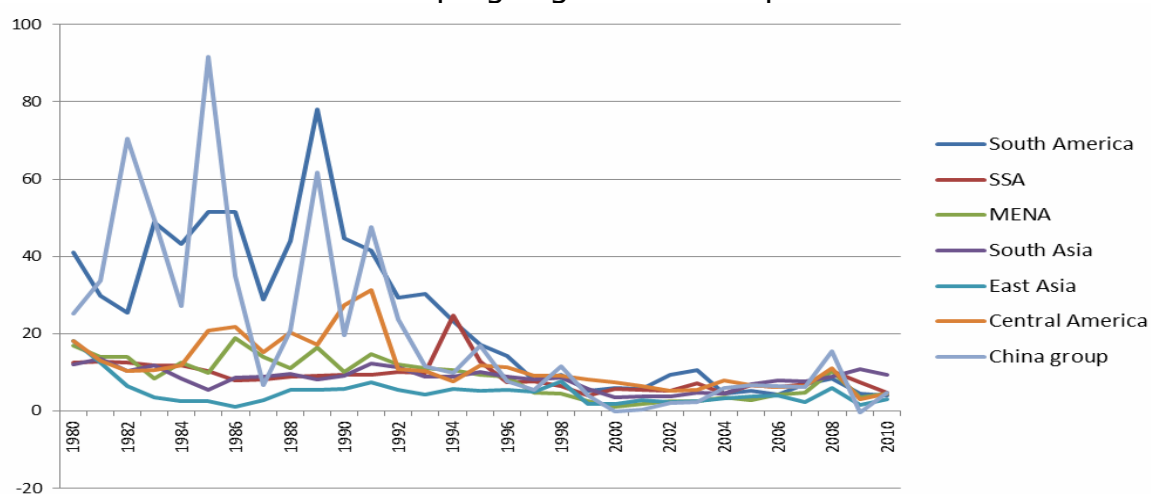
Source: IMF World Economic Outlook Database (2011 version)

current account deficit (Table 4). Yet, the deficit reduction was achieved mainly by means of cuts in public investments which reduced medium term growth and tax revenue, leading in this way to an 'illusory adjustment', as the deficit widened again in line with the adjustment-induced slowdown of GDP and tax collection (Figure 2).

After a step rise in the 1980s and early 1990s (when Argentina, Bolivia, Brazil, Russia and other transition economies experienced hyperinflation), the rate of inflation fell to around ten percent in all regions except Sub-Saharan Africa and the transition economies. This result was achieved by means of orthodox measures that, besides a restrictive monetary policy, used a fixed nominal peg as main anti inflation anchor. However, where such an approach was sustained for years, the RER appreciated, affecting in this way the current account balance, growth and inequality.

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Figure 2: Fiscal indicators (% of GDP), between 1990 and 2009
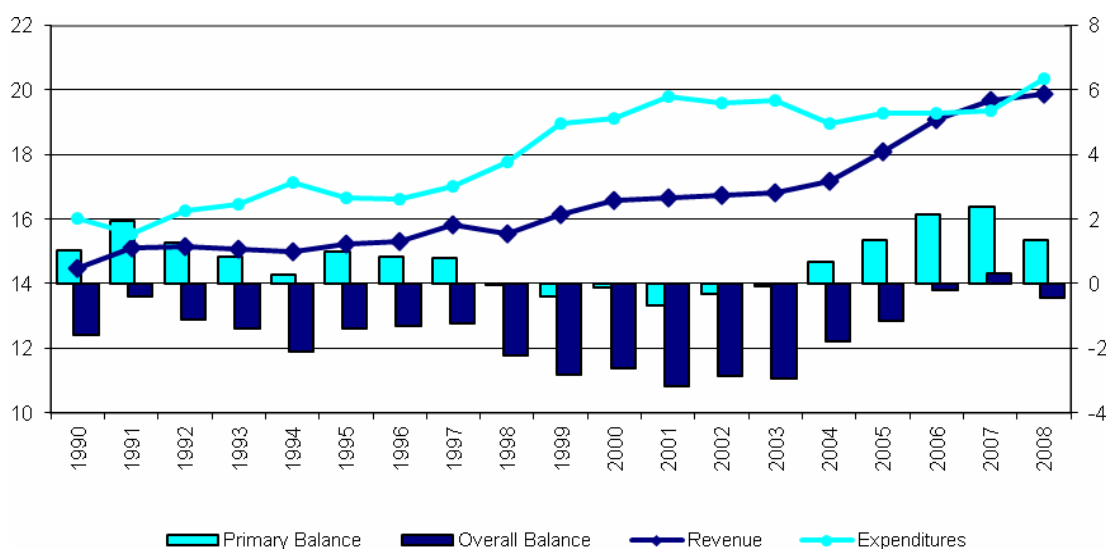
Source: Cornia, Gomez-Sabaini and Martorano (2011) on CEPAL data

(ii) GDP growth, investment rate and unemployment. While the real-life WC achieved important results in terms of macroeconomic stabilization (see above), its growth, investment and inequality performance was unsatisfactory. GDP growth slowed over 1980-2000 compared to 1960-1980 (Table 5). Growth was particularly weak in the 1990s due to stagnation in Europe, Japan and MENA, the collapse of the European countries in transition, the difficulties faced by Latin America during the 1980s and over 1997-2002, and – to a lesser extent – by the countries affected by the Asian crisis. As a result, the share of countries which recorded a negative growth of GDP/c rose from 6 and 12 percent in the 1960s and 1970s to 31 and 32 percent in the 1980s and 1990s. In contrast, growth accelerated and poverty declined (though inequality rose) in China, India and Viet Nam, where macroeconomic policies differed from those promoted by the real-life WC. Unsurprisingly, with the exception of these countries, the investment rate stagnated or declined though it grew in Latin America during the expansion of the late nineties (Table 5). While these disappointing outcomes might have been caused by endogenous labour supply, price and technological shocks, there is now agreement that they were due to an important extent to the macroeconomic policies mentioned above (Birdsall et al. 2010).

Table 4. Indexes of Macroeconomic Balance, 1982-2010.

Regions	1982-90	1991-1997	1998-2002	2002-2010
Budget balance/GDP (deficit<0)*				
South America	-1.7	-2.0	-3.2	-2.5
Central America and Mexico	-2.4	-0.8	-2.8	-1.9
Sub-Saharan Africa	-5.1	-3.9	-3.5	-0.7
MENA	-1.8	-1.9	-1.8	0.1
South Asia	-6.9	-6.2	-6.0	-4.7
East and South East Asia	0.8	4.5	-0.7	-0.2
Asian economies in transition	-1.6	-1.7	-3.3	-2.5
EE-FSU	-10.1	-5.3	-3.2	-1.1
Advanced economies	-3.1	-4.1	-0.1	-1.5
Average Yearly Rate of Inflation*				
South America	386.3	111.7	11.7	7.6
Central America and Mexico	361.5	15.8	7.0	7.4
Sub-Saharan Africa	20.1	165.5	35.0	8.2
MENA	29.4	20.4	7.6	6.0
South Asia	10.3	9.3	5.9	8.3
East and South East Asia	6.5	5.7	5.9	3.9
Asian economies in transition	81.5	17.1	1.2	6.0
EE-FSU	15.0	528.2	16.6	6.7
Advanced economies	8.9	3.2	2.3	2.3
Average Yearly Variations in the Real Effective Exchange Rate Index (2005 = 100) 2/, 3/				
South America	-8.54	3.67	-3.51	2.74
Central America and Mexico	-1294.72	2.52	1.43	0.07
Sub-Saharan Africa	-20.00	-2.10	-5.13	7.32
MENA	-7.48	-4.16	-0.05	0.51
South Asia	-8.54	-1.12	-1.61	0.81
East and South East Asia	-3.29	1.20	-4.06	1.21
Asian economies in transition	-20.22	-1.23	0.36	1.03
EE-FSU	-23.43	3.28	0.94	2.47
Advanced economies	0.32	-0.72	-0.51	0.66
Public debt/GDP (percent)*				
South America	56.8	47.7	52.5	44.4
Central America and Mexico	111.7	121.9	66.9	49.0
Sub-Saharan Africa	93.1	105.8	105.0	69.2
MENA	62.3	89.8	72.2	61.8
South Asia	92.1	80.4	76.9	76.9
East and South East Asia	46.6	39.8	52.6	46.4
Asian economies in transition	4.7	6.4	15.7	17.9
EE-FSU	32.1	72.7	45.1	31.9
Advanced economies	49.5	65.7	61.3	63.5
Current Account Balance/GDP*				
South America	-2.8	-2.4	-1.7	2.0
Central America and Mexico	-4.9	-6.5	-5.9	-5.7
Sub-Saharan Africa	-6.9	-6.5	-6.7	-5.9
MENA	-3.5	-3.0	0.9	3.2
South Asia	-4.6	-3.2	0.0	-0.9
East and South East Asia	-2.1	-1.1	6.8	7.6
Asian Economies in transition	-2.0	-2.1	1.4	0.8
EE-FSU	-2.3	-6.0	-5.1	-4.6
Advanced economies	-1.3	0.2	0.3	-0.3
Foreign debt/Exports*				
South America	31.5	245	252	57
Central America and Mexico	39.2	405	161	89
Sub-Saharan Africa	42.6	616	497	79
MENA	25.2	228	191	78
South Asia	31.5	285	224	46
East and South East Asia	17.1	137	128	163
Asian economies in transition	67.5	113.5	86.2	39.9
EE-FSU	56.0	120	131	104
Advanced economies	…	…	…	77

Source: author's compilation on *WEO (2011), ** ERS/USDA International Macro Database (2011 version) *** WDI (2011 version). For Public Debt, additional data are from Reinhart and Rogoff (2010).
Notes: 1/ China and Vietnam only, 2/Data cover 58 % of 138 countries based on WDI 2011, BIS and IDLA data. 3/ a minus sign signals REER depreciation.

Evidence of the impact of the above trends on the labour market is limited but basically points to a surge in unemployment and job informalization following the liberalization of the labour market and imports, privatization, the loss of competitiveness induced by the appreciation of RER in the wake of the liberalization of the capital account, and the contractionary stabilization programs of the 1980s and 1990s. For instance, during the 1990s the percentage of formal sector employment fell from 17-29 percent to 13-25 percent in five Southern African countries and from 49 to 43 percent in middle income Latin America (van der Hoeven and Saget 2004).

Table 5. Indexes of Economic Performance

Regions	1982-90	1991-1997	1998-2002	2002-2010
Growth Rate of GDP*				
South America	1.7	4.5	0.3	5.1
Central America and Mexico	1.3	4.2	3.6	4.0
Sub-Saharan Africa	2.5	3.1	4.3	4.7
MENA	3.1	4.8	2.7	4.4
South Asia	4.9	4.9	4.1	5.4
East and South East Asia	6.3	7.1	2.4	5.0
Asian economies in transition	6.4	9.8	7.2	8.7
EE-FSU	2.5	-3.6	4.8	5.3
Advanced economies	2.5	2.2	3.0	1.5
Investment/GDP Ratio**				
South America	19.9	20.2	19.4	20.3
Central America and Mexico	18.5	21.4	22.7	21.8
Sub-Saharan Africa	19.2	20.2	19.9	22.2
MENA	25.2	24.7	22.5	23.7
South Asia	20.5	21.9	22.3	26.0
East and South East Asia	30.2	34.3	24.2	26.0
Asian economies in transition	29.3	31.9	33.4	40.6
EE-FSU	33.0	23.3	22.9	26.5
Advanced economies	23.3	20.6	21.7	21.5
Unemployment Rate**				
South America	7.9	8.1	11.6	9.6
Central America and Mexico	8.5	9.6	7.8	7.9
Sub-Saharan Africa	13.7	12.3	14.5	15.3
MENA	10.2	13.4	13.2	11.1
South Asia	4.7	7.5	7.2	6.7
East and South East Asia	4.7	3.8	5.4	4.9
Asian economies in transition	3.4	5.6	4.9	4.7
EE-FSU	2.8	9.8	12.3	10.4
Advanced economies	8.1	9.7	7.6	7.5

Source: author's compilation on * ERS/USDA International Macroeconomic Database (2011) ** WEO (2011). Notes: 1/ China and Vietnam only.

Meanwhile in South Asia informal employment expanded rapidly, and in the European economies in transition unemployment rose by 10 million units

between 1989 and 1996 alone. In contrast, most of East Asia experienced a sustained growth of formal employment.

(iii) income inequality. Overall, during the 1980s and 1990s within-country income inequality increased – in some cases substantially – in 73 of the 105 countries with an adequate amount of data (Table 6) The increase was almost universal in the OECD, Latin America, and the EE-FSU. In China inequality rose slowly over 1978-1990, but accelerated since then. A reversal of the inequality trend was also observed in the economies of the East Asian miracle, which had achieved in the past an equitable and rapid export-led growth, and in India. Inequality rose less markedly in Sub-Saharan Africa and even less so in MENA, where, however, data scarcity limits the scope of the analysis (Table 6).

Table 6. Trend in Gini coefficient of the distribution of household income per capita, 1980-2000 and 2000-2010

| | OECD | Transitional economies | | Latin America | MENA | South East Asia | South Asia | SSA | World |
		Europe	Asia						
				A:1980s and1990s					
Specific period for each region (b	1980-2001	1990-1998	1980-2000	1980-2002	1980-2000	1980-1995	1980-2000	1980-1995	
Rising inequality	14	24	2	14	2	5	3	9	73
No change	1	0	1	1	3	0	0	2	8
Falling inequality	6	0	0	3	3	2	2	8	24
Total	21	24	3	18	8	7	5	19	105
				B: 2000-10 (or latest available year)					
Specific period for each region (b	2000- 2010	1998-2010	2000-2009	2002-2010	2000-2007	1995-2009	2000-2010	1995-2007	
Rising inequality	9	13	2	2	4	3	4	7	44
No change	4	5	1	1	0	0	1	1	13
Falling inequality	8	6	0	15	4	4	0	13	50
Total	21	24	3	18	8	7	5	21	107

Source: Cornia and Martorano (2012) Notes: a) the countries included in Table 5 have at least 10 well-spaced data for the 30 years considered. Each country was assigned to the rising, stable or falling categories on the basis of a trend analysis and difference between the initial and final Gini coefficients. b) the periodization and turning points vary from one region to another. The data for the 1980s are less robust due to fewer data-points.

2.2. Design and implementation flaws of the orthodox macro package [5]

What explains the above unsatisfactory results? The debate in this area identifies various reasons for the failure of the real-life WC model summarized in Table 1, including exogenous shocks, poor implementation of the liberal reform, limited international financing and the policy design problems discussed below (Birdsall at al. 2010):

- Stabilization overkill. The most criticized aspect of the liberal approach to stabilization is that it typically leads to larger-than-expected improvements in the balance of payments and inflation and greater-than-expected falls in GDP, investment and employment (Table 7). An explanation of this 'overkill' is that pro-cyclical expenditure-reducing monetary and fiscal policies take effect more quickly and cause depressive effects greater than the expansionary stimuli of devaluation. In addition, the large and rapid deficit reductions typical of this approach entails a fall in GDP and hence in revenue that requires further fiscal cuts. Furthermore, reliance on foreign capital to finance the current account deficit exacerbates the problem as net capital inflows behave pro-cyclically during crises, while the improvements in external balance and inflation are not enough to restore credibility and trigger a recovery of domestic and foreign investments in depressed economies with high interest rates. Most importantly, the 'credit crunch' induced by orthodox monetary policy results in reductions in consumption and investment expenditure far greater than projected by the IMF's financial programming model.

This type of stabilization approach more often than not induced recessions that affected investments and inequality. As noted, investment demand falls two to three times faster than GDP due to steep rises in interest rates, the working of the flexible accelerator mechanism, the worsening of expectations and mounting risk aversion among investors. In turn, inequality worsens as enterprises shed labor and cut wages, while weak safety nets do not compensate for the loss of labor income. In addition, large cuts in public expenditure may erode the

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[5] This section draws in part on Cornia (2006) chapter 1, pp. 8-13.

functioning of essential state services, reducing in this way the long term possibility of redistributing public goods such as human capital and infrastructure. Finally, the adoption of low inflation target of 2-4 percent limits the scope for countercyclical monetary policy, as nominal rates cannot be reduced below zero while quantitative easing is not practicable in countries with narrow bond markets, and do the trick only in part even in financially developed regions (Blanchard et al 2010). In brief, the view that the liberal approach causes 'short-term pain but long-term gains' is misplaced. Botched stabilizations often affected growth and inequality for years.

Table 7. Program vs. actual results of IMF stabilization programs

Program/actual	GDP (% change)	Consumer prices (year-end % change)	National wage (year-end%change)	Convertible Current Acct. bn. U.S.$
Hungary				
1991 Program	-3	31	0	-1.2
1991 Actual	-8	32	20	0.3
Poland				
1991 Program	3	94	0	-2.7
1991 Actual	-8	249	160	-2.2
Czechoslovakia				
1991 Program	-5	36	0	-2.5
1991 Actual	-16	60	54	0.2
Bulgaria				
1991 Program	-11	30	17	-2.0
1991 Actual	-23	54	14	-0.9
Romania				
1991 Program	0	234	146	-1.7
1991 Estimate	-12	339	142	-1.3

Source: Bruno (1994)

- Sequencing problems. Domestic financial liberalization in the presence of large budget deficits generated sharp rises in interest rates as, in order to finance the deficit, governments were forced to sell on the domestic bond market large amounts of treasury bills carrying high interest rates. Such interest rate rise spread quickly to the banks' lending rates, causing a contraction in credit demand and activity levels. It also attracted speculative capitals, the

inflow of which appreciated the RER, shifting in this way relative prices against the traded sector, with possible destabilizing effects on the current account balance and income inequality.

- Tax reform, falling revenue, and raising budget deficits. The 1980s and 1990s witnessed major changes in tax policy inspired by the belief it was necessary to reduce the size of government. This lead to large cuts in import tariffs (Table 2), a reduction or abolition of the personal income tax, and a decline in corporate tax rates. The ensuing loss of revenue was to be made up by broadening the direct tax base and introducing the VAT and other consumption taxes. Yet, in many countries these reforms caused a fall in revenue, as the drop in yields from trade and income taxes was not fully compensated by other types of taxes (Table 8). The ensuing rise in the deficit often called for deflationary policies which worsened growth and inequality.

Table 8. Unweighted Regional Tax/GDP ratios, early 1970s to 2008 (137 countries)

	Early-1970s	1980	1990	2000	2008	Δ 1980-2000	Δ 2000-2008	N. of countries where tax/GDP rose in 2000-8 on total number of countries
EE – FSU	…	47.7	29.6	17.7	19.4	*-11.9[1]*	*+1.7*	*10 (20)*
Asia	11.3	11.6	12.2	14.4	17.7	*+ 2.8*	*+3.3*	*20 (26)*
Africa	15.5	19.3	18.1	17.9	19.9	*-1.4*	*+2.0*	*28 (50)*
Latin America	15.2	15.5	13.3	15.3	18.9	*-0.2*	*+3.6*	*17 (18)*
OECD	28.3	32.4	35.3	37.5	37.5	*+5.1*	*0.0*	*7 (23)*

Source: author's elaboration on official data Notes: [1] difference between 1990 and 2000.

- Financial liberalization with weak financial supervision. The de-repression of domestic financial markets – not considered then as part of macro policy - was expected to lead to financial deepening, banking competition, lower lending rates, and an overall increase in financial intermediation. However, financial de-repression was not preceded by a prior strengthening of Central Banks' regulatory capacity, prudential regulation, and disclosure of exposure levels. As a result, the banking sector was often transformed into an unstable private oligopoly, as signalled by an epidemic of banking, currency and public debt crises (Table 9). The subsequent bank bailouts implied a transfer from poor

non-participants in the financial sector to richer participants, including depositors, borrowers, and financial institutions, causing in this way large regressive shifts in income distribution (Halac and Smuckler 2003). Such crises generated also long-lasting growth effects, as countries that suffered from a banking and/or financial crisis during the years 1975–1994 recorded during the subsequent five years a GDP growth 1.3 percent lower than that of countries not affected by such crises (Stiglitz 1998). Finally greater global financial integration increased overall consumption instability (Prasad et al. 2003).

Table 9. Number of banking, currency and foreign debt crises, 1970-2007.

		1970 - 1981		1982 – 1990		1991 – 1997		1998 - 2002		2002 – 2007	
		number	Aver. per year	number	Aver. per year	number	Aver. per year	number	Aver Per year	Number	Aver. per year
Type of Crisis	Banking	10	0.91	40	4.44	60	8.57	11	2.20	3	0.60
	Currency	38	3.45	70	7.78	64	9.14	30	6.00	6	1.20
	Sovereign Debt	16	1.45	34	3.78	1	0.14	10	2.00	2	0.40
	Twin	4	0.36	5	0.56	12	1.71	4	0.80	1	0.20
	Triple	0	0.00	3	0.33	0	0.00	4	0.80	1	0.20

Source: Laeven and Valencia (2008)

- An asymmetric distribution of the benefits of financial globalization.

A neutral approach to capital account liberalization in the presence of segmented credit market led to an expansion of consumer credit to the middle-upper class or raised investments in high-return, high-risk short-term activities in finance, insurance and real estate that employ comparatively few unskilled workers. Yet, the expansion of bank credit hardly benefitted SMEs and the poor, as lack of collateral and high transaction costs continued to exclude them from the credit market. Capital account liberalization affected inequality also through the appreciation of the RER. Indeed, while the credit boom induced by the capital inflows raised demand, the appreciation of the RER raised the share of the latter satisfied with imports while depressing growth and employment, as observed in Argentina between 1990 and 2001 (Figure 3). Meanwhile, the loss of competitiveness due to the fall of the RER, pushed domestic firms to reduce employment, adopt flexible contracts with low wages, or subcontract work to informal sector firms paying even lower wages.
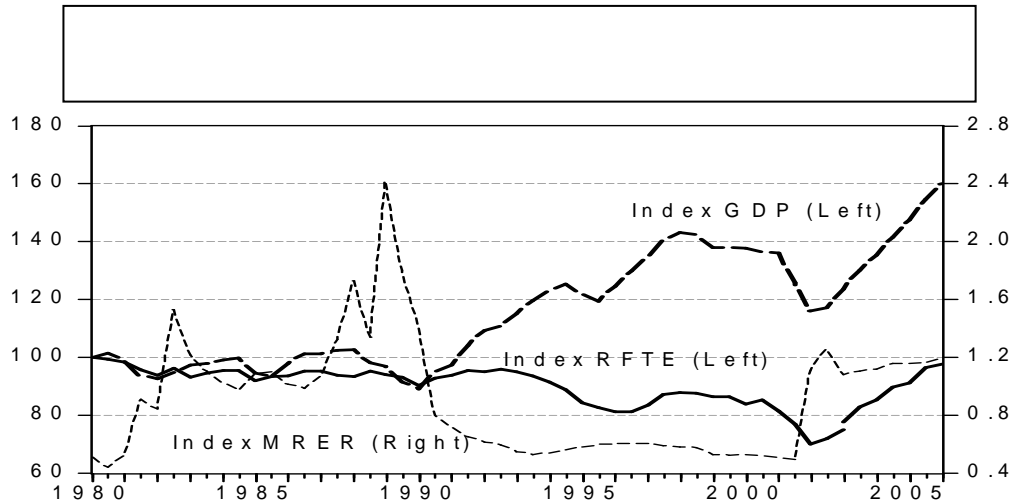
Source: Frenkel (2007)

- Perverse interactions between policy instruments. In countries that received large amounts of portfolio flows, overall savings and capital accumulation did not generally increase or even fell, as domestic savings declined or stagnated, giving rise in this way to a kind of substitution effect between domestic and foreign savings, as domestic agents started investing abroad, institutions lessened their effort at mobilizing domestic resources and public savings fell to achieve the lower deficit required to attract foreign funds. Another perverse interaction was observed on occasion of import liberalization which intended to expose domestic firms to foreign competition. However, the liberalization of the capital account caused an appreciation of the RER which led to import booms and a deterioration of the current account balance.

3. The new structuralist macroeconomics and inequality[6]

During the last decade or so a number of developing countries, particularly middle income countries, started adopting new macroeconomic policies which – while sharing some elements with the real-life WC package – differ from it in several other respects, including in terms of its impact on inequality.

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[6] The new macroeconomic approach cannot – of course - remove the inequality due to a highly concentrated distribution of asset, credit, opportunities and human capital, and to the existence of a large informal sector barely integrated in the economic mainstream and located in remote areas.

3.1 Old biases and new contextual conditions.

The world within which the new macro approach evolved has changed profoundly, especially since the 1990s:

- some problems, such as a high foreign debt or inflation, that led in the past to the adoption of stringent fiscal-monetary policies, are far less severe (Table 3),

- countries are now far more closely interlinked through flows of trade, remittances, finance, technology and services. Cross-country and cross-sectoral contagion is thus far greater and rapid than before, as seen for instance by the fact that banking crises triggered in many cases balance of payments and currency crises (Table 9);

- trade and capital account liberalization lead to the development of global financial markets that drastically narrowed the policy space of national governments which are often compelled to follow policies aligned to the expectations of global finance;

- during the last decade the main sources of macroeconomic shocks in developing countries were not overly expansionary domestic fiscal-monetary policies but the unsustainable fiscal policy of the United States, the European sovereign debt crisis, and the contagion caused by banking and financial crises in the USA, UK and other advanced nations lacking adequate financial regulation.

3.2 Overall policy approach

In view of the problems experienced by the advanced economies and global markets, many developing economies, recently started adopting 'defensive macroeconomic policies' to protect themselves from the negative effects of the increased global interdependence. The new macro policy approach is also a reaction to the deflationary bias of the WC approach, in particular the tendency of wages to grow below productivity and the recurrent appreciation of the RER i.e. two trends that, by depressing private consumption and exports, represent

a major impediment to growth (Bresser-Pereira 2011). The new approach evolved also from a critique of 'growth with foreign savings' model in which steady capital inflows attracted by high interest rates (seen as necessary to fight inflation) cause an appreciation of the RER which lead to persistent current account deficits which need to be financed with additional capital inflows.

It is difficult to define a universal package of structuralist macroeconomic policies emerging in response to the WC and the populist macroeconomic approach (that views fiscal expansion as a magic solution to most problems), as these will depend on a long list of local conditions, including whether the poor work in the traded or non-traded sector, the country has a rigid or elastic supply of wage goods, the government plays an important role in the economy, the size of its foreign debt, the nature of domestic institutions, the efficiency of markets, and so on. The best solution can only be country specific. Yet, some broad principles apply fairly generally (Rodrik 2007). Indeed, the new macro fundamentals pivot around policies aiming simultaneously at (a) aiming at low inflation, budget deficit (or even surplus) and output gap by emphasizing; (b) preventing external and internal crises, and (c) aiming explicitly at long-term growth of GDP and employment, especially in the traded-good sector, and at lowering income inequality, a changes that should help developing a domestic mass consumer market; (d) in case of commodity exporters, neutralizing the Dutch disease, i.e. the long-term appreciation of the RER due to the rents associated with the exports of primary commodities. Unless neutralized (e.g. via the imposition of a tax on the exports of the commodities causing the disease or through the creation of offshore sovereign funds) the Dutch disease hampers the industrialization of middle income countries. Key common elements of this structuralist macroeconomics for development include:

(i) ***reducing dependence on foreign savings, lowering foreign indebtedness and mobilizing domestic savings.*** The liberalization of the current account has often been presented as a golden opportunity to access a global pool of savings and to speed up capital accumulation and job creation.

However, as noted in section 3, these promises have seldom materialized, suggesting that the Feldstein-Horioka (1980) hypothesis (which states that domestic investments do not necessarily need to be financed with domestic savings) can be broadly rejected. Indeed, the evidence shows that open economies with larger domestic banking systems, domestic savings and a high investment ratios have smaller portfolio inflows than countries with smaller domestic banking systems and savings. Indeed, most foreign savings (FDI are an exception) are often used for purposes other than investment, are highly cyclical, exhibit unstable risk-premia (Figure 4), and can lead to a fall of the RER which affects growth and inequality. Countries heavily relying on external financing often ended up in what Damill and Frenkel (2011) call 'financial traps' characterized by costly risk-premia, exposure to sudden stops, external shocks, and rises in domestic rates in line with those paid on foreign loans.

Figure 4. Emerging markets risk premia and spreads on high-yielding US private bonds
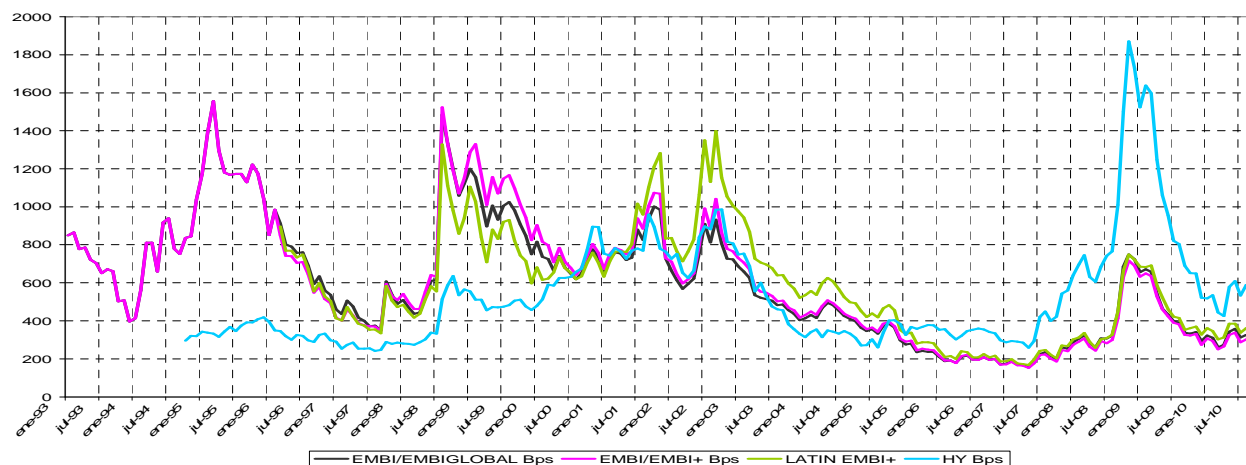

Source: Damill and Frenkel (2011) on the basis of: for the high-yield (HY) US private bonds, the Merrill Lynch index of US High-Yield Master II (H0A0); for sovereign bonds of emerging market economies and of LA emergent markets, the EMBI+ JP Morgan index (EMBI to November 1997 and EMBI+ from December 1997 on).

In the 2000s, the recourse to foreign savings has become more selective — e.g. for loans to finance investments in the traded sector — while several developing

countries with large public foreign debt started to reduce it[7]. As a result, the average ratio of foreign debt/exports has fallen markedly (Table 3), reducing in this way the financial vulnerability of the developing countries, interest payments on the foreign debt and profit repatriation. Spreads on international loans also fell, as the perception of country risk improved in relation to the past due to the adoption of '*defensive macro policies*' and thanks to rises in world commodity prices which allowed some developing countries to improve the current account balance, accumulate reserves, and adopt intermediate exchange rate regimes (Figure 5).

Figure 5. Net foreign asset position(US$, bn) in Eastern Europe and the Former Soviet Unio and Latin America, 2000-2008.
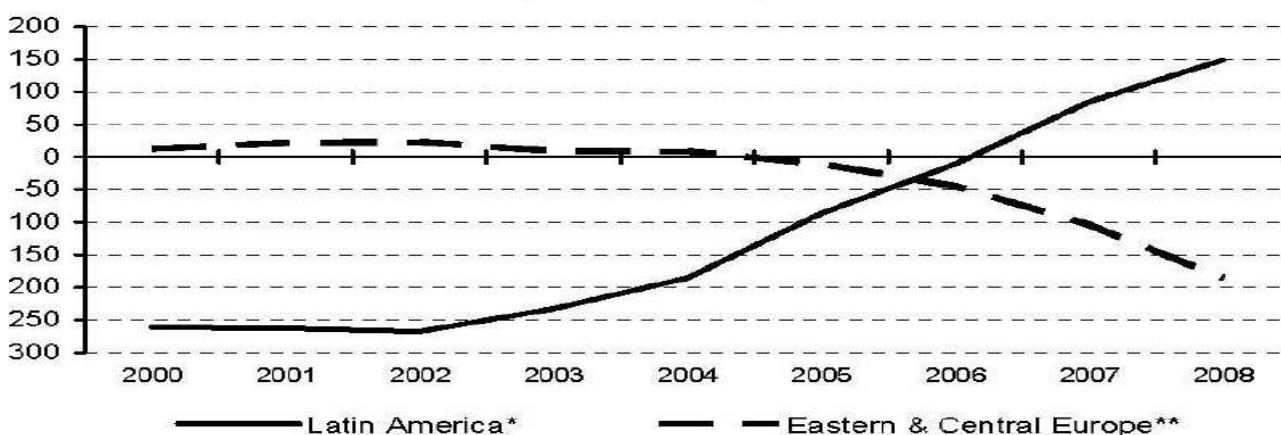
Source: Porzekanski (2009), Note: * Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela; ** Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Romania.

The recent experience of the EE-FSU stands however in sharp contrast to this trends. Indeed the region witnessed a massive inflow of FDI and 'cheap money'. i.e. hard-currency loans at low interest rates provided by local branches of foreign banks (Aslund 2009). By 2008, Bulgaria, Estonia, Hungary, Latvia, and Slovenia had private foreign debts in excess of 100 percent of GDP. All this caused a deterioration in the regional net foreign asset position (Figure 5) which made it vulnerable to the sudden stop in capital inflows of 2009-10 which affected growth and inequality.

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[7] In Latin America, Brazil and Argentina prepaid their outstanding debt to the IMF, others restructured their foreign debt at considerable discount, and a few benefitted from the HIPC program. As a result, the regional public debt/GDP ratio fell from 47 to 25 percent, while the gross public foreign debt net of fast growing currency reserves fell from 33 to 8 percent of GDP.

The new macro approach thus emphasizes that domestic accumulation needs to be mainly funded through a mobilization of domestic savings, i.e. through the strengthening of indigenous financial institutions, which are more likely to adopt counter-cyclical lending policies, as observed in the case of the Brazilian state development bank BNDES which in 2009 offset in part the flight to security of foreign capital. The evidence shows also that to increase private savings/GDP it is necessary to ensure macroeconomic credibility (low inflation and absence of currency and financial crises) and banking stability. It shows also that domestic savings can be raised by harnessing the mandatory savings of Pension Funds, tightening consumption credit and – most of all - ensuring there are sufficient incentives to invest. Finally, public savings can be raised to finance infrastructural development by increasing tax pressure. This approach is recommended in particular in countries with 'tax space', i.e. in the 60 or so developing countries with tax/GDP ratios below 10–12 per cent. As shown later on, some gains were recorded in the 2000s also in this area.

(ii) Controlling capital inflows and harnessing their sectoral allocation. Some modest results were recorded also in this field, though different types of inflows needs to be treated differently. Greenfield FDI in labour intensive manufacturing is likely to have equalizing effects, as shown by the past experience of Malaysia, China and Mauritius and more recently of Costa Rica.

As for portfolio flows, a few countries started imposing capital controls (even in the presence of stable macroeconomic conditions and appropriate regulatory institutions) so as to avoid Dutch Disease effects, bubbles and real exchange rate instability. Countries have imposed 'price' (e.g. capital transactions taxes) and 'quantity' (e.g. minimum stay) requirements on inflows with varying asset maturity, as done in the case of Chile's well-known '*encaje*' between June 1991 and March 2000. In turn, the central bank can limit the foreign exchange exposure of domestic banks, forbid them to borrow internationally to extend loans to the non-traded sector, introduce temporary or permanent administrative controls on inflows and outflows, and limit foreign ownership in

sectors such as real estate, as done in Colombia, India, Malaysia, Singapore, Taiwan, India, Soth Korea and Brazil in 2009-2010. It can also require commercial banks to allocate a share of their lending to the agricultural sector and SMEs and set up loan guarantees to these sectors.

Two key issues in this regard concern the timing of introduction, duration, and scope of controls. The IMF (2011) now fully supports the introduction of temporary controls on inflows during crisis periods, but the new structuralist macroeconomic approach suggests countries are better advised to use them as essential part of their permanent policy toolkit, to apply them also to outflows and extending them as long as they are needed (Gallagher et al. 2011). However, capital controls are not easily implemented, especially in countries with limited administrative capacity. In addition, controls cannot replace sound macroeconomic policies, and at best can slow down the flow of capitals but not eliminate it completely as they can at times be circumvented (Helleiner 1997). Yet, the existing econometric evidence suggests that capital controls during the last 15 years have been fairly effective (Gallagher et al. 2011), and that they can — in conjunction with other measures — constitute a deterrent against massive shifts in capital movements.

Policy makers can also apply measures to offset the monetary effects of capital inflows including asking state-controlled financial institutions to switch their deposit from the commercial banks to the central bank, sterilizing the capital inflows, increasing the reserve ratio of commercial banks with large foreign deposits, substituting foreign with domestic borrowing whenever the interest differential is not excessive and encouraging domestic institutions such as pension funds to invest abroad.

(iii) An exchange rate regime which reduces currency crises and promotes growth. The crises of the fixed-peg regimes epitomized by the collapse of the Rouble in 1998 and of the Argentinean currency board in 2001-2 encouraged a growing number of countries to opt for an intermediate exchange

rate of the BBC (basket, band and crawl) type (Williamson 2003) which is also referred to in the literature as a 'stable and competitive real exchange rate' or SCRER (Frenkel and Rapetti 2008) (Table 1). Thus, a managed float, combining exchange rate flexibility with discretionary interventions by the Central Bank in the currency market is now emerging as the tool of choice of a growing number of countries. Empirical research shows that a competitive exchange rate has been a key factor to kick-start growth (Rodrik 2003, Gala 2007) and improve long-term performance [8]. A managed floats regime (and its supporting measures, see below) tends to reduce the risk of currency crises, and at the same time provides adequate incentives to the expansion of the traded sector where many low income workers are often employed. This means rejecting the supposed superiority of 'two corner solutions' over intermediate regimes[9] and recognizing that in small open economies the stability of RER is a key policy objective. To support their exchange rates, some countries (Chile, Colombia, Brazil, Taiwan, South Korea) introduced capital controls, and allowed Central Banks to intervene in the currency markets during years of financial bonanza.

Also in this case, much of the EE-FSU stands apart, as only Poland, Hungary, the Czech Republic and Serbia opted for a managed float. All others anchored their currency by adopting the Euro or dollar, or established a currency board while three countries introduced a free float (Aslund 2009). With fixed pegs, these countries could not devalue their currencies to respond to the balance of

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[8] This approach may not fit the needs of countries where the poor work in the non-traded sector, the traded sector is skilled labour intensive — as in most mining economies and industrialized countries — or the poor are located in the traded sector but structural factors reduce the pass-through of the benefits of devaluation. In small economies with highly volatile terms of trade and difficulties in diversifying their exports, dollarization may be preferable. Finally, in large developing economies with comparatively low trade/GDP ratios, a competitive exchange rate is less important for growth and poverty alleviation. These objectives can be better pursued through an expansion of the domestic demand driven by fiscal policy.

[9] Reinhart and Rogoff (2003) show that neither fixed pegs nor free floats performs better in terms of growth and crises avoidance than intermediate regimes. Fixed nominal exchange rate regimes are unable to cope with external shocks, are prone to speculative attacks and lead to an appreciation of the real exchange rate which cause balance-of-payments difficulties, sudden devaluations and dollarization that significantly limits the possibility of conducting an independent monetary and exchange rate policy. In turn, free floats often turn into a 'free fall' with disastrous over-devaluations of the currency.

payments shock of 2008-9, and were forced to introduce an 'internal devaluation' consisting in raising massively interest rates and fiscal surpluses which had – *ceteris paribus* - a contractionary and un-equalizing effect. However, despite the choice of managed floats, Table 3 shows a generalized (if modest) tendency towards a real appreciation during the last decade, much of it triggered by inflows of portfolio funds. Yet, this trend has to be seen in relation to the large devaluations of the late 1990s and early 2000s. For instance, in Latin American, the RER reached in 2002-2003 its most depreciated level since 1990. Despite the modest appreciation recorded in the 2000s, over 2002-2009 the average RER was more depreciated than in the 1990s (Table 4).

However, the management of this type of exchange rate regime requires the adoption of supportive measures including: (a) consistent fiscal and monetary policies targeting inflation and capital controls. Indeed, the devaluation of the nominal exchange rate typical of the BBC-SCRER regime entails a slower decline of inflation than under other types of arrangements, as imported inflation rises in line with the nominal devaluations implicit in this approach. Inflationary pressures are aggravated by the BBC-SCRER's expansionary bias. Thus, the preservation of a real exchange rate target requires that monetary and fiscal policies should be only moderately expansionary to avoid overheating, while capital controls should aim at limiting capital inflows; (b) the accumulation of international reserves[10]. The BBC-SCRER exchange rate regime requires that the monetary authority accumulates large reserves, so to mitigate the appreciation of the RER or the collapse of the nominal exchange rate in case of external shocks. Many developing countries pursued this policy in the 2000s except the oil producers of MENA which may have done so for lack of absorptive capacity rather than as a deliberate policy (Table 9).

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[10] In several developing countries the accumulation of reserves was facilitated by gains in terms of trade as the prices of several primary commodities rose and that of manufactures exported by the low-wage Asian economies fell, leading some observers to argue that the Prebish-Singer theorem on the secular worsening of the terms of trade of developing countries had been turned upside down.

Table 9. International reserves as a share of GDP

|	1982-90	1991-1997	1998-2002	2002-2010
South America	7.4	10.7	11.1	15.4
Central America + Mexico	4.5	6.7	9.8	12.6
Sub-Saharan Africa	7.0	10.1	12.1	15.9
MENA	13.8	14.5	20.9	42.7
South Asia	3.8	7.8	8.6	12.0
East and South East Asia	17.0	24.8	34.1	40.6
Asian economies in transition	3.1	8.3	13.2	30.9
EE-FSU	2.7	9.2	14.5	21.5
Advanced economies	6.4	7.1	6.5	6.1

Source: author's elaboration on the basis of UNCTADstat (2011 version)

Thus, holding large reserves (whether 'earned' or 'borrowed') reduces the risk of default on public and private debts and strengthens the central bank's ability to intervene in the currency market to avoid an overshooting of the exchange rate and promote growth including by learning-by-investing externalities (Korinek and Serven 2010). Several authors argue, however, that such 'insurance policy' can cost up to 3 percent of GDP and is inherently deflationary (Chandrashekar and Ghosh 2009), though other estimates (Rodrik 2006) place such figure at around 1 percent of GDP. Be as it may, the currency reserves earn low or negative real interest rates, while they could be used to import capital goods and speed up GDP growth.

(iv) Long term equilibrium or surplus of the current account balance. The new structuralist macrocroeconomics emphasizes the need (related to the accumulation of reserves) of generating a current account surplus, so as to avoid problems of rising foreign indebtedness and inability to control the exchange rate. As a result, during the 2000s all developing regions improved substantially their current account position and in three cases recorded achieved surpluses (Table 3). The main exception were the non-oil transition economies of EE-FSU where current account deficit rose up to 10 percent of GDP, particularly in the Baltics, Hungary, Romania, Belarus, Ukraine and Moldova (Figure 6). In Bulgaria, in 2007 and 2008 the current account deficit exceeded 25 percent of GDP.

Figure 6. Average current account deficit/GDP ratio (%of GDP) over 2000-7 in Eastern Europe and the Former Soviet Union and Latin America.
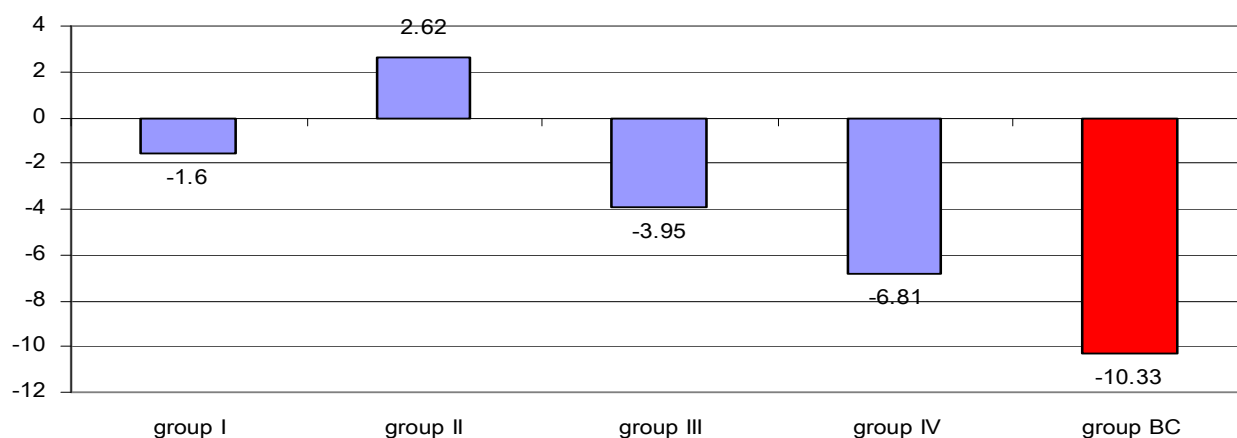
Source: author's elaboration on the basis of data from the IMF's World Economic Outlook 2011. Notes: Group I: Latin America; Group II: Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, and Uzbekistan. Group III: Armenia, Azerbaijan, Georgia, and Ukraine. Group IV: Albania, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Slovak Republic and Slovenia. Group BC: Estonia, Latvia, and Lithuania.

(v) Trade policy. As shown in Table 2, in most regions the free trade policies adopted in the past have not been overturned during the 2000s, though there is some evidence that they stopped on average generating the disequalizing effects they produced during the prior twenty years (Szekely and Samano, 2012). In contrast, trade destination shifted substantially as there was a decline in the share of trade with advanced economies (again with the exception of the EE-FSU countries which increased their export dependence on Western Europe) and a rise in the intra-regional share (as in the case of Mercosur, the Andean Pact, and ASEAN) and in the share of trade with the Asian emerging economies. This in part policy-driven and in part endogenous trade diversification plaid an important role in limiting the contagion originating from the OECD in 2009. In brief, there seem to be a drive towards a trade regime that avoids a collapse of the import competing sectors, actively seeks to diversify the composition and destination of exports, while quickly removing any anti-export sector bias.

(vi) A countercyclical fiscal policy. The new macro approach emphasizes the importance of being able to count on 'fiscal space' during crises, as in the past several economies entered crises without the ability of pursuing countercyclical fiscal policy because of the high levels of debt and future unfunded liabilities (Blanchard et al. 2010) and where forced to cut spending despite already large recessions. As a result, the last decade witnessed in many developing countries an intensification of the decline in budget deficit and public debt which had began during the 1990s (Table 3). In most of South America budget deficits (which had risen in the late nineties and early 2000s, see Table 3) declined since 2002 and in 2008 seven of the ten South American countries exhibited surpluses signaling a structural change towards the adoption of fiscal rules, fiscal responsibility laws or discretional decisions aiming at correcting the pro-deficit bias of the past (Fanelli et al 2011) while at the same time allowing counter-cyclical short term increases in deficits during crises. This new stance contrasts with the real-life W.C. and IMF position of the 1980s and 1990s which traditionally demanded crisis-affected countries to quickly reduce the deficit, with yearly cuts of up to four-five per cent of GDP which consistently lead to a worsening in aggregate demand, output, revenue collection, employment and inequality. Under crisis situations, a temporary rise in the deficit maintains aggregate demand at an acceptable level and limits the impact of shocks on the output gap and inequality. In contrast, as noted in Section 3, large cuts affect the deficit itself, as tax revenue is endogenously determined by the level of output. Hence, an attempt at rapidly reducing the budget deficit could lead to its increase, demanding in this way the imposition of further restrictive measures.

A key issue in this field is the choice of a sustainable deficit under crisis years and the subsequent pace of its reduction. In this regard, the IMF argues that an optimal fiscal deficit should be sustainable over the next five to 10 years, but in determining it, it assumes the rate of growth, fiscal revenue and interest rates as exogenous while, as argued above, such variables and the deficit are jointly determined. Nor can the case for quick deficit reductions be argued on the

basis that (even large) temporary deficits are costly, as there is no convincing evidence in this regard. In contrast, there is evidence that large and rapid fiscal cuts reduce growth over the short and long term and can cause irreversible declines in the well-being of the poor. So, while deficits certainly need to be reduced, this should be done gradually[11]. For instance, Adam and Bevan (2001) suggest that deficit reductions of up to 1.5 per cent of GDP per year help re-establish fiscal balance with a minimal impact on output, but larger reductions actually hurt growth. There is also growing evidence that – unlike in the 1980s and 1990s (Andersen et al. 1987) – with the new approach spending on health, education, public works, infrastructure and key public investments were protected or even expanded during the 2009 crisis, though in 2010-2011 most countries reverted to a more conservative fiscal stance (Ortiz et al 2011, Martorano et al 2012).

vii) a greater role for automatic and discretionary stabilizers. One area of the new consensus on fiscal policy concerns the need to rely more than in the past on automatic and discretionary fiscal stabilizers. Their strengthening of *automatic stabilizers* can take various forms. Already in the past, and increasingly so in recent times, commodity exporters set up 'stabilization funds' aiming at offsetting the revenue effects of large fluctuations in the world demand and prices of their exports. Such funds set aside resources during periods of high demand and prices of the exported commodities and release them automatically in crisis years. During boom years, such policy reduces the inflationary pressures arising from the non-traded sector, while during crises the injection of funds into the state budget sustains public consumption and aggregate demand. As for the *discretionary stabilizers*, the orthodox view was that they face design, timing and organizational problems right when they need to be set up during crisis, with the result that its benefits generally arrive late.

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[11] One is the renewed role played by the IMF. Innovations in the IMF bring the institution closer to a role of lender of last resort, largely along the lines demanded by developing countries (Ocampo 2011). It is plausible that the action of the IMF has helped to avoid crises in a series of small economies affected by financial and external fragilities by mid-2008. The second factor of this stronger financial resilience has to be found in the changes experienced by many developing economies in the 2000s.

However, the last decade has witnessed a diffusion of equalizing social assistance transfers targeted at the poor which can be quickly expanded – thus assuming the role of discretionary stabilizers to be used during crisis periods. Such programs were spearheaded in the 1990s by Brazil's *Bolsa Escola* (now *Bolsa Familia*), the social assistance pensions of South-Eastern Africa, and since 2005 by India's National Rural Employment Guarantee Scheme. The coverage of such programs increased massively, and programs of this kind are now in operation in at least 18 countries in Latin America, 20 in Sub-Saharan Africa, 6 in South Asia and 5 in S.E.Asia (where social insurance dominates) for a total coverage of 860 million people (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1672090). While these transfers are not usually considered a component of macro-policy, they can play an important counter-cyclical role during crisis periods. This makes possible to better absorb shocks and introduce macro policies that otherwise would generate hard-to-shoulder social and political costs.

(viii) Tax policy. The new macro approach emphasizes more than before the macroeconomic and distributive advantages of an adequate and progressive taxation, and less its presumed efficiency costs, as emphasized by the real-life WC (Table 1). Indeed, as noted in section 2.2, in many developing countries, the budget deficits recorded in the 1980s and 1990s resulted not so much (or not only) from excessive public expenditures, but mainly from low and falling tax/GDP ratios (Chu et al 2004). In contrast, Table 8 shows that the last decade witnessed (in some cases starting already from the second half of the 1990s) a fairly universal rise in tax/GDP ratio which was particularly pronounced in Latin America. In most cases, this new trend signals a weakening of the neoliberal stance about the supposed efficiency costs of taxation, and an explicit search for greater budgetary balance and greater tax equity (Cornia et al. 2011). While the increase in commodity prices over 2003-8 facilitated the surge in revenue in some countries, the evidence shows that the latter was mainly driven by the new accent placed on personal and corporate income tax and wealth taxes, the introduction of pragmatic

presumptive taxation, financial transaction tax, taxes on luxury items, reduction of excises on oil, alcoholic beverages and tobacco and minimal changes in trade taxes and VAT which were already modified in the 1980s and 1990s. As a result, between the 1990s and 2000s the redistributive effect of taxation improved by between 0.6 and 3.8 Gini points in ten countries out of the 11 Latin American ones with available data (*ibid*). In contrast, in EE-FSU, the tax reform emphasized the introduction of VAT and of a flat tax on personal and corporate income which - with few exceptions - likely generated un-equalizing effects on the post-tax income distribution (Cornia 2011).

ix) a countercyclical monetary policy: The orthodox stance in this area is based on the observation that inflation is 'costly' as it raises uncertainty about relative prices, erodes profits and wages, exasperate overall uncertainty, discourages investments, and affects the poor the most. High inflation also reduces real money supply and – if uncompensated by an accommodating monetary stance - raises the interest rate which reduces output and tax revenue, while, under an open capital account, even small-ish inflation differentials may cause capital flights.

In contrast, the new structuralist macroeconomics considers that – while the control of inflation is sacrosanct – its target value and speed of reduction must take into account other considerations, and be broadly driven by flexible inflation targeting. To start with, the 'inflation target' should be raised (from two to four-five percent in the industrialized countries and in similar proportions in developing countries) and made more flexible, so as to allow for a greater monetary space to fight effectively crises driven by different shocks (Blanchard et al. 2010)[12]. In addition, Bruno and Easterly (1998) and Stiglitz (1998) show that driving inflation below 40 per cent produces no discernible economic benefits while rapid disinflation might cause a contraction in GDP and — because of the endogeneity of tax revenue to GDP — a widening of the fiscal

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[12] The WC monetary policy (aiming at a two percent inflation target) permits only a small room of manoeuvre as nominal interest rates cannot be lowered below zero.

deficit. In addition, a policy of high interest rates increases the concentration of financial wealth in the hands of bond holders, while given the mark-up price formation mechanism prevailing in several developing countries, a rise in interest rates raises production costs and prices.

This means that the while the inflation target rate should be raised and that during crises nominal interest rates ought to decline more markedly than in the past. This policy should help containing cost-push inflation and at the same time avoid a contraction in investment and growth that inevitably depress employment. At the same time, the new macro approach argues that monetary policy should aim at providing liquidity more broadly by allowing central banks to act as true lenders of last resort, sterilize unwanted changes in foreign exchange markets, and impose capital controls to preserve monetary autonomy. Finally, in view of the rise in financial crises, monetary policy should also focus on controlling asset price bubbles, excessive leverage and current account positions which cause systemic risk by means of counter-cyclical regulation. For instance, capital adequacy and liquidity ratios can be increased, loan-to-value ratios decreased, margin requirements increased, and risk taking limited.

x) a stricter banking regulation and supervision. The loosening of banking and financial regulation during the 1980s and 1990s has been shown to cause major macroeconomic problems. In particular, it allowed creating off-balance-sheet institutions and NBFI not subjected to prudential rules, a trend which increased leverage and often led to financial and banking crises. However, - unlike in the OECD and European transition economies – in recent times the developing countries experienced few financial, sovereign debt or banking crises, including in 2009 (Table 7). Indeed, for the case of Latin America, Porzekanski (2009) talks of a 'missing financial crisis'. One reason for this crisis avoidance is the expanded role played by the IMF since 2008 in lending greater amounts of funds with lower conditionality. Another reason are the banking reforms implemented in Latin America and other developing countries. As argued by Rojas Suarez (2010), the governments of the region enhanced the

capitalization, funding and supervision of their banking systems, encouraged the development of local capital markets, introduced a stricter prudential regulation of financial systems, enhanced risk-assessment mechanisms in a number of large banks, developed appropriate legal, judicial and accounting frameworks, and assigned to state banks a greater role in providing liquidity and financing economic activity during crisis years.

3.3. Policy consistency, and coordination between different policy instruments

As noted in the introduction, the new macro fundamentals have three main objectives, i.e. preventing crises, maintaining a reasonable macro balance, and promoting equitable growth. Of the policy tools part of the new package in Table 10:

- the first three and the ninth aim at preventing crises due to external shocks;

-the fifth, sixth, seventh and eighth aim at ensuring a reasonable macroeconomic balance and low inflation via the control of aggregate demand while weighing adequately the importance of employment and distributive concerns;

- the third, fourth and seventh aim predominantly at the promotion of growth and lower inequality, and at achieving robust external accounts.

This assignment of 'policy tools' to 'policy targets' ignores, however, the close interconnectedness of the various targets and tools. In fact, the achievement of a given objective often requires adopting consistent policies in areas other than that of the assigned tool(s). Hereafter are therefore reviewed a few key policy coordination requirements as well as positive/negative synergies deriving from the interaction between policy tools. For instance:

- the adoption of a BBC-SCRER exchange rate regime reduces inflation and inflation expectations less rapidly than other exchange rate regimes (thus

Table 10. Summary of main policy tools and their coordination and synergies

Policy area	Policy stance	supportive measures and *synergic effects*
1. Foreign indebtedness & financing of capital accumulation	- Reduce public debt/GDP - Control rise of private debt - Mobilize domestic funds	- Adequate tax revenue & 1ary surplus - promote domestic savings - stable domestic credit supply - *bank stability enhances dom. savings*
2. Portfolio flows	- Introduce temp./permanent controls for inflows-outflows - steer their allocation to traded sector - sterilization of monetary expansion	- Low budget deficits - Adequate domestic credit supply
3. Exchange rate policy	- BCC-SCRER regime in most cases - Reserve accumulation - Intervene in currency mkts	- Low deficit to prevent inflows - moderate fiscal monetary policy to control inflation - *Inflation declines more slowly*
4. Trade policy	- Retain 'free trade policy' with temporary control in case of crises - diversification of exports/destinations	- *BBC-SCRER exchange rate offers some protection from imports*
5. Current account policy	Long term equilibrium or /surplus	- BCC-SCRER exchange rate - Import controls in crisis situations
6. Fiscal policy	- Small long term budget deficit - Countercyclical fiscal policy+ gradual cuts - Stabilizatio funds/fiscal rules - Avoid cutting pro-poor/growth items - Safety nets as automatic stabilizers	- coordinate with monetary policy - Raise tax/GDP to 'potential level'
7. Tax policy	- Raise tax/GDP to 'potential level' - Greater use of progressive taxes	- *Likely to reduce capital inflows*
8. Monetary policy	- Moderate & countercyclical - targets inflation	- coordinate with fiscal policy
9. Banking regulation	-Macro-prudential regulation - Expansion of domestic credit	- *Improves macroeconomic balance and Exchange rate stability*

Source: author's compilation

causing a fall in the RER), and therefore requires the adoption of moderately restrictive fiscal and monetary policies to control inflation and ensure the stability of the RER target. In addition, moderate fiscal and monetary policies under a BBC-SCRER regime is crucial for slowing down domestic aggregate

demand and inflation as - by enhancing employment growth and capital accumulation in the tradable sector – the BBC-SCRER regime generates an expansionary effect on aggregate demand;

- the objective of reducing the pubic debt/GDP ratio can be more easily achieved by a policy of low deficits (or surpluses). As for the private debt, the recourse to (often unstable) foreign financial markets requires a deepening and good regulation of the domestic banking sector;

- the target of low/zero deficits is important but cannot be achieved solely – as in the past – through a compression of public expenditure which tend to fall disproportionately on public investments, with negative short and long term effects. The achievement of such targets requires a steady increase in tax/GDP ratios to their potential level. Greater recourse to progressive taxation will ensure the simultaneous achievement of both macro balance and equity objectives;

- 'free trade' policies produced negative effects on inequality and growth in the past, but should be retained with some modifications (in terms of diversification of export/import structure and destinations and recourse to temporary tariffs). At the same time, the adoption of a BBC-SCRER regimes not only promotes exports but also protects domestic firms from competing imports;

- finally, monetary policy should be coordinated with fiscal policy to reduce the public debt to a sustainable level. For instance, a policy of low interest rates should be accompanied by a fiscal surplus.

4. The new structuralist macroeconomics and inequality

As noted, the 2000s witnessed a divergence in income inequality trends across regions (Table 5). While there was a widespread decline of inequality in Latin America, parts of Sub-Saharan Africa and a few South East Asian countries (Table 5), income distribution continued worsening (if at a slower pace than

during the prior two decades) in South Asia, China, Vietnam and Indonesia, which followed their own 'home made' macroeconomic policies (part of this inequality increase is due to rising rural-urban gap and to regional inequality). A fairly widespread inequality rise was observed also in the EE-FSU countries which - with exception of some Central European countries – adopted in the 2000s neoliberal macroeconomic policies inspired by the de facto WC.

No doubt, endogenous factors (such as gains in terms of trade, technology, and human capital formation) likely contributed to the improved inequality performance of the developing countries mentioned above. Yet, an examination of the data suggests that the degree of inequality gains across regions seems to be related in an important way to the shift towards the new structuralist macroeconomic policies.

4.1 Pathways linking the new approach to income inequality

Before testing econometrically the relation between macroeconomic policies and income inequality we first discuss from a theoretical perspective the pathways through which the former is likely to affect the latter:

- *the BBC-SCRER-unemployment reduction-inequality pathway*. A competitive RER improves the profitability of the traded sector by making exports more competitive and imports less competitive. There are two effects: first, employment shifts towards the traded sector (manufacturing and agriculture) which is normally more unskilled-labor intensive, though this might not be the case in countries with a large urban informal sector. Second, as noted by Rodrik (2003 and 2007) and as tested in econometric studies (Gala 2007), a competitive RER has been often associated with periods of rapid growth and overall employment creation, with favorable (if varying) distributive outcomes. Thirdly, the expansion of the traded sector relaxes the balance-of-payment constraint to growth and generates positive externalities – including in terms of employment creation – also in the non-traded sector. Finally, a competitive RER shifts the relative price ratio against the non-traded sector and

so discourages the formation of un-equalizing asset bubbles and the occurrence of macroeconomic crises.

- *the higher taxation-redistribution pathway.* Tax policy can affect directly and favorably the distribution of disposable income as an increase in tax/GDP ratios obtained through porgressive taxes improves the current distribution of post-tax income in relation to the pre-tax one (as observed recently in Latin America) while it permits to expand public expenditure on progressive social transfers, human capital formation and public infrastructure, thus improving the current distribution of disposable income as well as future wages and their distribution, as the scarcity rents accruing to the educated rich decline due to an increase in the supply of skilled workers. Third, even if the revenue increase is obtained through neutral or regressive instruments, taxation can influence favourably current inequality by reducing the frequency of highly un-equalizing budgetary crises, as an increase in tax revenue reduces the need to monetize the budget deficit or to borrow abroad.

- *the growth-inequality pathway.* The literature on endogenous growth suggests that   the new structuralist macroeconomic approach affects favorably the growth of GDP. According to the Loyaza model, taxation affects growth by increasing the supply of public goods, such as public infrastructure, which raise the rate of return on private investments and human capital. Other measures part of the new structuralist macroeconomics (including the reduction in external indebtedness, accumulation of reserves, introduction capital controls, countercyclical monetary and fiscal-monetary policy, competitive RER, financial regulation, and so on) also have positive effects on growth. In turn, faster growth helps creating new employment for the jobless and in some cases raise the wages of the unskilled workers, thus equalizing the distribution of income. Such effect is not automatic (indeed, the advanced economies have experienced long periods of jobless growth) but has been observed during many growth spells in developing countries with flexible labor markets. Thus, besides the direct effects on inequality, the new macroeconomics for development can

reduce inequality by promoting faster growth. Finally, the new macro approach affects favorably growth (and therefore inequality) in the case of external shocks thanks to the adoption of countercyclical fiscal and monetary policies which reduce output and job losses.

- the prevention of external crises - lower instability - inequality pathway. The new structuralist macroeconomics affects inequality also through the adoption of measures which minimize the frequency and impact of contractionary and un-equalizing foreign debt and currency crises with real effects. The new model includes in fact provisions to reduce foreign indebtedness, increase reserves, introduce capital controls to avoid booms and busts and the formation of bubbles, and the adoption of an intermediate exchange rate regime of the competitive RER regime which reduces the occurrence of current account crises (Figure 3).

- the banking regulation- domestic banking stability-inequality pathway. Inequality was also affected favourably by stricter measures adopted during the last decade in some developing regions to regulate the domestic banking sector which between 1982 and 1997 registered, for the world as a whole, no less than 100 crises (Table 7). As noted by Halac and Smuckler (2003) in a study of five Latin American banking crises, such shocks generated large and lasting un-equalizing effects. The new approach in this area is inspired by the lessons emerged recently in some developing regions, Latin America in particular. Porzekanski (2009) and Rojas Suarez (2010) for instance argue that – in addition to the improvement in the field of macroeconomics – most Latinos governments reduced currency mismatches, enhanced the capitalization, funding and supervision of their banking systems, encouraged the development of local capital markets, introduced a stricter prudential regulation of their domestic financial system and of lending, enhanced risk-assessment mechanisms in large banks, created appropriate legal, judicial and accounting frameworks, while assigning to state banks a greater role in the financing of economic activity, the mobilization of domestic savings and other areas.

4.2 Regression results and tentative conclusions

Hereafter we test econometrically the hypotheses formulated above on the relation between the new structuralist macroeconomic approach and inequality on the basis of a panel of 124 developing, developed and transitional countries with at least five well spaced Gini data points over the years 1980-2009. The dependent variable is the Gini coefficient of household disposable income derived from the SWIID database (http://www.siuc.edu/~fsolt/swiid/swiid.html), the IDLA dataset (Martorano and Cornia 2011), Eurostat and national sources. In some countries the definition of the income concept on which the Gini coefficients were computed is unknown. The regressors include most of the macroeconomic measures discussed above. As argued above, the impact of the new structuralist macro policies on inequality takes place not only directly (as in the case of progressive taxation), but also via the indirect effects these policies have on enhancing growth and stability.

The panel nature of the data used for this econometric test implies that the estimation procedure takes into account that each region is observed over several periods. Such model takes therefore the following form:

$$GINI_{it} = \alpha + \beta X_{it} + \eta_i + u_{it}$$

where $Gini_{it}$ is the Gini coefficient of the distribution of household disposable income per capita (or its closest approximation), X a vector of explanatory macro variables and two control variables (the average years of education of the workforce and its square), the subscripts i and t represent respectively the regions and years of the panel, u_{it} is a joint error term for regions and time periods, η_i is the time-invariant regional fixed effect, while α and β are parameters to be estimated. This estimation procedure generates for each of the 9 regions considered (see Table 3) an intercept which captures specific fixed regional effects reflecting differences in geography, institutions and unobservables. The definitions and sources of the variables included in regression are reported in Annex Table 1.

All macroeconomic determinants of inequality discussed in the text are included in regression with the exception – due to lack of data – of macroeconomic instability. Government balance/GDP was dropped as redundant, given that its effect is captured by the revenue/GDP and public debt/GDP ratios which – had the government balance/GDP been introduced in regression - would have made it non significant. As for the possible interdependence among other regressors, the very low values of the bilateral correlation coefficients (Annex Table 2) suggest the absence of the multicollinearity bias which could have been plausibly expected on the basis of the received theory, as for instance in the case of the relation between the real exchange rate and the reserve/GDP ratio, or between the public debt/GDP ratio and tax revenue/GDP). Thus, most of the variance of the independent variables does not seem to be explained by other regressors.

Model 1 in Table 11 below is the standard reference model. It shows that all variables are statistically significant and have the sign expected *ex-ante* on the basis of theory, but for the Kaopen index of financial liberalization which is non significant and the national saving/GDP ratio which is significant but has a sign contrary to the expected one. The subsequent four model present refinements of model 1 aiming at capturing regional or structural differences and at correcting the problems of model 1 just mentioned. In particular, model 2 includes the interaction variable "Kaopen index* dummy poor countries" which aims at capturing the effects of the capital account liberalization in poor countries (those with a GDP per capita lower than the median of the country panel) which are likely to be most affected by the instability of financial flows.

Model 2 shows in fact that while capital account liberalization is equalizing on average (a result influenced by the presence of developed countries in the panel), it is un-equalizing in low-middle income countries, as argued in sections 3 and 4. In turn, model 3 introduces a variation on model 1 by adding the

Table 11. Fixed effects panel regression of the impact of macroeconomic variables on the Gini index of income inequality, 124 countries over 1980-2009

Regressors	Expected sign	Model 1	Model 2	Model 3	Model 4	Model 5
GDP_growth rate	(-)	-0.0872**	-0.0867**	-0.0769**	-0.0855**	-0.0680*
Average years of education of workers	(+)	2.0383***	1.4137***	1.1819***	1.2618***	1.2429***
Average years of education of workers^2	(-)	-0.1232***	-0.0840***	-0.0712***	-0.0743***	-0.0737***
Gross National savings / GDP	(-)	0.1805***	0.1535***	0.3793***	0.2538***	0.2547***
Gross National savings/GDP* share VA in agriculture (s1)	(-)			-0.0035**		
Gross National savings/GDP* share VA in industry (s2)	(-)			-0.0046***		
Gross National savings/GDP* share VA in agriculture/share VA in industry (s3)	(-)				-0.1055***	-0.1065***
Capital controls (Kaopen index)	(-/+)	0.1060	-0.3088**	-0.4586***	-0.3745**	-0.3651**
Capital controls in poor countries (Kaopen index* dummy poor countries)	(+)		2.2923***	2.7001***	2.5600***	2.5805***
Reserves/GDP	(-)	-0.0348**	-0.0237	-0.0352*	-0.0290*	-0.0305*
Real exchange rate	(-)	-0.0001***	-0.0002***	-0.0002***	-0.0002***	-0.0002***
Government revenue/GDP	(-)	-0.2363***	-0.2325***	-0.2374***	-0.2280***	-0.2266***
Current account balance/GDP	(-)	-0.2188***	-0.1950***	-0.1755***	-0.1708***	-0.1680***
Bank deregulation (Frazer Institute Index)	(+)	0.9616***	0.8736***	0.7672***	0.7966***	0.8110***
Public Debt/GDP	(+)	0.0080*	0.0027	-0.0035	-0.0023	-0.0028
% Yearly Change in Public Debt/GDP	(+)					0.0278**
Constant		39.66***	43.03***	44.90***	43.96***	43.86***
Regional dummies		Yes	Yes	Yes	Yes	Yes
Observations		1,274	1,274	1,219	1,219	1,219
R-squared		0.800	0.810	0.818	0.816	0.817

Source: author's calculations

interactions between the national saving rate and the share of value added in agriculture (s1) and industry (s2). It shows that in economies where these two sectors are important, a higher gross national saving ratio is associated with lower inequality, possibly reflecting the fall in the national saving ratio in more egalitarian but low-savings tertiarized societies with an easy access to global financial markets. Such effect is captured as well in models 4 and 5.

Overall, the results confirm that accumulating reserves, having a competitive RER, increasing government revenue/GDP, and realizing a current account

surplus reduce inequality in models 1 to 5, while bank deregulation raises it. The public debt/GDP ratio is non significant but its yearly variation is significant – as expected - in countries where such ratio exceeds 60 percent (see model 5). The size of the parameters in models 1-5 is generally stable and – with the few exceptions mentioned above – are highly significant, suggesting that they have been correctly estimated. Thus, while still susceptible of several improvements (e.g. by verifying with a statistical test the possibility of reverse causation and endogeneity which have been excluded here on theoretical ground), the regression results are encouraging, as in practically all models the control variables (growth rate of GDP, average years of education of workers and its square) and the macroeconomic variables discussed in the prior sections have the sign expected *ex ante* and are statistically significant. The index of capital liberalization (Kaopen index) is – somewhat surprisingly – equalizing, but it becomes un-equalizing when interacted with the dummy 'low income countries'.

In conclusion, the regression results tend to support to an unexpected extent the theoretical arguments, evidence of the literature and regional comparisons discussed in sections 3 and 4 about the impact on income inequality of the adoption of new structuralist macroeconomic policies in a number of countries during the last decade. It confirms also that the adoption of real-life WC-type policies contributed to raising inequality in a large number of countries during the 1980s and 1990s as well as in several countries of Eastern Europe and South Asia during the 2000s. The case of China – which adopted some of the new macroeconomic policies discussed in this paper while experiencing a rapid rise in income inequality – shows that other factors (such as rising regional inequality and weak labor market policies) may dominate the improvements due to the adoption of several of the policies discussed in this paper. Finally, these results have to be taken with a pinch of salt and further empirical and theoretical work is needed at the country o regional level to fully document what we argued is the favorable inequality impact of the new structuralist macroeconomics which has gradually evolved the last 10-15 years in a number of developing countries.

<div align="center">**Annex Table 1**. Description of the variables used in the regression analysis</div>

Variable	Description	Unit of Measurement	Data Source
Gini coefficient of disposable income/capita	Gini on Income	Index (ranging btw 0 and 100)	SWIIDv3_0, IDLA database, EUROSTAT, World Development Indicators (WDI), African Development Bank database (AfDB), ESCAP and national sources
GDP/c growth rate	Growth rate of GDP	Rate of growth	ERS/USDA International Macroeconomic Dataset (2011)
Human capital of workers	Number of years of education of adults (25+)	Absolute number	Barro and Lee (2010)
Gross national savings/GDP	Gross National Savings	Percentage of GDP	The World Economic Outlook (WEO) database 2011
Kaopen index of capital account openness	The Kaopen index is a positive function of the openness.	Ranges btw -2.5 (close) and +2.5 (open)	Chinn and Ito (2011).
Reserves/GDP	International reserves as a share of GDP	Percentage of GDP	UNCTADstat (2011)
RER	Index of the Real Exchange Rate	Index 2000=100	ERS/USDA International Macroeconomic Dataset (2011)
Revenue/GDP	Ratio of Government Revenue to GDP	Percentage of GDP	The World Economic Outlook (WEO) database 2011
Current account balance/GDP	Current account balance	Percentage of GDP	The World Economic Outlook (WEO) database 2011
Bank deregulation	Frazer Institute Index, varying between 0 (no deregulation) and 10 (complete deregulation)	Index (ranging btw 0 – 10)	Gwartney et al (2011)
Public Debt/GDP	Total Public Debt	Percentage of GDP	The World Economic Outlook (WEO) database 2011, and Reinhart and Rogoff (2010)

Source: author's compilation on the basis of: (i) Chinn, M. D. and H. Ito (2008), "A New Measure of Financial Openness", *Journal of Comparative Policy Analysis,* 10 (3), 309 – 322; (ii) Gwartney, J. , Hall, J. and R. Lawson (2011), Economic Freedom Dataset, published in *Economic Freedom of the World: 2010 Annual Report,* Economic Freedom Network, (http://www.freetheworld.com/2011/2011/Dataset.xls) (iii) Solt, F. (2009), "Standardizing the World Income Inequality Database", *Social Science Quarterly,* 90 (2), 231-242, (iv) Reinhart, C. M. and K. S. Rogoff (2010), "From Financial Crash to Debt Crisis", NBER Working Paper 15795.

Annex Table 2. Bilateral correlation coefficients between regression variables

	Gini Index	GDP Growth	Years of edu workers	Saving/ GDP	Gov Revenue/ GDP	Current Acct. Balance /GDP	Debt/ GDP	Reserves /GDP	RER	Index of bank deregul	Kaopen index
Gini Index	1.00										
GDP growth rate	0.11	1.00									
Years of education of workers	-0.47	-0.10	1.00								
National Saving/GDP	-0.16	0.23	0.15	1.00							
Government revenue/GDP	-0.68	-0.19	0.56	0.13	1.00						
Curr acctount balance/GDP	-0.09	-0.06	0.05	0.66	0.13	1.00					
Public Debt/GDP	-0.01	-0.12	-0.17	-0.27	0.02	-0.06	1.00				
Reserves/GDP	0.08	0.17	-0.01	0.52	-0.09	0.36	-0.04	1.00			
Real Exchange rate	0.20	-0.01	-0.10	0.03	-0.23	0.03	0.02	-0.04	1.00		
Bank deregulation index	-0.13	-0.04	0.49	0.01	0.40	0.02	-0.23	0.06	-0.10	1.00	
Kaopen_index	-0.28	-0.12	0.62	0.03	0.47	0.02	0.01	0.02	-0.04	0.54	1.0

Source; author's compilation

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