The role of selected policy instruments in reducing income inequality[1]

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1. Introduction

After a long period of neglect, the last two decades have witnessed a revival of theoretical and empirical analyses focusing on income inequality, its determinants, and the policies which help achieving better distributive outcomes. Several factors explain this renewed interest, e.g. the rise in income concentration recorded in many countries during the 1980s and 1990s, greater data availability, theoretical advances, and the spread since the mid 1990s of democratic regimes sensitive to popular demands for equity (Roberts, 2012).

The interest for more progressive policies has also been stimulated by the distributive changes observed during the last decade in Latin America (LA), and parts of South East Asia (SEA) and Sub-Saharan Africa (SSA). Despite the increasing openness of their economies, these countries witnessed substantial improvements in distributive outcomes. As shown in Table 1, the trends in the Gini coefficients of the distribution of household income per capita deteriorated in 69 percent of the countries during the 1980s and 1990s, a period characterized by a global recession, the spread of neo-liberal policies and a string of financial crises. However, the decade of the 2000s (a period dominated till 2008 by an improvement in global economic conditions) witnessed a bifurcation of inequality trends. On the one side, inequality fell in LA and selected countries in SSA and SEA[2], due – inter alia - to changes in the field of taxation, public expenditure, labour market and financial regulation (which are the main focus of this paper). On the other, inequality continued rising– if at a slower pace than before - in most countries of the OECD, the European and Asian economies in transition, South Asia, and the African oil economies.

Table 1. Trends in the Gini coefficient of the distribution of household disposable income per capita, 1980-2000 and 2000-2010[/1] in developed, developing and transitional countries

	OECD	European Transition Economies	Asian Transition Economie	Latin America	MENA	South East Asia	South Asia	Sub-Saharan Africa	World	
1980s (or earlier available year) and **1990s**										
Specific period for Each region[/2]	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**	**(69%)**
No change	1	0	1	1	3	0	0	2	8	(8%)
Falling inequality	6	0	0	3	3	2	2	8	24	(23%)
Total	21	24	3	18	8	7	5	19	105	(100%)
2000-2010 (or similar period)										
Specific period for each region [/3]	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**	**(41%)**
No change	4	5	1	1	0	0	1	1	13	(12%)
Falling inequality	8	6	0	**15**	**4**	**4**	0	**13**	50	(47%)
Total	21	24	3	18	8	7	5	21	107	(100%)

Source: Cornia and Martorano (2012) **Note**: [/1] Countries were assigned to the different inequality categories on the basis of a trend analysis and point-to-point difference between the initial and final Gini for the broad periods 1980-2000 and 2000-10. [/2]The periodization in two periods varies somewhat from region to region. .

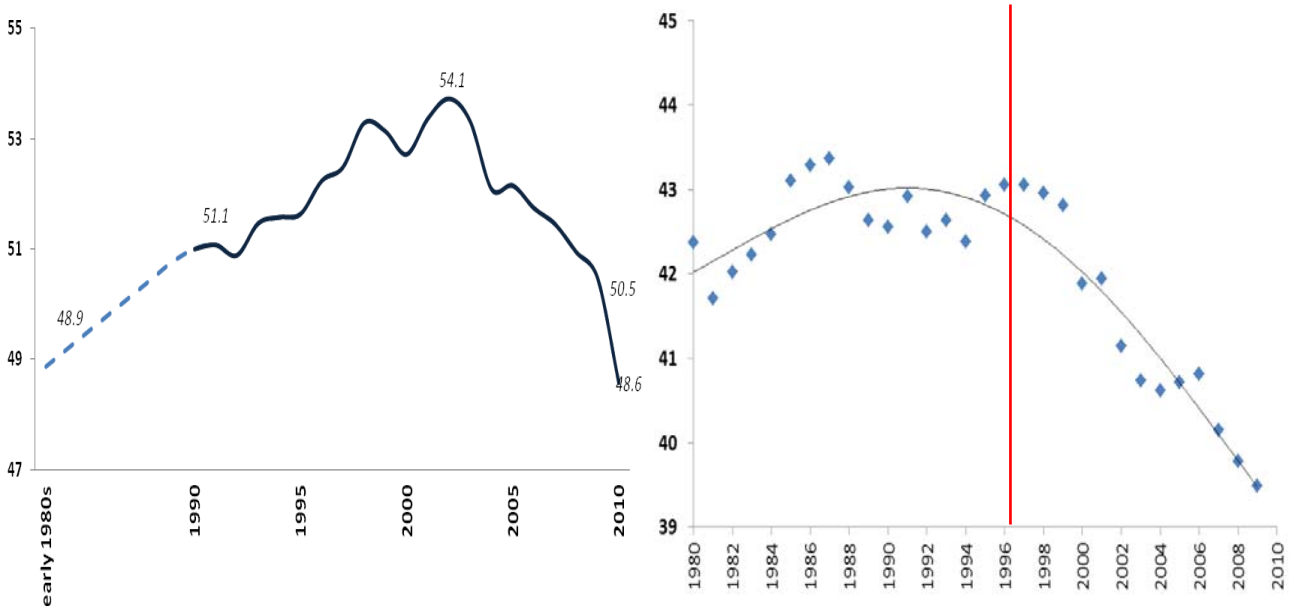
[1] I woiuld like to thank Paola Biasi, Bruno Martorano and Antonio Scognamillo for providing data and comments.

[2] Since peaking in 1999, the Gini coefficient dropped in Malaysia, Thailand and South Korea (Table 1) and the Philippines, while it rose in Indonesia, Taiwan and Singapore.

2. The recent inequality trends divergence as the result of a 'natural experiment'

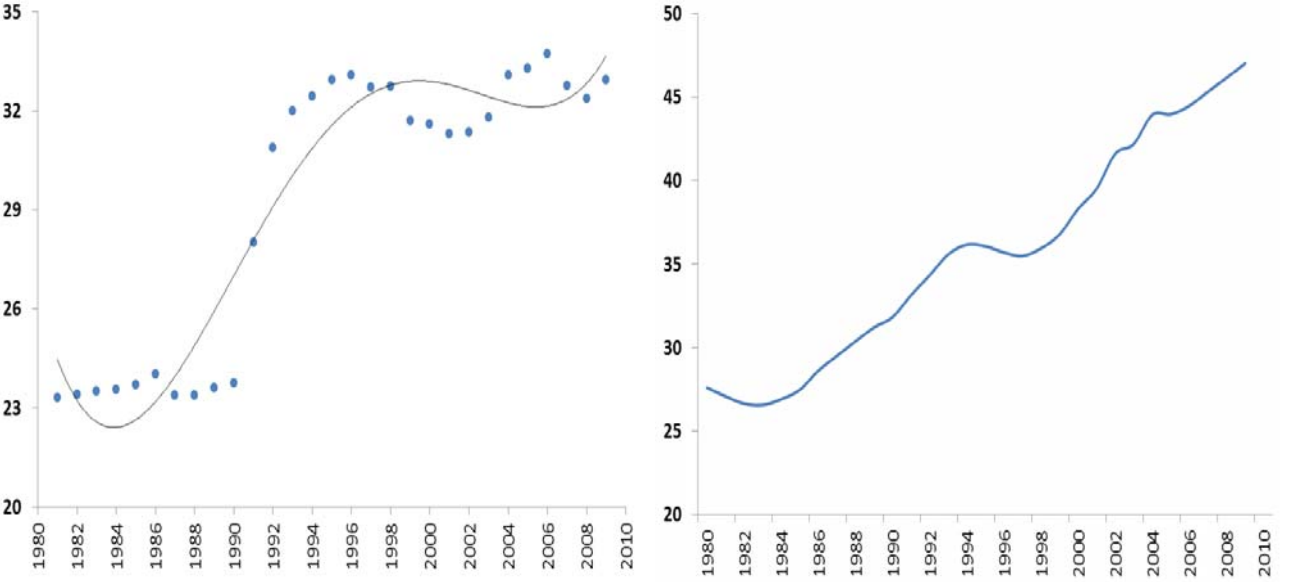
Such trend bifurcation (Table 1 and Figures 1 and 2) may be seen as the result of a 'natural experiment' in which the fall of inequality in the virtuous regions and the rise in the non-virtuous ones mainly depended on the adoption of different economic and social policies, rather than from differences in factors endowments, production structures, economic growth or 'luck' (i.e. rising commodity prices and remittances, global financial exuberance, and rapid world growth).

Figure 1. Trend in the Gini index of the distribution of disposable per capita income in 18 Latin American countries (left panel) and 4 South East Asian countries (right panel).



Source: Cornia and Martorano (2012) and Cornia (2014). Note: Latin America includes all 17 Spanish speaking countries and Brazil; South East Asia includes Malaysia, Philippines, S.Korea and Thailand.

Figure 2. Trends in the average Gini index of the distribution of income per capita of 21 European transition economies, 1980-2009 (left panel) and China,1980-2009 (right panel)



Source: Cornia and Martorano (2012). Note: Eastern Europe and the Former Soviet Union included countries of the region except for those of the former Yugoslavia. The data for the years 1984-91 cover only between 14 and 22 countries with data on the distribution of wages, while those for 2006-9 refer only to 17 to 23 countries with data on the distribution of income. Both period are not strictly comparable with those for the years 1992-2005.

Indeed, with the exception of the OECD and SSA, the structure of most developing and transitional regions is 'similarly heterogeneous': Both distributionally-virtuous and non-virtuous regions include semi-industrialized countries, commodity exporters, countries depending on migrant remittances, and mixed economies. And both groups benefitted during the last decade from terms of trade gains, easier access to global finance, rising remittances, and overall global growth. It is thus difficult to claim that the startling decline in inequality observed in LA and parts of SEA and SSA was due to improvements in global economic conditions. While these, no doubt, plaid a role in the virtuous countries, they cannot be the main explanation of the inequality decline in the virtuous countries, as the non-virtuous countries also benefitted from global improvements until 2008.

Finally, the better inequality performance of the virtuous countries cannot be attributed only to fast domestic growth. While growth might improve employment, wages and equity, the fast growing Asian countries experienced during this period steep inequality rises. As the exogenous shocks affecting the different regions were not dissimilar, and as the rate of growth of GDP did not lead on average to better distributive outcomes, it is likely that the regional divergence in inequality trends is then likely to be due to differences in domestic policies. By comparing the policy experience of virtuous and non-virtuous regions it might thus be possible to learn important lessons on how can inequality be reduced under the present globalized economic conditions.

3. The politics of redistributive policies

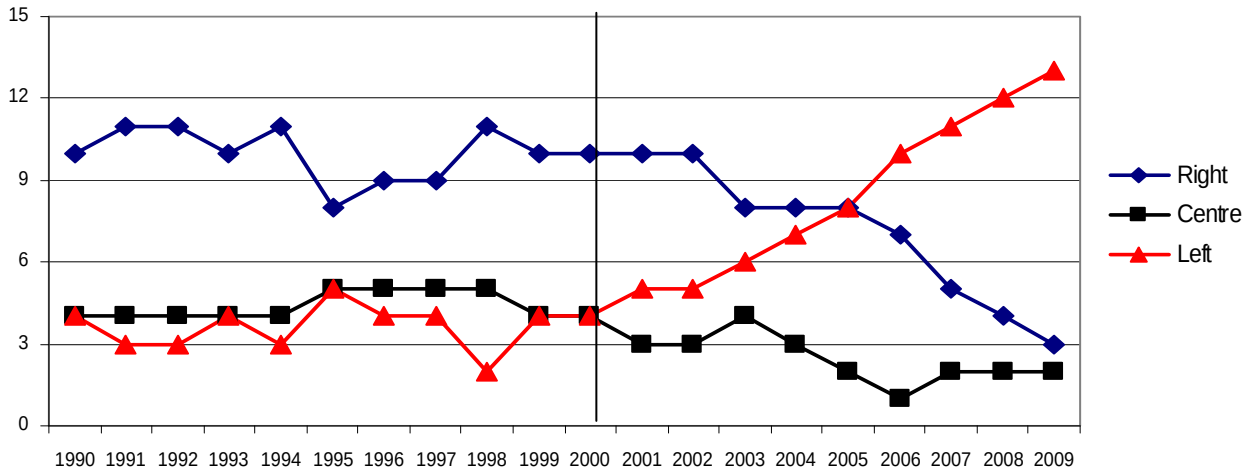
What explains the adoption of more progressive economic and social policies during the last decade in the virtuous countries? A key factor has been the return to democracy in many countries after years of authoritarian regimes. A second, has been the steady shift towards the election of regimes more sensitive to social equity.

Political economy theory supports this explanation. As argued by Robinson (2010), if political power is concentrated in the hands of the élites or authoritarian regimes, the political system tends to adopt un-equalizing policies. For instance, during the years (1973-1987) of the military dictatorship in Chile, inequality rose sharply as the military regime liberalized foreign trade (a measure which raised the skill premium and reduced employment in the traded sector), introduced labour reforms biased against workers and unions, lowered taxes on wealth, capital gains, profits and VAT on luxuries and introduced sweeping educational reforms that favoured private schools and increased educational inequality (Contreras and Ffrench Davis 2014).

In contrast, genuine democracy (the quality of which can be assessedwith the Polity2 index), greater electoral participation and 'consolidation of democracy' reduce the concentration of power and facilitates the transition towards non-clientelistic policies. Indeed, the recent adoption of progressive policies in LA and SEA and of neutral or regressive policies in the non virtuous group has likely been influenced by their different political histories. In the economies in transition of East Asia and EE-FSU which emerged from decades of state dominance over the economy and an overly compressed income distribution, the policies followed in the (1990s and) 2000s were influenced by the desire to do away with the approaches inherited from the past by reducing the role of the state in the economy, eradicating the spirit of egalitarianism inherited from the past, and shifting from the principle of 'equalizing outcomes' to that of 'equalizing opportunities' (Figure 1). A reflection of such change in political philosophy is the drop in the number of 'interventionist regimes' (both left of centre and nationalist right-of centre regimes) in the region, and a parallel rise of pragmatic 'independent' regimes focussing on liberalization, joining the EU, domestic liberalization and global integration (Cornia 2012b). Similar adverse changes likely occurred in the authoritarian or anocratic countries of SSA which benefitted from large gains in terms of trade and growing world demand. For this region the econometric evidence shows that the (uneven but welcome) spread of democracy in SSA is associated with declining inequality (Menchi Rogai 2012).

In contrast, the political trajectory of LA (and SEA) has been different. For long the region was the symbol of authoritarianism, unequal distribution of assets and income, and limited or no redistribution by the state. However, during the last twenty years, the political landscape has witnessed a steady shift towards democratization and, starting from the late 1990s, by a drift in political orientation towards progressive centre-left regimes (Figure 3). Matters of social justice and economic development are at the core of the identity of the new parties supporting such regimes. However, in the pursuit of such objectives, the new regimes avoided the ill-conceived approaches to budget deficits and inflation typical of the macroeconomic populism experimented in the 1980s. They are also well aware of the primacy of the market in price formation, while favouring regional trade integration and openness to FDI. At the same time, the new regimes' concern for poverty and inequality, market failures and strengthening state institutions emerged in stark contrast with the neo-liberal emphasis on shrinking the state and the self-sustained role of markets (Panizza 2005).

Figure 3. Changes in political orientation in 18 Latin American countries, 1990 - 2009



Source: Cornia and Martorano (2009)

All in all, the econometric evidence in Lustig and Birdsall (2010) and Cornia (2014) shows that the inequality decline was in part explained by policy changes which followed the return to democracy, and the election of left-of-centre regimes caused by growing popular frustration with the results of the neo-liberal policies implemented during the 1980s and 1990s (Latino Barometro, various years).

4. Causes of the inequality rise in the 1980s-1990s and of its fall during the 2000s

As noted in the introduction, this paper focuses on the distributive impact of policies in the field of taxation, public expenditure, labour market and financial regulation. However, in order to be able to draw policy lessons on how to reduce income inequality, it is essential to grasp the overall philosophy of the policy regimes which lead to a near universal inequality increase during the 1980s and 1990s and to a decline in selected countries during the 2000s. Indeed, it would be too reductive to focus only on specific policy areas without understanding the overall articulation of policy regimes and the sources of inequality changes. Progressive/regressive policies tend in fact to cluster together in approaches inspired by common guiding ideas.

4.1 Factors behind the widespread increase in inequality during the 1980s and 1990s

What overall endogenous/policy factors then explain the widespread deterioration in income inequality during the 1980s and 1990s? Barring an aggravation of the traditional structural causes of

inequality (high land and human capital concentration, curse of natural resources, and urban bias), three are the causes most frequently mentioned in the literature:

(i) the Skill Biased Technical Change (SBTC), according to which the technological upgrading (in the ITC and other sectors) induced by the trade liberalization of the 1980s and 1990s raised the demand for skilled workers, while their supply grew less because of insufficient public expenditure on secondary and tertiary education and the inability of poor students to finance their studies. Asa result, the wage of skilled workers rose and that of the unskilled ones fell.While there is widespread evidence that the ratio of skilled/unskilled wages rose in many countries during the 1980s-90s, it is not obvious whether the technological upgrading was the sole driver of the rise in the skill premium and income inequality. Indeed, while trade liberalization eased the importation of labour-saving, skill-biased capital goods, the depressed investment climate prevailing in several developing countries during the 1980s and 1990s plausibly hampered the spread of these new technologies. Econometric evidence for Latin America (Cornia 2012) suggests that other factors (such as the spread of informal employment, reduced scope of collective bargaining, and a fall in minimum wages following the labour market reforms of the 1970s-1980s) also plaid an important role in the inequality increase of that period - see point (iii);

(ii) increased South-North exports and migration. Such literature emphasizes that the rapid growth of the effective world labour supply[3], growing global integration of labour markets, and subsequent increase in South-North migration and exports of goods with a high content of unskilled labour depressed the wage rate in both the countries of origin and destination. In addition, migration raised inequality in the source countries where the unskilled poor were less likely to migrate than mid-income workers able to finance the high costs of informal migration. Remittances therefore accrued to households in the 40^{th} to 90^{th} percentile of the income distribution, bypassing the people of the lowest rung. At the same time, migration of skilled workers likely raised their wage at home, leading to a jump in the wage premium and overall inequality in the source. However Docquier and Rapoport (2003) argue that migration may be less un-equalizing or even equalizing in source countries if large migrant networks emerge in the countries of destination so as to reduce the cost of migration and make it affordable also to unskilled workers. Recent evidence for El Salvador and Mexico confirms the latter hypothesis (Cornia, 2014).

(iii) a premature and unfettered liberalization of the domestic economy and external transactions. Contrary to the predictions of the Herkscher-Ohlin theorem - trade liberalization turned out to be un-equalizing in most cases, especially in the 1980s when tariff rates were slashed sharply. While the evidence for the 1970s and part of the 1980s was fairly equally divided between studies suggesting that trade liberalization improved inequality or worsened it, a fairly recent review of the evidence for the 1980s and 1990s (Koujanou-Goldberg and Pavcnik 2007) concludes that income inequality increased in a generalized way during the years of fast trade integration. This effect was due to factors immobility; the erosion of comparative advantages of middle income countries in the labour-intensive sector, due to the entry on the world market of the Asian low-wage exporters; the unequal distribution of the production factors (e.g. as in the case of commodity exporting countries characterized by *latifundia*); the import of skill-intensive investment goods in labour abundant countries; and the appreciation of the real exchange rate and shift in demand towards cheap imports and away from domestic products when trade and finance were liberalized at the same time (Taylor 2004). Similar distributive effects were often observed on occasion of the FDI liberalization which was expected to improve labour absorption and reduce inequality in labour-abundant countries. An even stronger evidence concerns the distributive impact of the capital account liberalization (Galbraith and Lu 1999, Behrman et al. 2000) due the instability of the real exchange rate, the allocation of such inflows to

[3] Between 1980 and 2005, the effective global labor supply rose four-fold with most of the growth occurring since 1990 (IMF 2007). Asia contributed half of this increase due to a rise in working age population and greater trade openness.

capital- and skill-intensive firms in the finance, insurance, and real estate sectors; their volatility; and the negative effects of deregulated financial systems owing to problems of incomplete information, markets and contracts, herd behavior, panics, weak supervision and assets price speculation (Prasad et al. 2003). The impact of domestic liberal reforms was more nuanced. Financial liberalization was found to be highly un-equalizing (section 8). Labour market reforms also had mainly a un-equalizing effect (section 7). The liberal tax reform reduced the tax/GDP ratio and did not improve tax incidence (section 5). Finally, the impact of privatization varied according to the approach followed.

4.2 Key elements of the improvement in inequality in selected countries during the 2000s

A comparison of the regional inequality changes recorded over the past decade permits to formulate a few general conclusions about the drivers of the divergence in inequality trends mentioned above.

The 'open economy growth with equity' policy model implemented in the developing countries which experienced a drop in inequality during the last decade is a 'hybrid model' which combines elements of the liberal model (a focus on low inflation, budget deficit and public debt) with innovative approaches in the fields of countercyclical fiscal and monetary policy, taxation and managed exchange rates, reduction of the foreign debt, stricter banking regulations and greater role of public banks, capital controls, trade diversification, and so on which rendered these economies more resilient to the liberalized trade and financial environment within which they now operate. While all regions adopted a broadly similar stance in terms of macroeconomic targets, the virtuous countries adopted also the other changes just mentioned, with favorable effects on inequality.

The virtuous countries also adopted more vigorous policies in terms of educational, labor market and social protection policies. A key driver of the inequality changes was the extent of support of public education at the secondary level. In this regard, the increase in public expenditure on education recorded during the last 15-20 years in most LA as well as in South Korea, Malaysia and – to a lesser extent – Thailand appears to have generated a 'quantity effect' (a more egalitarian distribution of human capital) and a 'price effect' (a drop in the ratio of skilled to unskilled wages) which helped equalizing the wage distribution. In contrast, in less virtuous economies such as China and several European economies in transition, public expenditure on education dropped substantially while several services were privatized with the effect that the supply of skilled worker stagnated and the skill premium rose. Also labour market policies differed markedly between the regions which experienced a fall in inequality and those which recorded a rise in it. In the first, there was a drive towards re-formalizing employment, strengthening collective bargaining, raising minimum wages and other policies favourable to labour (section 7), while the opposite was true (until very recently) in China and elsewhere. Key differences were recorded also in the field of social assistance. Finally, the inequality decline recorded during the last decade in LA and some SEA and SSA countries cannot be attributed to policies aiming at removing the structural causes of inequality, such as an unequal distribution of assets, subsidies, opportunities and market inefficiencies, and at reducing the rural-urban, spatial and ethnic income gap. Thailand and Malaysia (which attempted to reduce rural-urban gap or inter-ethnic differences) are an exception.

Thus, the virtuous countries have shown that it is possible to reduce inequality under open economy conditions and in the presence of continuous technological shocks if a new policy model (which we name for convenience 'open economy growth with equity') is adopted. This encouraging conclusion differs from the predictions of some authoritative researchers (Rodrik 1997) about the unavoidable un-equalizing effect of the opening of the economy. At the same time, the above comparison shows that the unfettered adoption of domestic and – especially - external liberalization (as in several former European socialist economies) or of highly unbalanced industrial, regional, educational and tax policies (as in China) have lead to a rapid rise in inequality which may threaten social stability and increase the vulnerability to external shocks.

5. Taxation policies leading to a decline of income inequality.

5.1. Approaches to taxation

- ***The classical approach to taxation***. In the early post-WW II period, standard public economics assigned to taxation the role of financing public goods and correcting a socially unacceptable distribution of market income. This redistributive view of taxation and public expenditure applied also to the developing countries. However, the application of these principles therein faced considerable problems due to the predominantly rural and informal structure of these economies, their high level of inequality (which required steep marginal tax rates to achieve a reasonable degree of equity), poor governance, weak tax administration, and resistance to taxation by the élites. While there were improvements in vertical equity, horizontal equity was undermined by the presence of many exemptions granted to specific industries, including agriculture which were often excluded from the payment of income tax (Table 2). In addition, there was hardly any property

Table 2. Incidence of different taxes in rural/urban areas, Pakistan, fiscal year 1978-79

Monthly income class ((rupias)	**Rural area**							**Urban area**		
	Import Taxes	Excises	Sales taxes	Surcharges	Totale taxes on goods	Taxes on profits	Total	Personal Income Tax	Tax on corporate profits	Total
	Effective Tax Rates (Taxes Paid by Households as Percentage of their Personal Incomes)									
fino a 300	5.492	3.490	1.075	0.835	10.892	0.738	11.630	0.000	0.774	14.324
301-400	5.221	3.522	1.030	0.788	10.561	0.698	11.259	0.000	0.833	12.373
401-500	4.898	3.261	0.954	0.724	9.837	0.663	10.500	0.000	0.624	11.912
501-600	5.254	3.409	1.010	0.710	10.383	0.648	11.031	0.000	0.625	13.363
601-800	4.718	3.252	0.918	0.673	9.561	0.632	10.193	0.000	0.669	12.545
801-1000	5.152	3.394	0.999	0.697	10.242	0.619	10.861	0.229	0.607	12.423
1001-1500	4.395	3.139	0.873	0.597	9.004	0.583	9.587	0.409	0.585	11.960
1501-2000	4.097	2.869	0.829	0.544	8.339	0.556	8.895	0.732	0.471	11.619
2001-2500	3.837	2.706	0.779	0.501	7.823	0.514	8.337	1.155	0.533	12.000
2501-3000	3.621	2,681	0.755	0.452	7.509	0.503	8.012	1.056	0.533	11.342
3001-3500	3.647	2.550	0.774	0.428	7.399	0.483	7.882	2.563	3.338	16.540
3501 +	3.990	2.384	0.883	0.457	7.714	0.415	8.129	5.760	6.895	22.860
Total	4.626	3.138	0.917	0.632	9.313	0.595	9.908	1.740	2.122	14.670

Source : national data

taxation due to political-economic reasons. The limited success of these reforms pushed governments to introduce 'second best' indirect and *ad hoc* taxes which increased the complexity of the tax system. As a result, in the 1960s Costa Rica and Bolivia had respectively more than 300 and 400 taxes. In turn, the 'inflation tax' was highly regressive. In Mexico it absorbed 6.6 percent of the incomes of the bottom decile, as opposed to 4.2 percent of that of the 9th decile (Gil-Diaz, 1984).

- ***The neoliberal tax revolution.*** The standard approach to taxation was modified profoundly by the tax reforms of the neoliberal era in which redistribution became a secondary goal of tax design. The main objectives were to reduce the size of the government and efficiency cost of direct taxation, and to improve horizontal equity and revenue adequacy. To reach these goals, countries had to widen their tax base, reduce sharply income tax rates on persons and corporations, rationalize the tax structure and simplify tax administration. This approach, which implicitly entailed a lesser need for revenue, was justified by the emphasis placed on 'government failures' in providing public services, and the residual role to which the state was being relegated by the creeping privatization of health, education, pensions and public infrastructure. Second, most analysts had come to believe that high tax rates not only discouraged economic activity but were ineffective in redistributing income and wealth. As a result, marginal tax rates on income fell sharply. Finally, trade taxes were seen as a cause of global allocative inefficiency and had therefore to be sharply cut. Thus average import

tariff rates fell from 20-45 percent over 1982-90 to 10-15 percent by 1998-2002 to fall only marginally during the 2000s (Table 3). To offset the loss of revenue from trade taxes, countries relied on VAT, with rates ranging between 10 to 20 per cent, with some exemptions for wage goods. In addition, selective excises were also reformed, and had to be preferably levied on goods which generated negative externalities (e.g. tobacco and alcohol).

Table 3. Average import duty, main developed and developing regions

	1982-90	1991-1997	1998-2002	2002-2010
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 transition economies /1	44.5	38.9	15.5	12.5
EE-FSU	…..	11.0	9.0	6.0
Advanced economies	8.5	7.1	3.3	4.2

Source: Cornia (2012c)

As noted by UNCTAD (2012) while these changes in the tax structure were supposedly aimed at making the tax system more "neutral", they *de facto* altered the distribution of income. True, the elimination of loopholes in most cases reduced certain privileges of taxpayers in the high income group. At the same time, cuts in PIT and CIT, together with increases in consumption taxes and user fees, led to a redistribution of the tax burden from the higher income group to the middle and lower classes. The overall effect of these changes in the tax structure was un-equalizing.

The impact of the neoliberal tax reforms varied from country to country, but as shown by Chu et al (2004) on a panel of 36 developing and transition countries they led to an average drop of one percentage point in the tax/GDP ratio between the 1980s and the 1990s (as opposed to a rise by 1.6 points between the 1970s and the 1980s), while the importance of direct taxes in the total and overall tax progressivity declined. Econometric evidence provided by these authors shows that the drop of the direct taxes raised moderately the Gini coefficient. An additional result of Chu et al (2004) was that, as a result of the problems inherited from the past and the reforms of the 1980s and 1990s, tax and transfer policies in developing and transition economies were not very effective in offsetting the increase in market income inequality recorded during that period. Similar conclusions are arrived at by Cornia (2012c) for the period 1990-2010. Indeed, his regression analysis for Latin America shows that a fall (rise) in the ratio of direct/indirect taxes raised (reduced) in a statistically significant way the Gini coefficient of the distribution of disposable income. Finally, the reduction in overall revenue/GDP ratios due to the above tax changes, the priority given to debt servicing, and the artial privatization of pensions and health undermined the financing of public welfare in several developing countries.For instance, during the 1980s, 'public spending on health, education, social security, and housing fell in absolute terms in 10 of 14 Latin American countries and in 8 of 14 as a share of GDP' (McGuire 2010: 5), while social spending became regressive in 10 of 12 countries (ECLAC 2007).

- ***A new emphasis on raising tax/GDP ratios and improving equity.*** In some developing countries, the decade of the 2000s witnessed the adoption of a new approach to taxation. Important changes occurred in LA, and other countries in the field of taxation, with the effect that tax/GDP ratios and tax progressivity improved. The new approach was inspired by the search of greater tax equity and the principle of 'fiscal exchange', according to which governments can raise taxes if, at the same time, raise the quantity and quality of services provided to a broad spectrum of the population. In the long term the ability to raise taxes depends on the level and efficiency of public outlays.

The specific changes introduced by the new approach were (Cornia et al 2012): income and wealth taxes were assigned greater importance, particularly the corporate income tax (CIT). For instance, the 2007 Uruguayan tax reform introduced *ex-novo* a progressive personal income tax (PIT) and a flat CIT, while greater emphasis was placed on PIT in Uruguay, Paraguay, Ecuador and Mexico. Other countries (e.g. Mexico) introduced a minimum tax on firms to strengthen the collection of CIT, and in others the income per capita at which the highest direct marginal tax rate is applied was lowered. Most governments eliminated a long list of exemptions, deductions and tax holidays on CIT which had been introduced in the 1980s and 1990s to attract foreign investments without yielding the desired effects. Presumptive taxation was also strengthened due to the inability of the tax administration to ascertain the assets and income of potential taxpayers, and was levied on an estimate of the person/firm's income made by the tax authorities on the basis of objective indicators of gross turnover (e.g. assets, number of employees, electricity consumption and so on). The strengthening of presumptive taxation was accompanied by a simplification of taxation of self-employed taxpayers. For instance, in Argentina, since 1998 the *Monotributo* integrated social security payments, income tax, minimum tax on assets, and VAT. Several LA countries introduced a surrogate tax on financial transactions yielding 0.3-1.9 percent of GDP. Standard theory suggests that this tax is distorting and leads to financial disintermediation. Yet, it can also be seen as a 'second best' tool to tax assets and rents which otherwise would escape taxation. VAT rates were left unchanged, while in some countries there was an increase of excises on luxuries.

However, during the 2000s not all regions shifted to this new approach to taxation. The advanced economies retained the reductions in PIT and CIT (of 15-30 percentage points) introduced in the 1980s and 1990s as there was "… growing acceptance of the fact that a proportional tax system is more likely to be optimal from an efficiency point of view than one which is graduated and selective" (OECD, 1989: 184-185, cited in UNCTAD 2012). Meanwhile, most European economies in transition followed the OECD approach. While they introduced administrative simplifications, lowered tax rates, and widened the use of VAT, they also adopted a flat CIT and PIT (Table 4). While the Baltic countries retained the highest pre-reform flat tax rate and increased the no-tax area (thus making the tax schedule comparatively progressive), other countries adopted very low flat tax rates. The *ex-ante* partial equilibrium effect of such reform was thus likely un-equalizing, both directly and because there is no evidence that the introduction of such tax generated Laffer-type responses leading to an increase in GDP, employment and revenue (Keen et al. 2008).

Table 4. Countries adopting the Flat Tax in EE- FSU

Country	Year of adoption	Personal Income Tax Rates		Corporate Income Tax Rate		Changes in basic allowance
		Before	*After*	*Before*	*After*	
Estonia	1994	16 – 33	26	35	26	Increase
Lithuania	1994	18 – 33	33	29	29	Increase
Latvia	1997	10 – 25	25	25	25	Reduction
Russia	2001	12- 30	13	30	35	Increase
Ukraine	2004	10 -40	13	30	25	Increase
Georgia	2005	12 -20	12	20	20	Eliminated
Romania	2005	18 -40	16	25	16	Increase
Macedonia	2007	15- 24	12	15	12	Unchanged
Kazahkistan	2007	5- 20	10	30	30	Increase
Czech Rep.	2008	12 -25	15	24	22	Increase
Bulgaria	2008	10-24	10	10	10	Eliminated

Source: Keen, Kim and Varsano (2008)

Additional countries (such as Serbia and Hungary) also introduced a flat tax, though –interestingly enough - several others (Czech Republic, Slovakia and Iceland) which had adopted such approach earlier on they subsequently abandoned it.

5.2 Trends in Revenue/GDP and Tax/GDP Ratios

The ability to redistribute via the tax system depends not only on tax composition but also on the level of the tax/GDP ratio (Table 5). In developing economies such ability is restricted by the low overall level of taxation. In advanced economies, average revenue/GDP ratios exceed on average 40 percent of GDP, and tax/GDP ratios (including social security contributions) surpass 35 percent (or 40 percent in the Scandinavian countries, Italy, France and Belgium. In the developing economies these ratios respectively fall in the range of 15-20 and 20-30 percent of GDP. Yet, while tax/GDP ratios in the developing countries stagnated or fell during the years of liberal tax reforms, they systematically increased during the 2000s. In contrast, tax GDP ratios and social security contributions stagnated or fell in the advanced economies. Several developing countries are thus slowly catching up with the advanced economies in term of revenue ratios (Table 5),

As noted, during the 1980s and early 1990s, tax/GDP ratios fell in both group of countries due to the impact of the liberal reforms, slow growth and the erosion by inflation of the tax base. Such trends continued in the early 1990s, and only from the mid 1990s the tax/GDP ratio started recovering in the developing countries (Table 5).

However, during the 2000s (in some cases starting during the late 1990s) most developing regions experienced a fairly universal rise in tax/GDP ratio (which reached a staggering 9-10 points in the case of Brazil and Argentina) which improved perceptibly the distribution of after-tax income, a phenomenon observed also in South Korea (Cornia and Martorano 2012). Yet, though tax/GDP ratios increased in many developing regions during the last decade (*ibid)* there still is considerable room to increase the vertical and horizontal equity of taxation. This can be done not only with traditional progressive income and wealth taxes but also with a sufficiently high flat-tax rate with a sizeable no tax area, progressive indirect taxes, an appropriate taxation of mining rents and excises on luxuries.

Thus, tax/GDP ratios rose in all developing regions but Asia (Table 5), and by the late 2000s had reached levels ranging between 15 and 20 per cent (Figure 4), with the fastest increase recorded in Latin America. Such ratio remains, however, well below that of the OECD countries where revenue accounts on average for some 35 per cent of GDP. The 'effective' tax/GDP ratio also remained below the 'potential tax/GDP' ratio[4]. For instance, Cornia et al. (2012) provide econometric evidence that – except for Brazil, Argentina and Nicaragua - the effective tax/GDP could rise on average by 3.7 GDP points if it rised to the level of the 'potential tax/GDP' ratio.

5.3. Taxation of resource rents and income inequality

The rise in tax/GDP ratios recorded during the 2000s in most developing countries was also due to contingent factors, such as higher commodity prices, a faster global growth of GDP over 2003-2008 (which raised tax buoyancy), and labour policies favouring the re-formalization of the economy which contributed to an expansion of the tax base. In SSA, for instance, the share of (comparatively easy to tax) GDP coming from the resource sector (oil and mining) rose steeply between 1990 and 2010 in nine countries (Table 6), while in another nine it grew less rapidly but still substantially. Tax and non tax revenue increased substantially also in those European economies in transition and West Asian economies exporting oil and minerals.

[4] The potential tax/GDP ratio is the global normal (obtained by regression on a panel of developing and developed countries) which measures what such ratio should be on the basis of the GDP/c, the structure of the economy, the size of the (difficult to tax) informal sector, and the extent of the (easy to tax) resource sector.

Table 5. Trends in revenue/GDP ratios and tax structure in developed and developing countries

	1991-1995	1996-2000	2001-2005	2006-2010
Developed countries				
Total Revenue and grants	42.8	42.2	41.5	41.8
- Tax revenue	26.9	26.3	25.9	26.0
- VAT	6.3	6.7	7.0	7.1
- Trade taxes	1.1	1.1	0.8	0.6
- Income tax	12.8	12.3	12.0	12.1
(of which CIT)	*2.7*	*3.1*	*3.2*	*3.5*
- Other tax revenue	6.7	6.2	6.1	6.1
- Social security revenue	10.9	10.3	10.1	10.0
- Other revenues	5.1	6.1	5.4	5.3
Latin America				
Total Revenue and grants	21.3	22.7	23.9	27.3
- Tax revenue	12.5	13.8	14.8	16.7
- VAT	4.7	5.4	6.4	7.3
- Trade taxes	1.8	1.6	1.3	1.2
- Income tax	2.8	3.3	3.6	4.7
(of which CIT)	*2.0*	*2.2*	*2.2*	*3.0*
- Other tax revenue	3.2	3.5	3.5	3.4
- Social security revenue	2.9	2.8	2.8	3.1
- Other revenues	5.9	6.1	6.3	7.5
East, South & S.E. Asia				
Total Revenue and grants	20.9	19.6	19.2	20.7
- Tax revenue	14.4	13.8	13.7	14.9
- VAT	4.5	4.5	5.2	5.6
- Trade taxes	2.4	1.7	1.5	1.4
- Income tax	4.8	5.4	5.4	6.2
(of which CIT)	*3.0*	*3.1*	*3.5*	*4.3*
- Other tax revenue	2.7	2.2	1.6	1.7
- Social security revenue	0.7	1.2	2.2	3.0
- Other revenues	5.8	4.6	3.3	2.8
West Asia				
Total Revenue and grants	…	28.0	29.9	34.2
- Tax revenue	…	18.7	18.3	20.6
- VAT	…	8.8	10.1	12.2
- Trade taxes	…	2.1	1.9	1.9
- Income tax	…	4.9	5.1	5.9
(of which CIT)	…	*2.7*	*3.3*	*3.3*
- Other tax revenue	…	2.9	1.2	0.6
- Social security revenue	…	8.5	8.6	9.2
- Other revenues	…	0.8	3.0	4.4
Africa				
Total Revenue and grants	22.1	21.0	23.8	28.2
- Tax revenue	14.4	14.0	15.0	16.4
- VAT	4.4	4.4	4.9	5.4
- Trade taxes	5.3	5.0	4.2	4.2
- Income tax	4.0	4.2	5.1	6.2
(of which CIT)	*2.5*	*2.4*	*2.3*	*3.4*
- Other tax revenue	0.7	0.4	0.8	0.6
- Social security revenue	2.0	1.8	2.3	2.7
- Other revenues	5.6	5.3	6.5	9.1

Source: UNCTAD (2012), Tables 5.1 and 5.2

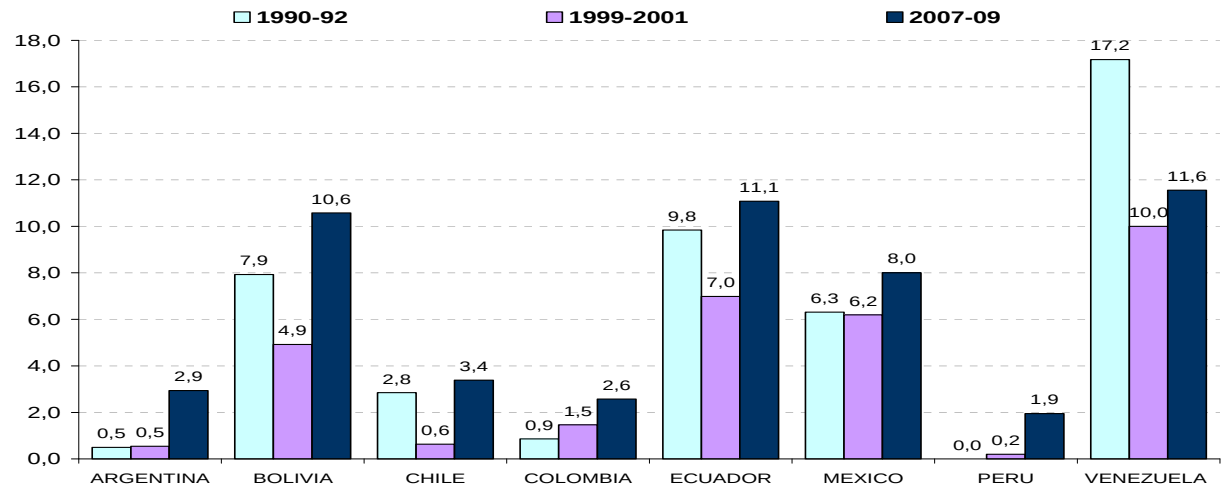
Table 6. Evolution of the percentage share of natural resource rents on GDP in SSA

Country	1990	2000	2010		Country	1990	2000	2010		Country	1990	2000	2010
(a) % share > 20%					*(b) % share btw 10-20 %*					*(c) % share btw 5-10%*			
Angola	30.5	42.3	46.9		Burk. Faso	3.5	3.3	10.5		Cote Ivoire	3.0	4.5	6.4
Chad	4.5	5.9	38.4		Burundi	9.5	9.3	10.9		Ethiopia	6.5	10.1	6.4
Congo DR	16.0	21.1	31.8		Cameroun	11.3	12.7	9.0		Ghana	4.4	5.4	8.9
Congo Rep	46.0	75.6	66.4		G. Bissau	10.1	11.2	4.8		Malawi	6.7	5.9	3.9
Eq. Guinea	12.6	67.0	46.0		Guinea	18.3	10.0	18.2		Mozambique	8.6	4.5	8.7
Gabon	34.7	50.7	50.0		Liberia	…	16.7	11.0		Sierra Leone	12.6	7.7	3.5
Mauritania	11.6	12.3	51.8		Mali	2.4	2.9	12.3		Tanzania	8.3	2.7	7.9
Nigeria	47.5	46.9	27.7		South Africa	6.3	2.2	9.9		Uganda	9.7	6.7	5.8
Zambia	19.3	4.4	25.8		Sudan	…	12.8	17.6		Zimbabwe	3.2	2.4	9.9
Average	**24.7**	**36.2**	**42.7**		**Average**	**7.7**	**9.0**	**11.6**		**Average**	**7.0**	**5.5**	**6.8**

Source: author's elaboration on WDI. Data for another 13 countries with a share of resource rents below 5 percent of GDP show mixed trends.

In eight (and especially in four) of the 18 LA countries analysed by Cornia et al (2012) the rise in (tax and non-tax) revenue due to the increase in the international demand and prices of oil, mining products and a few agricultural products such as soya was sizeable (Figure 4). The largest rise in relation to 1999-2001 (a period of low commodity prices) was recorded in oil- and gas-rich Bolivia and Ecuador where these additional resources accounted respectively for a hefty 5.7 and 4.1 per cent of GDP, while in the remaining six commodity exporters the rise ranged by between 1.1 (Colombia) and 2.8 (Chile) per cent of GDP. Argentina (an exporter of agricultural commodities) financed part of its increase in public spending with the 2.5 per cent of GDP generated by export duties on agricultural commodities.

Figure 4. Fiscal revenues originating from primary commodities (% of GDP) in 8 LA countries



Source: Cornia, Gomez Sabaini and Martorano (2012)

This trend has lead many to argue that in this group of countries the improvement in revenue/GDP ratios, public spending and inequality was mainly due to 'luck' i.e. an increase in the international demand and prices of the exported commodities. In countries of SSA, EE-FSU, LA and – especially – West Asia endowed with sizeable natural resources, their exploitation produces considerable tax and non-tax revenue which permits to expand public expenditure, create expenditure stabilization

funds (as in Chile and Nigeria) or set up funds for integenerational equity (as in Norway). The usual way governments transform the wealth of natural resources into fiscal revenue is through their exploitation by state companies or via the control of part of the stock of private companies operating in this sector which transfer part of their profits to the public budget. In addition, the governments of these countries benefit from royalties (usually linked to the volume of production of these resources), the revenue generated from the income tax levied on firms and workers operating in this sector, and from the application of export or domestic sales taxes. While the increase in this kind of revenue has certainly been relevant in a number of countries, this cannot fully explain the increase in tax/GDP ratios recorded during the 2000s. For instance, the increase in the revenue/GDP ratio due to the recent commodities bonanza accounted respectively for 33 per cent of the total tax increase between 1999-2001 and 2007-9 in Argentina, 38 per cent in Colombia, 51 per cent in Peru, and the quasi totality of the increase in Bolivia and Ecuador (Jiménez and Gómez-Sabaini 2009). In contrast, the remaining 12 countries of the region (which also registered a rise in tax/GDP ratios) were affected unfavorably by the commodity price increase. At the same time, in oil rich countries, a sustained (if occasionally unstable) flow of non-tax revenue from the natural resources sector has given rise to a sort of 'fiscal laziness' which delayed much needed structural tax reforms.

An increase in revenue from resource rents is not, however, a guarantee of improvement in income distribution. Its impact depends mainly on the (progressive or regressive) use of these resources, and is therefore influenced by the approach to public spending, which in turn depends on the extent of democracy and orientation of the political regimes prevailing in these countries. Preliminary econometric evidence by Cornia (2013) suggests that income inequality rose in those SSA countries (Nigeria and, to some extent, Ghana) where the ratio of resource rents/GDP increased while it declined in countries (such as Ethiopia) were the growth of the 2000s was driven by an expansion of agricultural output in the context of an egalitarian agrarian system. Finally, a comprehensive econometric analysis for 18 LA countries over 1990-2010 (Cornia 2012a) indicates that gains in international terms of trade (and the ensuing increase in state revenue) reduced income inequality over the 1990-2010 for the average of LA, but raised it in key commodity exporters.

A key concern of liberal economists about the increase in direct taxation relates to its 'efficiency effects' (see the above quote of OECD 1989). Yet, the 2007 Uruguayan tax reform show there are no universally valid theoretical reasons to believe that greater equity is achieved at the expense of growth. For instance, Martorano (2012) found that, contrary to the predictions of optimal taxation theory, the income tax introduced in Uruguay in 2007 did not lead to a contraction in labour supply. This may have been due to an inelastic labour supply, a level of taxation well below any efficiency-reducing threshold (the rates varied between 10 and 25 per cent), or the perception that the tax rise was accompanied by an increasing supply of public goods which raised wellbeing and the returns on private investments. In addition, the evidence about the presumed capital flights due to the taxation of rents, dividends and profits is far from clear. While most Latin American countries tax wealth at low rates on the assumption of high capital mobility, Tanzi (2007: 10) notes that 'It is not clear how much truth there is in the assertion that an increase in the taxation of dividends, interest incomes, rents, capital gains and profits would lead to a (greater) emigration of capital'.

5.4. Structure of taxation

Given the structural characteristics of developing economies (a large share of agriculture and informal sector in GDP), their structure of taxation is less progressive than that of advanced nations where income tax represents some 40-45 percent of total tax revenue (Table 5). Yet, in view of the changes in tax policy discussed in section 5.1 the structure of taxation has steadily evolved over time. During the years of the liberal reforms, the weight of the trade tax and PIT declined, excises

and corporate income tax remained broadly constant and general consumption taxes (and user fees) increased, as illustrated in Tables 5 and 7.

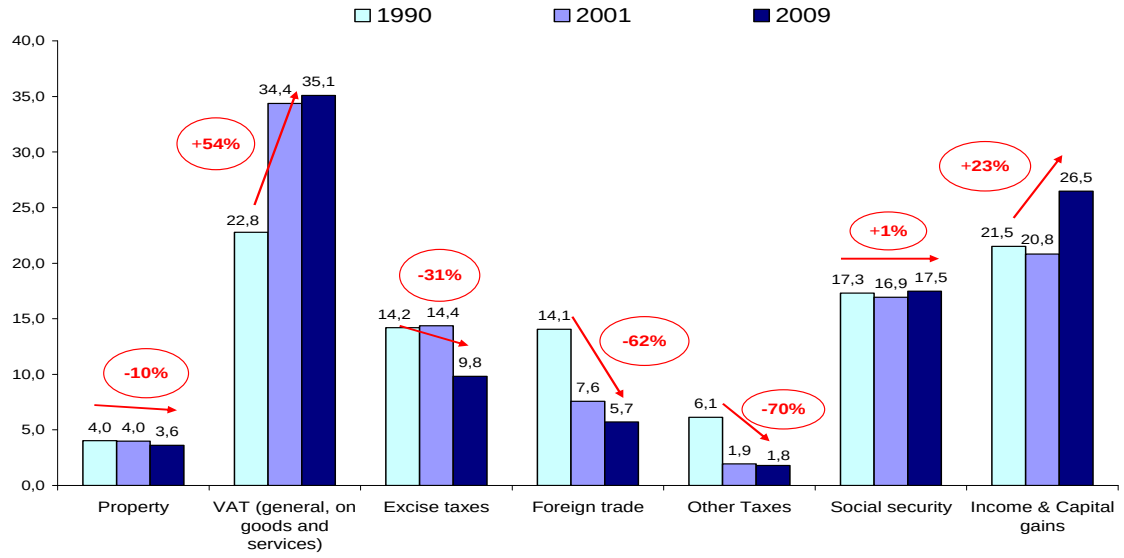
Table 7. Evolution of the average tax structure in Latin America (% of total tax revenue), 1975- 2002

	Income tax		Domestic goods and services		International trade
	Individual	Corporate	General consumption	Excises	
1975–80	10	18	16	14	23
1986–92	10	18	17	13	21
1996–2002	7	19	36	14	14

Source: Bird and Zolt (2005), quoted in Cornia, Gomez Sabaini and Martorano (2012).

In contrast during the years 2001-2009 LA experienced an increase in the weight of CIT, and to a lesser degree of PIT and capital gains taxes, a slight increase in the weight of social security contributions and VAT, and a decline in property, foreign trade, excises and other taxes (Figure 5).

Figure 5. Evolution of revenue structure (% of total revenue) in Latin America



Source: Cornia, Gomez sabaini and Martorano (2012) on the basis of CEPAL data.

Data for 2006-2010 (Table 5) suggest that – as compared to the advanced economies - most developing areas still depend to a considerable extent on indirect taxes, with the possible exception of Asia and MENA, with the effect that their ability to reduce income inequality is affected both by their comparatively low tax/GDP ratios (which depends also on policy, but is strongly endogenous to the economic structure and size of their informal sector) and by the structure of taxation (which is also endogenous to a great extent to the factors just mentioned).

Even within each region, the averages reported in Table 5 hide however a considerable variation in tax structure which – as noted - depends on factors endowments and productive specialization. Point-resource economies (such as for instance Zambia, South Africa, Botswana, Ghana), for instance, are characterized by higher tax/GDP ratios thanks to the greater ease with which they can collect CIT from such sector. In contrast, agricultural economies such as Ethiopia, Sierra Leone and Rwanda (Table 8) have lower tax/GDP ratios and generally rely on trade and indirect taxes.

Table 8: Revenue collection (% of GDP) by type of tax, 15 SSA countries

Country	Year	Indirect Taxes	Direct Taxes	Trade Taxes	Total[83]
Benin	2008	5.5	2.3	9.3	17.1
Botswana	2007/08	3.8	11.5	10.5	25.8
Burundi	2008	8.8	5.1	2.9	16.8
Ethiopia	2008/09	1.5	3.2	1.9	6.6
Ghana	2008	8.7	7.1	4.1	19.9
Kenya	2007/08	5.7	8.4	4.9	19.0
Malawi	2008/09	8.9	7.8	2.1	18.8
Mauritius	2007/08	12.1	4.2	1.1	17.4
Rwanda	2008	6.6	5.1	1.8	13.5
Senegal	2008	4.6	10.3	3.4	18.3
Sierra Leone	2008	2.6	3.4	4.8	10.8
South Africa	2008/09	8.7	16.4	1.2	26.3
Tanzania	2008/09	7.3	6.2	1.3	14.8
Uganda	2008/09	7.1	3.6	1.2	11.9
Zambia	2008	6.6	8.5	2.5	17.6
Average		6.5	6.9	3.5	

Source: International Tax Dialogue (2010) 'Revenue Admin.in SSA', ITD Comparative Info Series, No.1 2010.

5.5 Tax incidence[5] and net distributive effect of fiscal operations

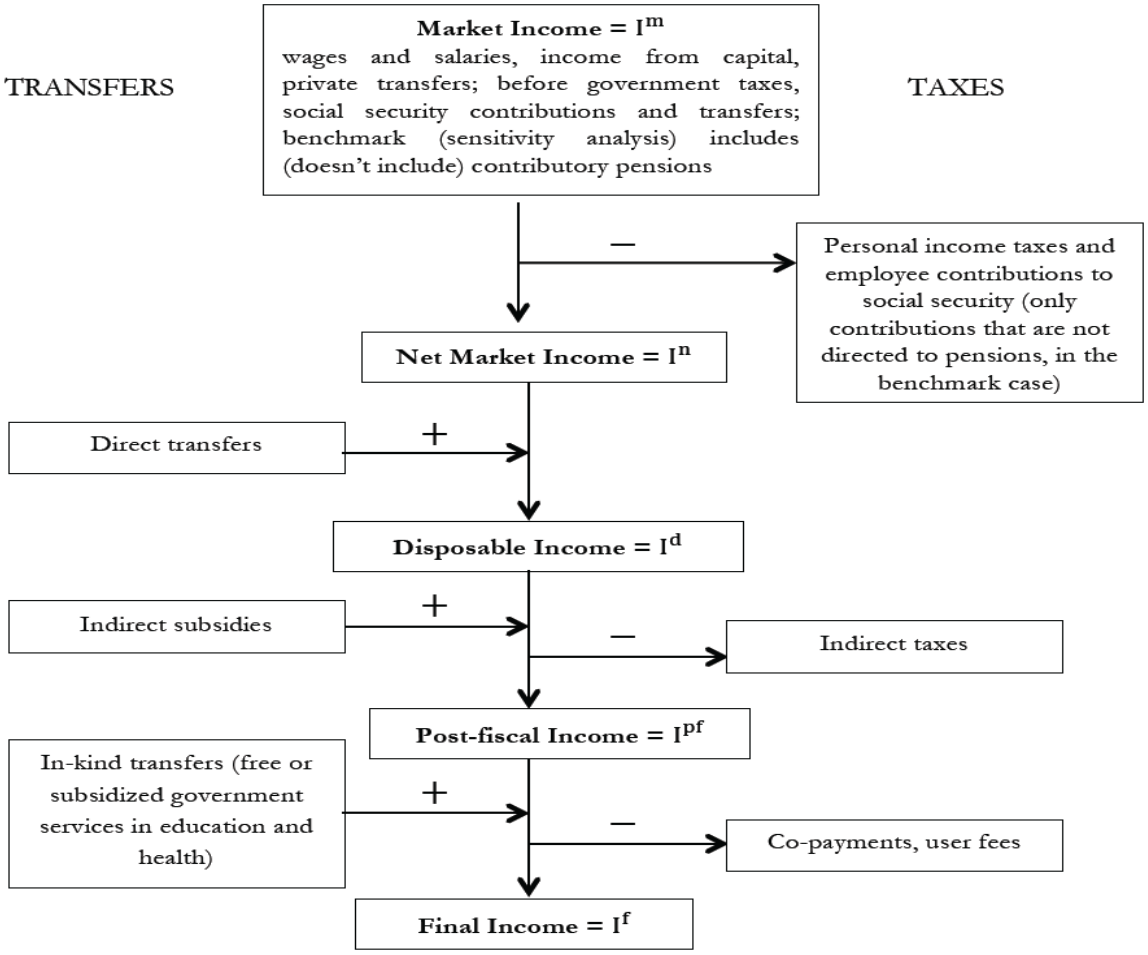
Fiscal policy (i.e. tax and expenditure policy) affects the final distribution of income in several ways which are illustrated in Figure 7. Most of the discussion in this section concerns the impact of tax policies in reducing the inequality of 'market incomes' when moving from the latter to 'net market income'. In turn, the redistributive effect of transfers in cash and kind is discussed in section 6. Before continuing the discussion on the incidence of the various taxes, a key point made further down is that in both the developing and developed economies – some 80% of the redistributive effect of fiscal operations is due to public spending (Table 9). Thus, given the lower tax/GDP ratios prevailing in developing economies, their possibility to redistribute via the budget is reduced. While greater redistribution can be obtained through an improvement in tax structure, the main gain will be obtained through an increase in the tax/GDP ratio.

What does the literature show about the incidence of overall taxation and of specific taxes? The main message is that various taxes have a very different incidence. Thus, the extent to which tax policy can improve the distribution of income depends on the composition of tax revenue. In a classical study covering 29 studies for the 1960s on 17 LA countries Bird and De Wulf (1973) concluded that tax systems were often ineffective in redistributing income. They identify a mild redistributive impact in only 4 of the 29 studies analyzed, whereas the remaining studies suggested rough proportionality or even regresssivity over most income classes. One of the reasons was the dominance of consumption and trade taxes in the total. In a more recent survey of seven tax incidence studies, Shah and Whalley (1990 and 1991) conclude instead that, with some exceptions,

[5] The conclusions of tax incidence studies are influenced by the income concept analyzed and a series of methodological choices about the shifting of CIT and other taxes. The early studies were generally carried out in a partial equilibrium analysis mode. Computable general equilibrium models gradually replaced various 'shifting assumptions' featured in a large number of studies. For example, PIT and CIT in Kenya were found to be progressive on the basis of a general equilibrium analysis (Mwega 1986 quoted in Lustig et al. 2013), but regressive on the basis of a partial equilibrium analysis (Westlake 1973 quoted in Lustig et al. 2013). Certain methodological difficulties dating back to the 1970s, continue to persist. For example, income concepts used in incidence studies continue to vary widely, from taxable income and gross income to permanent income. In addition, there are significant differences in taxes studied, units of analysis, and underlying assumptions (Cornia, Gomez Sabaini and Martorano, 2012).

the overall tax system was broadly progressive (possibly due to a change in the structure of tax revenue). They found that excises, PIT and urban property tax were progressive, sales and import duties regressive, corporate taxes to vary (depending on the hypothesis made on whether the tax is translated or not on the consumers), while general indirect taxes had a U-shaped incidence.

Figure 7. Definition of Income concepts and factors affecting their distribution



Source: Lustig et al (2013)

A recent study by Cornia, Gomez Sabaini and Martorano (2012) on Latin America suggests that the 3 points net increase in tax/GDP ratio was generated by a rise in income tax, wealth taxes, presumptive taxation, financial transaction taxes, consumption taxes on luxury items, a reduction of dis-equalizing excises on oil, alcoholic beverages and tobacco and increasing the taxation of commodity rents[6]. As a result, the Reynolds-Smolensky (RS) index[7] - which measures the redistributive effect of tax systems - improved by between 0.6 and 5.3 Gini points in 10 of the 11 countries with available data (Table 11) .The largest improvements (ranging between some two and

[6] An emblematic example is the 2007 Uruguayan tax reform which made an explicit effort at improving the equity of taxation via the introduction of dual income tax regime (Martorano, 2011). More in general a review by Cornia,, Gomez Sabaini and Martorano (2012, Appendix Table 2) for 36 studies for 17 LA countries and the years 1996-2006 confirms that income tax is always moderately progressive, VAT moderately regressive, excises and fuel taxes rmoderately rrgrssive or proportional, and trade, tobacco and alcohol taxes marginally regressive.

[7] The Reynolds–Smolensky index is the difference between the Gini coefficients of the distribution of personal income before and after taxes. In most cases, the value of the RS index is obtained by imputation techniques which simulate the amount of taxes paid on the basis of tax rates and the distribution of gross income.

Table 9. Redistributive effects of taxes and transfers in selected groups of countries

Country	*Year*	Gini coefficient of disposable per capita household income		Changes in Gini coefficients due to fiscal operations			
		Before	After taxes and transfers	Total	Due to Taxation	Due to Transfers	% of total Gini decline due to transfers
Australia	*2003*	0.461	0.312	0.149	0.047	0.101	68
Austria	*2004*	0.459	0.269	0.190	0.034	0.156	82
Belgium	*2000*	0.542	0.279	0.263	0.063	0.201	76
Canada	*2004*	0.433	0.318	0.114	0.038	0.076	67
Denmark	*2004*	0.419	0.228	0.191	0.042	0.149	78
Finland	*2004*	0.464	0.252	0.212	0.044	0.168	79
France	*2005*	0.449	0.281	0.168	0.017	0.151	90
Germany	*2004*	0.489	0.278	0.210	0.052	0.158	75
Greece	*2004*	0.462	0.329	0.133	0.007	0.127	95
Ireland	*2004*	0.490	0.312	0.178	0.046	0.132	74
Netherlands	*2004*	0.459	0.263	0.196	0.040	0.156	80
Spain	*2004*	0.441	0.315	0.126	0.001	0.124	98
Sweden	*2005*	0.442	0.237	0.205	0.037	0.168	82
Switzerland	*2004*	0.395	0.268	0.128	-0.003	0.130	101
UK	*2004*	0.490	0.345	0.145	0.021	0.124	85
United States	*2004*	0.482	0.372	0.109	0.043	0.066	60
Average				**0.170**	**0.033**	**0.137**	**80**
Czech Republic	*2004*	0.468	0.267	0.201	0.038	0.163	81
Estonia	*2004*	0.493	0.340	0.153	0.034	0.120	78
Poland	*2004*	0.527	0.320	0.207	0.005	0.202	98
Romania	*1997*	0.372	0.277	0.095	0.013	0.082	86
Average				**0.164**	**0.022**	**0.142**	**86**
Israel	*2005*	0.491	0.370	0.121	0.045	0.076	62
Korea	*2006*	0.334	0.311	0.023	0.006	0.017	74
Taiwan	*2005*	0.324	0.305	0.019	0.003	0.016	84
Turkey	*1997*		0.490		-0.014		
Average				**0.054**	**0.018**	**0.036**	**73**
Argentina	*2006*	0.589	0.479	0.110	0.019	0.091	83
Brazil	*2006*	0.570	0.486	0.084	0.014	0.070	83
Colombia	*2004*	0.568	0.562	0.006	-0.001	0.006	100
Costa Rica	*2004*	0.559	0.479	0.080	0.012	0.068	85
Guatemala	*2006*	0.521	0.507	0.014	0.012	0.002	14
Mexico	*2006*	0.537	0.497	0.040	0.003	0.037	92
Uruguay	*2004-06*	0.542	0.428	0.124	0.010	0.114	92
Average				0.065	**0.010**	**0.055**	**85**

Source: Appendix Table 1 in Cornia, Gomez Sabaini and Martorano (2012) on the basis of Leiden LIS Budget Incidence Fiscal Redistribution Dataset, Centrangolo and Gómez-Sabaini (2006), OECD, IMF, IDLA database and a literature search.

Table 10. Summary results of tax incidence studies on developing countries; 1971–5 and 1991–5

	All taxes	Direct taxes	Income taxes	Payroll	Indirect
Frequency	36	3	14	5	5
Very progressive	1				
Progressive	12	1	12		2
Proportional	7	1			1
Insignificant	1			2	
Mixed	8	1	1		2
Regressive	7			3	
Very regressive			1		

Source: Chu et al (2004), Note : not all results of the 36 studies for the specific taxes are included in columns 3 to 6.

Table 11. Reynolds–Smolensky index for Latin American countries,1990s and 2000s (Gini points)

	1990s	2000s	2000s-1990s
Argentina	-1.95	1.90	3.85
Brazil	-0.70	0.42	1.12
Chile	-0.80	0.27	1.07
Costa Rica	-0.98	1.24	2.22
Ecuador	-0.70	0.70	1.40
El Salvador	-1.40	-0.75	0.65
Guatemala	-0.77	1.20	1.97
Honduras	-2.87	-0.10	2.77
Nicaragua	-5.20	0.17	5.37
Panama	-0.69	0.91	1.60
Uruguay	-0.20	1.10	1.30

Source:Cornia, Gómez-Sabaini and Martorano (2012).

five Gini points) were recorded in Argentina, Honduras and Nicaragua. However, despite the recent gains, in the 2000s the tax systems remained regressive in Colombia, Honduras, El Salvador and the Dominican Republic. Similar effects of taxation were evident in South Korea (Table 12). A peculiarity in the three SEA countries analyzed by Cornia and Martorano (2012) is the large contribution of direct taxes to total tax revenue, a fact which helped improving the post-tax distribution of income, and the (late) expansion of the welfare system. In S. Korea, the expansion of the latter strengthened the redistributive capacity of fiscal policies (Sung 2009), with the result that in 2007 the difference between the Gini of market income and disposable income was close to 4 points (Table 12). The most important contribution came from direct taxation and cash transfers while consumption taxes worsened the income distribution by 0.85 points (*ibid*). Private transfers also had a large redistributive effect. However, the recent expansion of the social security system reduced partially the dependence on private transfers.

Table 12. Redistributive Effects Based on the Rates of Changes in Gini Coefficients (2007)

	Reynold – Smolensky
market income + private transfers	1.42
private income + public transfers	0.85
Gross income - income taxes	1.49
Gross income -income taxes - other direct taxes - social security contributions	1.85
disposable income - indirect taxes	-0.18
Tot variation of Gini	3.94

Source: Sung (2009)

Econometric analysis by Cornia Gomez Sabaini and Martorano (2012) also shows that an increase of three per cent of GDP in the share of revenue of income and wealth taxes would improve the RS index by between 2.7 and 3.3 points for the average country of LA, while a two per centage GDP points decline in the revenue generated by selective indirect taxes would improve it by 1.7 points, with an overall gain in the RS index of 4.4-5 points. This would bring the average LA country in line with the redistributive effects of taxation observed in Western Europe. Much smaller improvements in the RS index would instead be achieved by raising social security contributions.

6. Public expenditure policies

Public expenditure policies affect: (i) the current distribution of 'final income', (i.e. the distribution of all net monetary incomes including social assistance transfers plus the imputed value of public

services received[8], see Figure 7), and (ii) the future distribution of 'market income'. Indeed, if public services are provided to all families, the overall supply of human capital (and skilled labour) of the country will increase, the nutritional, health, and educational capital of the poor will catch up with that of the better of, while the overall distribution of human capital would improve. Plenty of empirical evidence for both developed and developing countries (see later) confirms these points and shows that an equitable distribution of human capital leads to an equitable distribution of market incomes with lags of 15-20 years. In Western Europe, market income inequality became more egalitarian during the last century when elementary and secondary education became 'free, universal and compulsory' and when a progressive income tax was introduced. Recent research confirms that an important driver of the decline in inequality observed in many LA countries during the 2000s was the steady increase in secondary completion rates by the children of low-income household during the preceding two decades (Cruces et al., 2011). In turn, econometric analysis by Cornia and Martorano (2012) shows on a panel of 104 developed and developing countries and the years 1980-2010 that both growth and income inequality improved in line with the increase in the number of years of education of the labour force.

As for the impact on growth, a large amount of theoretical and empirical literature on endogenous growth, human capital theory, the determinants of wellbeing (HDI), social cohesion, civic attitudes and democracy shows there is hardly any money better spent than that on education, health, nutrition, basic social transfers and related sectors (housing, water and sanitation). The overall impact on long-term growth is well analyzed in different types of economies (Ranis and Stewart 2000). Furthermore, improved education will be essential for technological innovation and diffusion needed for sustainable agriculture and moving towards low-carbon production and consumption processes (United Nations, 2011).Yet, controversies remain concerning the composition of social expenditure, its (public versus private) financing, and the absence of complementary inputs (e.g. infrastructure and equipment) which may reduce the impact on growth and equity.

As noted, however, such gains are not automatic and other conditions need to be satisfied at the same time. First, productivity gains from human capital investment tend to come with important time lags. Hence it is important not only to sustain investments over prolonged periods of time and to finance them in ways avoiding macroeconomic trade-offs in the short-medium term run (see later). Second, there will be a need to provide new jobs to the for better educated. Lacking such adjustment, new sources of inequality and social tension could emerge. The associated labour market mismatches and rising youth unemployment may be among the factors giving rise to the Arab Awakening at the start of the second decade of the twenty-first century. Third, higher incomes associated with higher education levels may induce more energy-intensive consumption habits and shift food demand to protein-rich items, putting greater pressure on tight food markets and possibly leading to an environmentally unfriendly agricultural production and land use.

To improve both the current and future distribution of income and GDP growth is thus necessary to: (i) allocate a sufficient amount of (private and) public resources to human capital formation, (ii) prioritize those areas of social expenditure which have the highest private and social rates of return, and (iii) ensure that such allocations are progressive. Hereafter we review the theory and empirical evidence concerning these three issues, briefly discussing beforehand the philosophy of different approaches to public social expenditure.

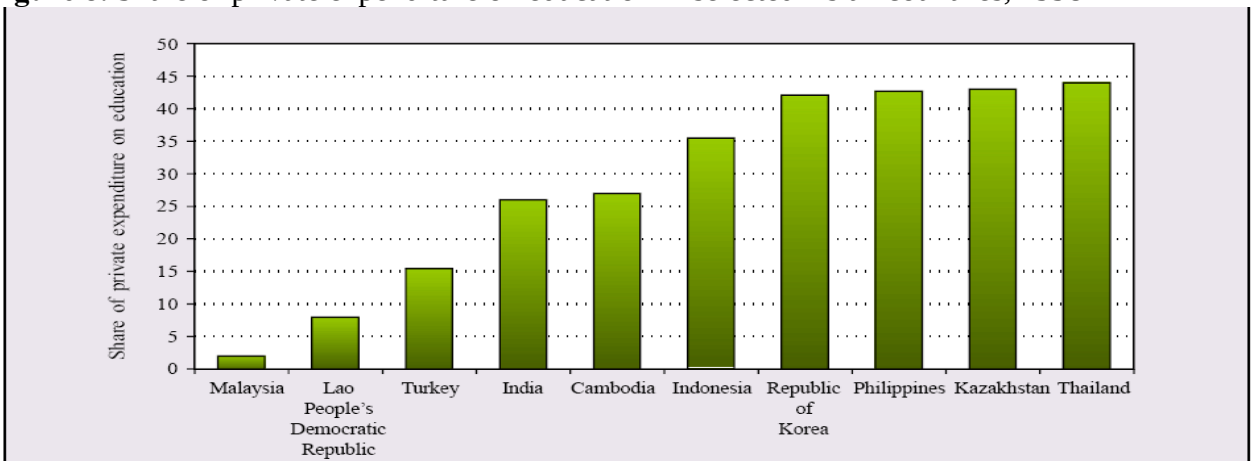
[8] The approach most often followed to estimate the incidence of public spending on education, health, nutrition and so on is the so-called "benefit or expenditure incidence" approach. In essence, one uses per beneficiary input costs obtained from admin data as the measure of average benefits. This "non-behavioral approach" amounts to asking the following question: how much would the income of a household have to be increased if it had to pay for the free or subsidized public (Lustig 2013).

6.1 Approaches to public to public expenditure and social spending

- *Standard public economics approach to social expenditure, and its limits*. Such approach suggests that the state should step in (through taxes/subsidies, regulation, and public production) whenever there are 'market failures', i.e. when the market undersupplies or oversupplies in relation to what is desirable in terms of overall economic efficiency. Market failures occur in case of imperfect competition, asymmetric information, pure public goods, positive/negative externalities, merit goods (vaccination and education), and natural monopolies. In addition, even in the absence if these market failures, the state should intervene (with taxes/transfers) whenever the free play of market forces leads to 'a socially unacceptable income distribution'. Most activities in the field of health, education, nutrition, water, sanitation and public housing are characterized by some types of market failures. In the health sector, the private sector undersupplies in relation to the desired level, the provision of education and nutrition are characterized by both positive externalities and merit goods features, and several public utilities were seen until recently as a standard case of 'natural monopolies'. In all these cases, the state interventions are desirable.

In practice, however, as suggested by the 'Wagner Law', public social spending rises in line with the level of GDP/c and - as mentioned in section 5 – with the fiscal capacity and spending priorities of governments. As a result, in low income developing countries - where governments have a limited fiscal capacity - a considerable share of the financing of health, education and other public goods is borne by the households either in the form of user fees paid in public establishments (e.g. schools and clinics), or directly to private providers (Figure 8 and Table 13).

Figure 8. Share of private expenditure on education in selected Asian countries, 1998



Source: ESCAP (2003)

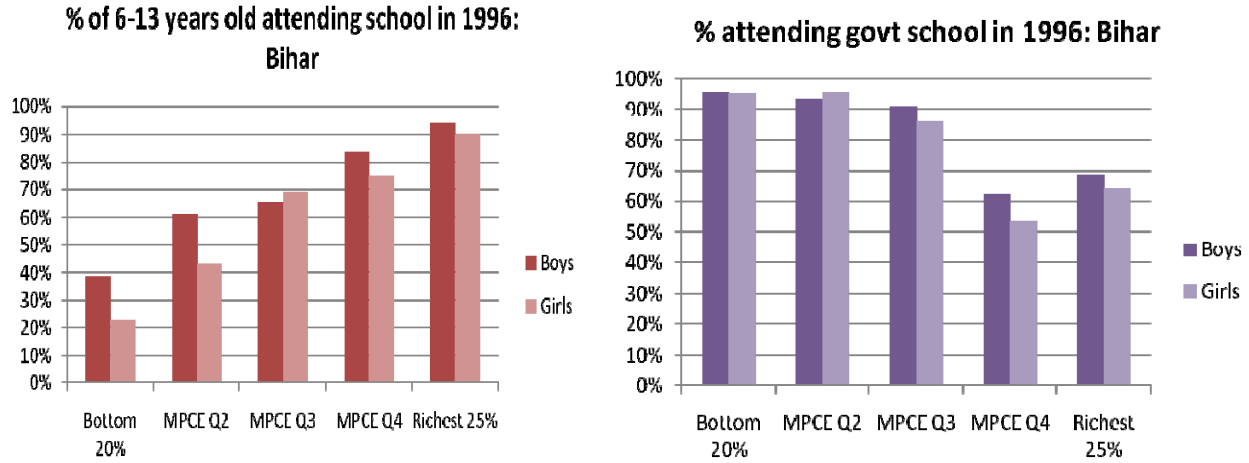
Table 13. Share of private spending on total health expenditure in selected Asian countries

	Private expenditure on health as percentage of total health expenditure					
	1995	*1996*	*1997*	*1998*	*1999*	*2000*
South and South-West Asia						
Afghanistan	50.0	50.0	47.4	42.3	43.1	36.5
Bangladesh	66.1	64.2	63.9	63.5	63.3	63.6
Bhutan	9.7	11.7	9.6	9.7	10.4	9.4
India	83.8	84.4	84.3	81.6	82.1	82.2
Iran (Islamic Republic of)	54.4	51.8	54.0	54.5	53.8	53.7
Maldives	16.2	15.5	18.1	18.2	17.5	16.6
Nepal	73.6	74.0	69.4	67.4	71.1	70.7
Pakistan	75.2	77.0	77.1	76.4	78.1	77.1
Sri Lanka	51.9	50.4	50.8	49.0	51.3	51.0
Turkey	29.7	30.8	28.4	28.1	28.9	28.9

Source: ESCAP (2003)

In addition, even in countries where the 'quantity' of public social services supplied is adequate, the upper income groups may opt out of the public system because of the real or perceived 'low quality' of public services, and make use of better quality and more costly private health and educational services. In most cases, these social classes tend to oppose taxation as they argue they do not use any state services. Figure 9 illustrates this phenomenon in the case of education in Bihar.

Figure 9. Percentage of 6-13 years old children attending school by income quintile (left panel) and percentage of children attending public school by income quintile (right panel).



Source: ppt by Deepa Sankar, World Bank

Finally, the benefits of social public expenditure depend on the way such spending is financed e.g., through seignorage, an expansion of the deficit financed with state bonds or external borrowing (leading to an increase in public debt/GDP) or an increase in progressive taxation. In the first case, beyond a tolerable threshold of 2-3 percent of GDP (Agenor and Montiel 2011) the benefits of public spending may be eroded by a rise in inflation (which – as seen in section 5.5 - tends to have be regressive). In the second case, an increase in public debt may be offset by a growth acceleration (due to the positive growth effect of higher human capital), with the effect that the public/debt/GDP ratio may falls. Yet, if growth does not accelerate (due to the low quality of social spending or lack of complementary inputs) a debt-financed increase in social spending may generate problems of intergenerational equity. Indeed, if the public debt/GDP ratio rises beyond a sustainable level, the government will be forced in the future to cut social spending (or increase taxes) to finance a growing spending on debt servicing. This was not the general case, however, in the recent decade, as the increase in public expenditure documented in Table 17 was accompanied by a more than proportional increase in tax/GDP ratios (Table 5) which allowed to reduce on average budget deficits (Table 14) and make room for a sustainable increase in social spending in all regions.

Table 14. Average Regional Budget Deficit/GDP by main regions, 1982-2010

	1982-90	1991-1997	1998-2002	2002-2010
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

Source: Cornia (2012)

- The New Political Economy revolution and critique of the standard approach to social spending
During the 1970s the NPE or 'public choice' school started arguing against the state involvement in the field of social spending as: (i) such interventions were motivated by 'the search of private interest' (of the *policy-maker*, the social classes which supported him/her, and the bureaucracy) and not by the search of collective wellbeing; (ii) market forces were informationally more efficient than the state in deciding what social services were demanded by the population, and (iii) as under the system of public provisions there was often a large unsatisfied demand for social services (due to the limited fiscal capacity of governments) which required to open up to the private sector also in these fields; and (iv) the allocation of public social expenditure was often inequitable and further distorted the market based distribution of income. For all these reasons, it was argued, it was better to let the market operate freely also in the field of health and education.

The implications of the new approach entailed to cut taxes (see section 5.1), introduce *user-fees* for the provision of public social services, privatize social services, and deepen credit markets to ease the access of low income households to the resources needed for their human capital formation. These theoretical argument provided also a solid justification to the actions of several governments which – faced with soaring budget deficits due to the world crisis of the 1980s, and unable or unwilling to raise taxes – reduced public spending and unloaded a further share of the cost of acquiring essential services on the households. The decline in public social expenditure was particularly marked during the macroeconomic adjustment years of 1980-85 (Table 15) when social spending dropped on average by between 0.7 and 13.5 percent in all regions, while the number of countries which registered a decline ranged between 14 percent in the advanced countries and 50-57 percent in MENA, developing Asia and Su-Saharan Africa (Table 15, column 5). Yet, attempts at financing human capital principally through out-of-pocket household expenditure as attempted in the 1980s and 1990s by neo-liberal fiscal reforms, adversely affected human capital investment by low-income households (see Birdsall et al., 2006 for the case of primary school tuition fees).

Table 15. Changes in public spending for social protection (% of GDP) by period

	Change in social spending/GDP *(Variation in percentage points)*			Percentage of countries where public social spending increased (decreased)		
	1981-85	2007-09	2009-10	var 1981-85	var 2007-09	var 2009-10
Advanced economies	-0.2 (*-1.6*)	2.6 (*18.7*)	-0.2 (*-1.2*)	27 (14)	100 (0)	17 (4)
European economies in transition		2.6 (*26.0*)	0.0 (*0.2*)		86 (0)	16 (26)
Developing Asia	-0.2 (*-13.5*)	0.2 (*21.4*)	-0.1 *(-9.6)*	33 (50)	85 (14)	13 (38)
Latin America and Caribbean	0.0 (*-0.7*)	0.7 *(13.4)*	-0.1 *(-3.8)*	27 (45)	80 (20)	27 (45)
MENA	-0.1 (*-2.6*)	-0.1 *(-1.0)*	-1.0 *(-10.9)*	29 (57)	60 (20)	33 (66)
Sub-Saharan Africa	-0.1 (*-6.6*)	0.3 *(12.4)*	0.1 *(3.4)*	33 (56)	71 (14)	60 (40)

Source: Martorano, Cornia and Stewart (2014) based on GFS–IMF data and Martorano and Cornia (2012) database.
Notes: The number of countries included in each region varies across the different periods. Countries that experienced variations in public expenditure by between -5% and +5% are considered stable.

Third, the reforms of those years posited that public expenditure on education, health and social protection has to be given priority in budgetary allocations during periods of crisis, and be targeted on the 'deserving poor'.

- The MDG counter-revolution and rising state awareness of the importance of social spending.
A major change in social policy and public spending has occurred with the adoption of the Millennium Development Goals (MDG) by by the UN General Assembly in September 2000. The

MDG aim at achieving universal primary education, cutting in half child mortality, improve maternal health, and combat HIV/AIDS, malaria and other diseases. Most other MDG goals have strong linkages to education and health. In particular, the overarching goal of the MDG - the eradication of extreme poverty - requires important investment in education and health. Of course, the MDG approval did not 'fall from the sky', but resulted from the widespread critique of the adverse social impact of the neoliberal policies of the 1980s and 1990s (see among others 'Adjustment with a Human face", by Cornia, Jolly and Stewart, 1987) and the growing in-country dissatisfaction with such approach – as revealed by LatinoBarometro (http://www.latinobarometro.org)., Africa Barometer and other ongoing political polls on the opinions and preferences of citizens.

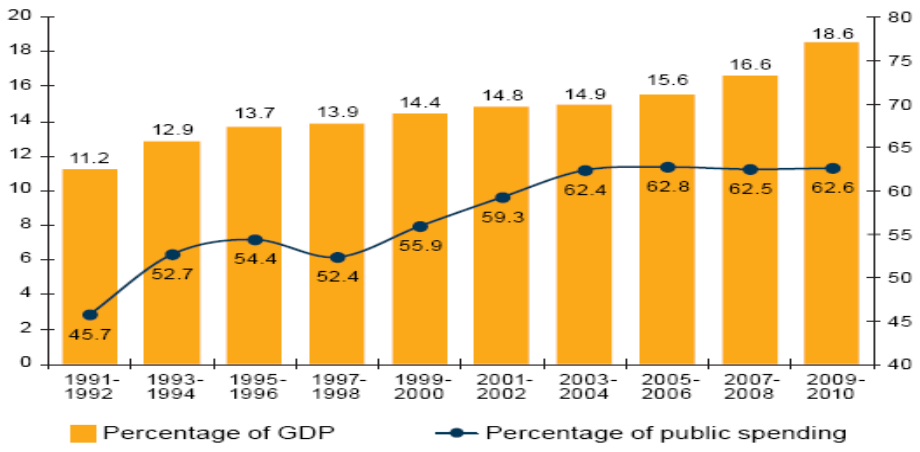
With the adoption of the MDGs (endorsed also by OECD, World Bank and IMF) many developing countries revised the prior stagnant or downward trend in public spending in health, education and – in particular- social assistance (see Table 17). By endorsing these goals, countries essentially recognized education and health as priority areas for action, including during recessions. Such paradigmatic shift was particularly evident *inter alia* in LA where the commitment to the MDG was facilitated by a shift towards centre-left regimes more sensitive to social issues. Indeed, as show in Table 17, social expenditure rose between 2003 and 2006 by 1.33 points in centre left regimes and only 0.48 in countries of different political orientation (see Table 16 and Figure 10)

Table 16. Average public social expenditure/GDP in LOC versus NO–LOC countries

Year	Social public expenditure as percentage of the Gross Domestic Product (GDP)				
	Total	Education	Health	social security	Housing
1990	9.0	2.8	2.1	3.3	0.7
1996	10.9	3.4	2.4	4.0	1.0
2003	12.8	4.3	2.8	4.6	1.1
Around 2006	13.3	4.3	2.9	4.6	1.4
Centre Left Δ (2006 – 2003)	1.33	0.20	0.38	0.46	0.29
No Centre Left Δ (2006 – 2003)	0.48	-0.12	0.06	0.11	0.43

Source. Cornia (2010) on the basis of ECLAC's database Badenso, data refer to 18 Spanish-speaking countries + Brazil.

Figure 10. Total public spending/GDP and its share of social public spending (21 LA countries)

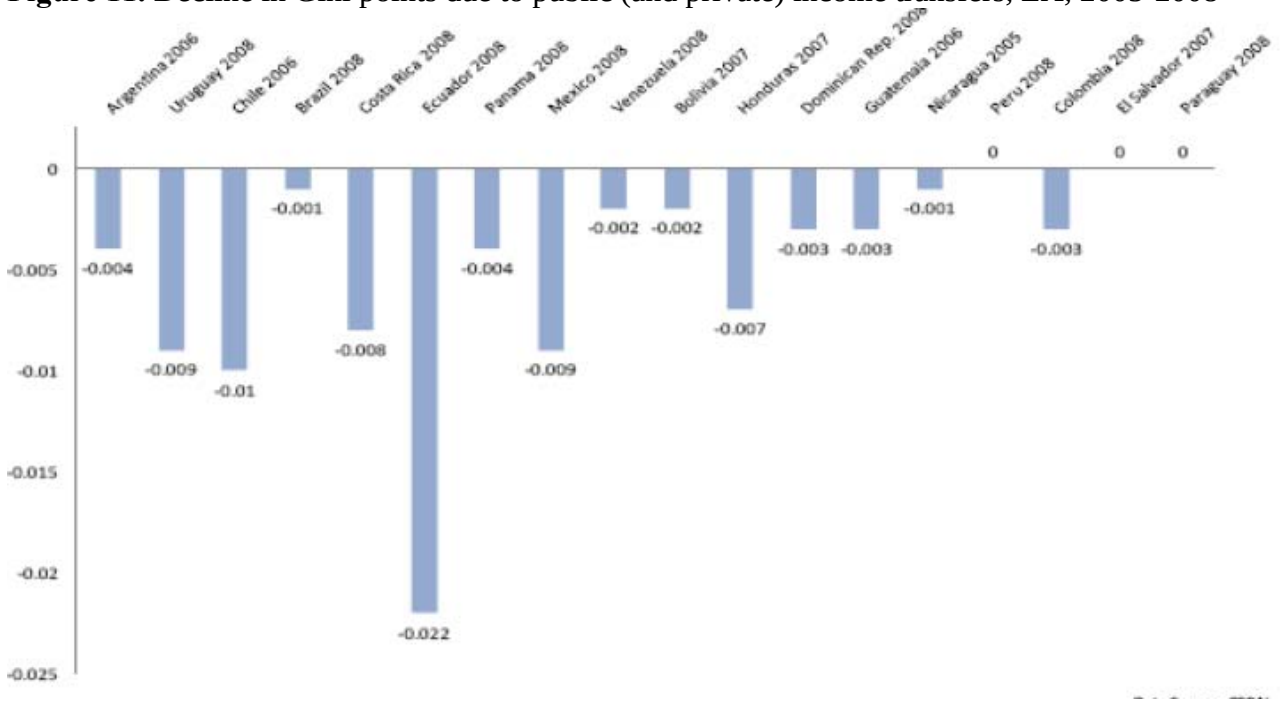


Source: ECLAC (2012)

There is evidence that – with MDG counter-revolution – countries prioritized social expenditure also during periods of crisis. For instance, Table 16 shows that during the financial crisis of 2007-9 social public spending fell only in MENA, while it rose on average, with the blessing of the IMF, by between 12 and 26 points in the other regions. With the persistence of the crisis, however, in 2010 public social spending fell again (Table 15, columns 3 and 6).

A specific feature of social policy during this period was the nearly universal introduction of highly targeted social assistance conditional and non conditional cash transfers which appear to have generated a sizeable impact on income inequality (Cornia 2012). Such programs are funded by the budget (rather than foreign aid, as in the case of the Social Emergency/Investments Funds introduced during the adjustment era), absorb 0.2-0.8 of GDP and cover an important share of the population at risk with the aim of reducing poverty and child labor, ensuring that children remain in school and have access to health services, and that the unemployed can enter employment or a training scheme. At the moment, about 850 million people worldwide receive such kind of transfers. As argued by Barrientos (2013) such conditional and non conditional cash transfers are well targeted, cover a substantial share of the target population, and reduce noticeably income inequality (up to 2.2 Gini points in the case of Ecuador) and tend to generate positive effects on school attendance, pregnancy check ups, skill training and employment.

Figure 11. Decline in Gini points due to public (and private) income transfers, LA, 2005-2008



Source: ECLAC (2009)

Thus, income transfers can generate strong redistributive effects, though their composition is crucial, and though such programs are often introduced to offset the dis-equalizing impact of restrictive macroeconomic policies, as observed for Central Europe and a few LA countries. While steadily rising (Mexico, Brazil, Thailand and Malaysia are good examples of such approach), such public transfers are still often smaller than desirable. Their intensification can be effected through social insurance and social assistance schemes. In this regard, the recent evidence suggests that the best approach may consist in 'walking on two legs'. In a country with a limited formal sector, social insurance expenditure is little progressive as it mainly covers the few comparatively well-off formal sector workers. Focusing only on its expansion would thus not very progressive. This suggests that while actively extending the social insurance in the formal sector, government may be setting up solidarity-based, non-contributory, universal or targeted funds providing basic benefits to informal sector workers and their families, including also conditional and non-conditional cash transfers. In mid income countrries, both approaches should be pursued at once.

In EE-FSU - despite rapid GDP growth over 2001-2008, social protection expenditure stagnated for the region as a whole at 10 per cent of GDP. In addition, already since the 1990s investment in education was characterized by opening to the private sector, the development of costly private

universities affordable only to well off and the introduction of user-fees in public institutions. As a result, the 1990s were characterized by a fall in enrolment rates in upper secondary education which, except in Central Europe and, in part, the Baltic countries, lasted till the mid 2000s. The enrolment decline was very marked among pupils of vocational schools from low and middle income groups. These trends suggest that the supply of skilled and semi-skilled workers declined over time, exacerbating in this way educational inequality and contributing to the upward shift in skilled wages relative to the unskilled ones.

In addition, social protection systems in the region were and remain highly heterogeneous, and the related outlays range between 4 and 20 percent of GDP. Except for the comprehensive and progressive systems of Central Europe, social protection remained heavily biased (as during the socialist era) towards little progressive pension systems. Unemployment benefit, sick pay and child allowances - which are better targeted - remained underfunded. For instance, child benefits absorbed between 0.1 and 0.9 per cent of GDP. However, in six of the 12 countries with data this ratio declined between 2000 and 2004-6 (Unicef 2009, quoted in Cornia 2012b). Progress in the field of social assistance was also less marked than in other regions due to the initial lack of administrative infrastructure. Thus, while the communist social protection systems had a considerable impact on income inequality, the last decade has seen a steady erosion of this initial advantage.

In China the (tax) and social policy also contributed to the increase in income inequality. The post-1994 tax reforms reduced the incentives and capacity of the local bureaucracy to provide public goods. The autonomy given to local schools and hospitals has often led to their commercialization with the effect that the poor and migrants are often priced out of their services (Corrnia and Uvalic 2013). According to a 2009 report by the National Bureau of Statistics, the migrants covered by the four major types of insurance – pension, health care, unemployment, and injury – were a meager 7.6, 12.2, 3.9, and 21.8 percent. Whereas in urban areas social services still serve the majority of the resident population, in rural areas there was a near-collapse of the rural social services, as after the 1994 tax reform, many local areas were left with unfunded mandates for basic social services.

6.2 Trends in the level and stability of social public spending/GDP

Table 17 illustrates the trends in overall public expenditure, as well as in public expenditure on health, education and social protection (social insurance and social assistance) for the last three decades. Such data have been computed on the basis of the SPEED database of IFPRI which draws mainly on the IMF-GFS data and generally refers to the expenditures of central government and only seldom of the general government. This means this database does not therefore include the expenditures of lower levels of government, such as provinces and municipalities, which in highly decentralized and federal states can be quite sizeable. Furthermore, the social expenditure data in Table 17 do not include outlays on housing, nutrition, food subsidies and other less important items. This renders the data not completely comparable across countries and over time. This explains possible discrepancies with other sources of data (cfr. For instance the data for LA in Table 16 with those in Table 17).

Despite these statistical limitations, Table 17 confirms empirically the changes in doctrinal approaches to public expenditure and the role of the state discussed in section 6.1. In particular Table 17 shows that: (i) while overall public expenditure/GDP fell everywhere between the 1980s and the 1990s, it then grew between the 1990s and 2000s in LA and Asia, while it remained constant in MENA, SSA and the advanced economies, and fell in the transition economies of EE-FSU which – as noted in section 5 – adopted in most cases liberal reforms also during the 2000s; (ii) overall social expenditure/GDP fell in the 1990s in relation to the (already problematic) 1980s in 4 regions, while it remained constant in SSA and rose slightly in Asia; (iii) with the exception of the transition economies of EE-FSU, total social public expenditure grew between the 1990s and

Table 17. Trend in Public expenditure/GDP ratios and in social expenditure (education, health and social transfers) structure in developed and developing countries, 1980 – 2011

		1980 -1989	1990 - 1999	2000 – 2011
Developed Countries	Total, of which:	43.3	40.3	40.2
	- education	*3.7*	*4.4*	*4.9*
	- health	*4.2*	*4.4*	*5.4*
	- social protection	*15.1*	*13.9*	*14.3*
	- total social sector	***23.0***	***22.7***	***24.6***
	- social sector/total	***53.1***	***56.3***	***61.1***
Latin America and Caribbean	Total, of which	22.0	18.7	21.2
	- education	*3.3*	*2.7*	*3.4*
	- health	*2.4*	*1.5*	*1.8*
	- social protection	*3.4*	*3.0*	*3.9*
	- total social sector	***9.1***	***8.2***	***9.1***
	- social sector/total	***41.3***	***43.8***	***42.9***
East, South, and South East Asia	Total, of which:	24.9	23.0	24.0
	- education	*3.0*	*3.1*	*3.3*
	- health	*1.2*	*1.3*	*1.4*
	- social protection	*1.3*	*1.5*	*2.2*
	- total social sector	***5.7***	***5.9***	***6.9***
	- social sector/total	***22.9***	***25.6***	***28.7***
Transition Europe and Central Asia	Total, of which:	31.9	27.8	25.0
	- education	*1.3*	*2.3*	*1.9*
	- health	*1.0*	*1.6*	*1.3*
	- social protection	*7.4*	*2.6*	*3.1*
	- total social sector	***9.7***	***6.5***	***6.3***
	- social sector/total	***30.4***	***23.4***	***25.2***
Sub-Saharan Africa	Total, of which:	27.8	25.5	25.6
	- education	*4.3*	*4.1*	*4.2*
	- health	*1.8*	*1.8*	*2.2*
	- social protection	*1.1*	*1.3*	*1.6*
	- total social sector	***7.2***	***7.2***	***8.0***
	- social sector/total	***25.9***	***28.2***	***31.,7***
MENA	Total expenditure, of which	34.2	29.0	28.7
	- education	*4.1*	*4.4*	*4.1*
	- health	*1.6*	*1.6*	*1.7*
	- social protection	*3.4*	*1.9*	*3.3*
	- total social sector	***9.1***	***7.9***	***9.1***
	- social sector/total	***26.6***	***27.2***	***31.7***

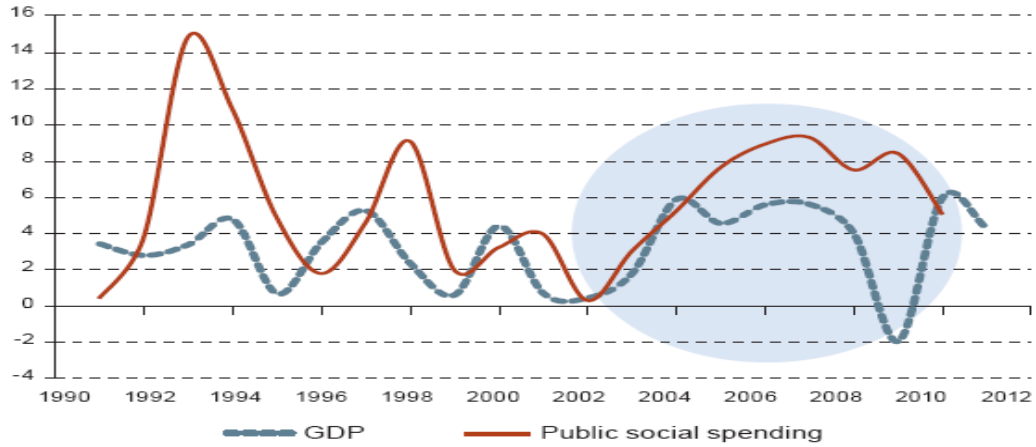
Source: author's compilation on the SPEED database (http://www.ifpri.org/book-39/ourwork/programs/priorities-public-investment/speed-database). Notes: see text.

the 2000s in all regions. The rise ranged between 0.8 GDP points in SSA and 1.9 GDP points in the advanced economies, possibly due to the growing 'social conditionality' for the achievement of MDGs; (iv) in three of the five regions which experienced a rise in total social expenditure/GDP, social protection absorbed the largest amount of additional resources. In the advanced countries (which already counted on extensive social protection systems) the main increase was recorded in

the health sector, most likely due to the aging of the population and the increasing cost of the new health approaches; (v) the share of social expenditure on total public spending rose between the 1990s and 2000s in all regions though it remained constant in LA (though more complete data showed an increase – see Figure 10 for Latin America).

Two features of such increase in public social expenditure stand out. First, the 2000s increase was made possible by the rise in tax/GDP ratios mentioned in section 5, (in a few cases) by the cancellation of the debt servicing obligation (such as the HIPC programme, which was especially important in SSA and a few LA countries[9]) which generated short and long term redistributive effects, and the greater priority assigned to social spending (Figure 10) due to the MDG counter-revolution, democratization and abandonment of clientelistic policies which improved the priority assigned to social expenditure (Lopez Calva and Lustig 2010). Second, the cyclical behaviour of social spending – which oscillated closely with the business cycle – diminished considerably, thus allowing to avoid damaging cuts in priority sectors during recessions (Figure 12, Table 16).

Figure 12.Cyclical behaviour of GDP and Public social spending, 1990-2012



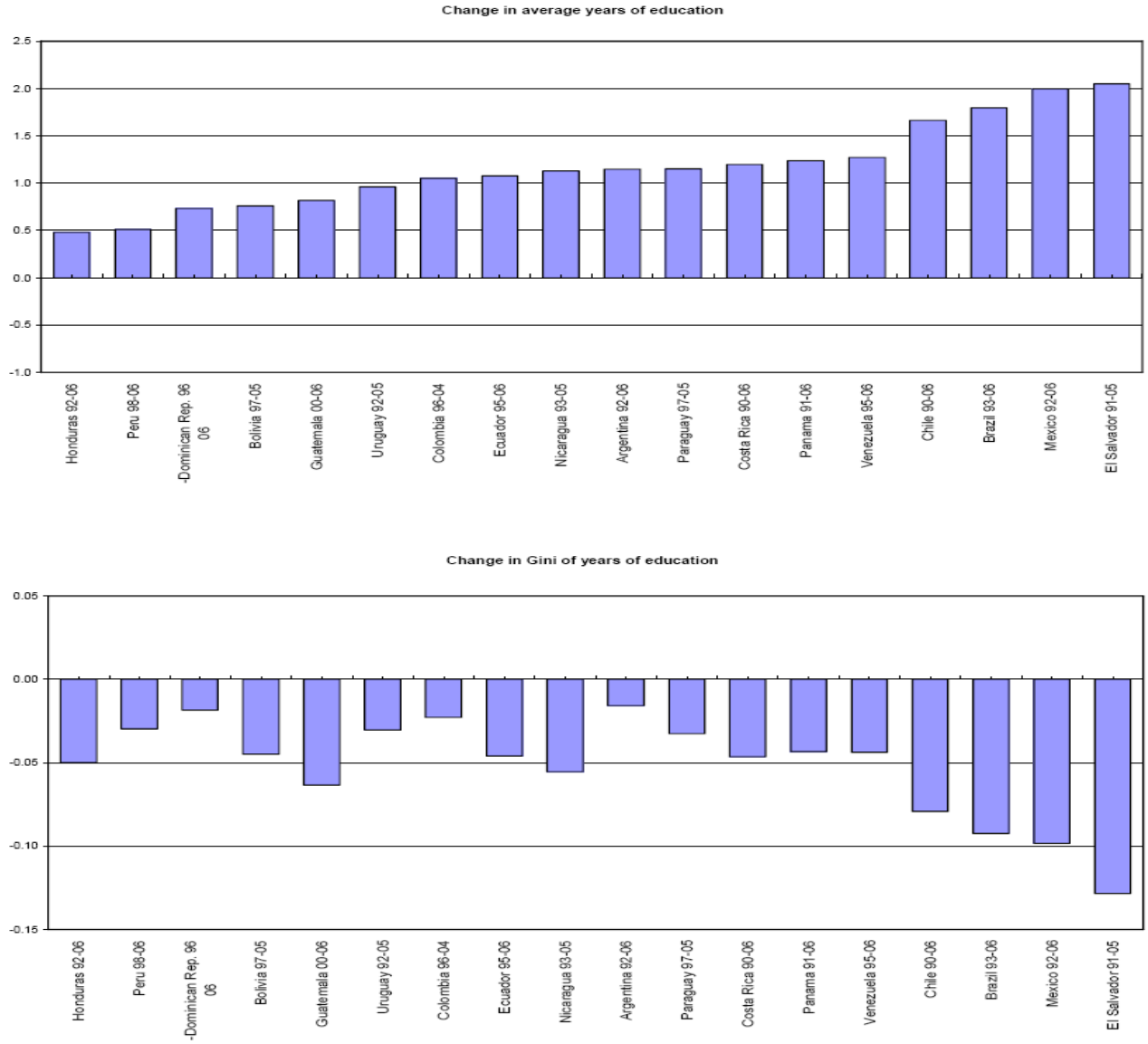
Source: ECLAC (2012)

Such an increase in public resources allocated to health and education generally had a progressive slant, and generated positive redistributive effects via: (i) a better distribution of current 'final income' and (ii) by redistributing human capital stock among households following the rise in secondary enrolment rates among the poor recorded since the early 1990s (Cruces et al. 2011) which led to an improvement in the distribution of human capital among workers and to a drop in the skill-premium and educational inequality (Figure 13).

Also in SEA high (public and private) investments in education generated a more egalitarian distribution of final incomes and – especially – a decline of the skill premium, which is a key determinant of current reduction in income inequality (Cornia and Martorano 2012**).** Although the EA countries historically allocated to public spending on education an amount similar to that of other developing countries, they achieved more favorable results due to the higher priority assigned to 'educational quality for all', in particular in the field of scientific education (Cornia and Martorano 2012). Indeed, a rapid expansion of secondary-tertiary education also during the 2000s enhanced the possibility of profiting of rapid technical progress in ITC and other sectors while at the same time avoiding a rise in the skill premium and overall inequality, as a rising demand for skilled labor was matched by a surge in its supply. The clearest example of this policy is provided by S.Korea which in the late 1990s switched to knowledge-intensive, high-tech productions without experiencing a rise in the skill premium which remained stable at 3.5 during the 2000s (Figure 14).

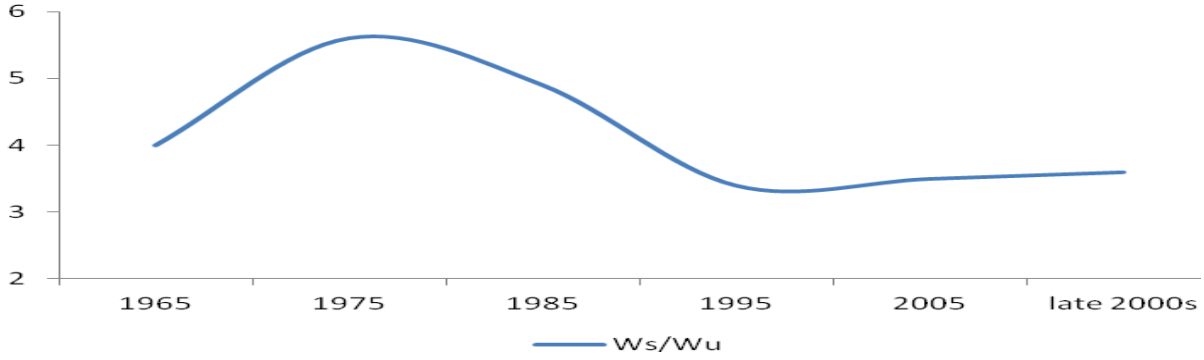
[9] Since 1996-7, Bolivia, Honduras and Nicaragua enjoyed debt cancellations equal to 5, 6 and 2 percent of their GDP

Figure 13. Percentage changes in average years if education of the adult population and the Gini of educational achievements between the mid 1990s and the mid 200s in 18 Latin American countries



Source: Gasparini et al (2009)

Figure 13. Wage skill premium in Korea between 1965 and late the 2000s



Source: Kwack (2010)

Malaysia too invested heavily in education, by improving access to post–primary education and promoting the creation of employment opportunities (Ragayah, 2011). As a result, the average years

of education of the workforce rose steadily from 8.2 in 2000 to 9.5 in 2010 with faster than average increases recorded among the poor. Less pronounced, but similar gains observed in Thailand where the share of workers with secondary education rose substantially since the mid-1990s, while the number of those with tertiary education increased since 2000. The resulting decrease in inequality in education lead to a reduction of wage inequality (Ragayah 2011).

6.4. Public expenditure incidence

Traditionally, public social spending has been poorly targeted, particularly in the health sector. An IMF paper by Davoodi et al (2003) summarizes the incidence of public expenditure in health and education for 56 developing-transition countries in the 1990s. It found that benefits from primary education and health care went disproportionately to the middle class, particularly in SSA, HIPCs countries and transition economies; and that expenditure targeting improved since the 1990s. The paper concludes that countries with a pro-poor incidence of education and health spending tend to have better education and health outcomes, higher per capita income, and a fairer distribution of final income. The results in Table 18 are average regional data and things vary substantially between countries of the same regions (see 'memo items' in Table 18 within each region).

Table 18. Incidence of public social expenditure in health and education, 1990s

	sample Size	All		Primary Health Care		Health centers		Hospitals	
		Bottom 20%	Top 20%	Bottom 20%	Top 20%	Bottom 20%	Top 20%	Bottom 20%	Top 20%
SSA	9	12.9	28.6	15.3	22.7	14.5	23.7	12.2	30.9
Asia and Pacific	2	10.8	30.9	19.7	16.9	18.4	16.8	9.1	38.0
Latin America	10	23.1	15.2	20.4	19.1	19.1	19.9	17.0	22.2
MENA	1	16.4	23.6	…	…	…	…	…	…
Transition	4	13.6	27.0	14.9	21.5	14.5	21.3	11.4	28.7
Total	26	16.9	23.2	17.3	20.8	16.4	21.4	13.3	28.4
Memo Items									
- Minimum		4.0	4.9	8.0	10.0	7.5	10.0	1.0	12.0
- Maximum		43.1	48.0	28.0	36.0	28.0	36.0	27.6	55.0
Education									
	sample size	All		Primary		Secondary		Tertiary	
		Bottom 20%	Top 20%	Bottom 20%	Top 20%	Bottom 20%	Top 20%	Bottom 20%	Top 20%
SSA	10	12.8	32.7	17.8	18.4	7.4	38.7	5.2	54.4
Asia and Pacific	4	12.4	34.8	20.3	16.9	8.3	37.3	2.5	69.0
Latin America	14	19.2	20.7	29.5	9.4	15.1	17.8	4.7	41.6
MENA	2	15.3	24.1	24.7	12.4	11.0	24.4	4.0	46.9
Transition	7	15.3	24.0	19.3	20.0	12.5	24.6	8.7	32.6
Total	37	15.8	26.3	22.8	15.1	11.3	27.9	5.4	46.3
Memo Items									
- Minimum		5.0	9.7	7.4	4.3	1.9	9.6	0.0	24.6
- Maximum		33.3	46.0	39.4	27.8	24.3	60.8	18.3	93.1

Source: Davoodi et al (2003)

Similar but more encouraging results concerning primary education were obtained by ECLAC (2007) for the early-mid 2000s (Table 19). In contrast, the results for tertiary education were even more regressive, a finding which – after the improvements in the participation to secondary education recorded during the last 10 years in many developing countries - still awaits a solution. Only in Argentina, an increase in public expenditure on tertiary education would have perceptible redistributive effects, but in Brazil, Guatemala, and Paraguay it would worsen the distribution of 'final income'.

Table 19. Incidence of public expenditure on elementary education (panel a) and tertiary education (panel b) by households income quintiles

		(a) % incidence of public spending on elementary education					Gini	(b) % incidence of public spending on tertiary education					Gini
		Household Income quintiles						Household Income quintiles					
Country	Year	1	2	3	4	5		1	2	3	4	5	
Argentina	2003	35	26	19	13	7	-0.273	9	14	21	29	31	0.196
Bolivia	2002	25	25	23	18	10	-0.146	3	5	17	30	45	0.440
Brazil	1997	26	27	23	17	8	-0.194	0	1	3	22	76	0.672
Colombia	2003	37	28	19	12	4	-0.322	3	8	17	31	42	0.403
Costa Rica	2004	40	26	18	10	5	-0.349	5	11	13	26	44	0.371
Guatemala	2000	21	25	23	21	10	-0.104	0	0	6	11	82	0.705
Honduras	2004	28	25	21	17	9	-0.184	1	2	6	23	69	0.627
Mexico	2002	30	26	20	16	8	-0.214	1	7	15	33	44	0.453
Nicaragua	2005	27	26	23	17	7	-0.192	1	4	14	23	58	0.530
Panama	2003	34	26	20	14	6	-0.270	3	10	20	30	38	0.358
Paraguay	1998	33	28	23	15	1	-0.306	0	1	6	27	66	0.627
Peru	2004	32	27	22	14	6	-0.262	2	7	17	30	44	0.431

Source: ECLALC (2007)

However, it must be underscored that the redistributive effects of public social expenditure can (and must) be assessed in two different ways: (i) the first focuses on the share of public spending by income quintiles. According to this method, public spending can be considered progressive and redistributive if the share of quintiles (1+2) is greater than that of (4+5), an approach followed in both Tables 18 and 19; (ii) a second criterion focuses, in contrast, on the benefits shares of the various quintiles (or on the concentration coefficient of the distribution of these benefits) in relation to the quintiles pre-transfers income shares (or their concentration coefficient). From this perspective, a transfer is considered redistributive, if the share received by the poor quintiles is larger than that of pre-transfer income, or if the concentration coefficient of the benefits distribution is lower than that of the pre-transfer distribution. In terms of this second criterion, an analysis of government social expenditure by income quintile for 18 countries over 1997-2003 (CEPAL 2007) suggests that (Table 20): (i) all components of public social expenditure (including social security) are less concentrated than private incomes and are therefore redistributive (even if, in the latter case, they are not progressive, as the rich receive a greater share of the benefit than the poor); (ii) expenditures on primary education and social assistance are strongly progressive (and hence redistributive), those on secondary education and healthcare are mildly progressive or broadly proportional (in the case of health it depends on the approach to its financing), those on tertiary education are regressive and as or more concentrated than the distribution of pre-transfer income. In turn, expenditures on social security (pensions, unemployment insurance) are regressive but slightly less concentrated than that of private income (and are therefore only mildly redistributive), as such transfers are received only by formal sector workers (only seldom social security provides

Table 20. Incidence of government expenditure by quintile (panel a), and concentration coefficients of the public expenditure by three country groups (panel b), 18 LA countries, years 1997-2004).

(Panel a) Shares of total public expenditure by sector and income quintile					**Expenditure Sector**	**(Panel b) Concentration coefficients of public expenditure**		
I quintile	II quintile	III quintile	IVquintile	V quintile		Group 1	Group 2	Group 3
7.4	6.5	6.3	5.9	5.6	**Education**	-0.067	0.116	-0.138
5.1	4.7	4.2	4.0	3.7	**Health**	0.074	-0.073	-0.192
2.0	2.8	4.3	**6.3**	**16.5**	**Soc Security**	0.504	0.568	0.349
3.3	2.1	1.6	1.3	1.1	**Soc Assist.**	-0.089	-0.154	-0.484
0.8	0.9	1.1	1.4	0.9	**Housing**	0.206	0.067	-0.026
19.6	17.0	17.5	18.9	27.8	**Total**	0.143	0.042	0.044

Source: Elaboration on CEPAL (2007); Note: Group 1 includes Bolivia, El Salvador, Guatemala, Honduras, Ecuador, Nicaragua, Paraguay, and Peru. Group 2 includes: Colombia, Dominican Republic, Mexico, Panama, and Venezuela. Group 3 includes: Argentina, Brazil, Chile, Costarica and Uruguay.

non-contributory benefits to informal sector workers and their families). Regression analyses by Cornia (2012) on a panel of 18 LA countries for the years 1990-2009 confirms that social security spending (both social insurance and assistance) tend to improve the inequality of the distribution of household disposable income per capita. Analysis of the distributive effect of social assistance transfers (see Figure 11) are well documented. While such transfers are not without problems, their redistributive effect is now well established.

Overall, for LA there are indications (CEPAL 2005) that the incidence of such public expenditures have become more progressive, though at different speeds across countries, as shown by the increase in enrolments rates of poor children in secondary education, greater access to health services, and the diffusion of well targeted cash transfers and anti-poverty programs. In contrast, as shown in Table 21, social security expenditure is not progressive (though it can be redistributive), as it mainly covers formal sector workers with stable employment.

The extent of the progressiveness and redistributive-ness of public spending must be assessed in several dimensions, as in some context public policy and societal values may discriminate against some social groups. In this regard, Table 21 compares the incidence of public spending on primary and secondary education in the traditionally progressive state of Kerala and in the traditionally backward state of Bihar. It shows that: (i) in Kerala, public spending on primary education is progressive in both the rural and urban areas and across genders, (ii) public spending on secondary education is almost proportional overall, though it shows a modest pro-male bias in urban areas; (iii) in Bihar the incidence of public spending on primary education is regressive in rural areas but not in urban areas, though in both areas there is a clear anti-female expenditure bias (due to a large extent to the overall societal gender bias) , (iv) secondary education is strongly regressive overall and strongly biased against females in both the rural and urban sector.

Table 21. Quintile shares of public education subsidies by gender and location in Kerala (panel (a) ND Bihar (panel b), 1996, percent

	Elementary education						Secondary education					
	Rural			Urban			Rural			Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
(a) Kerala												
Quintile 1	11.9	12.8	24.7	12.8	16.0	28.7	7.1	6.9	14.1	7.3	4.6	12.0
Quintile 2	12.6	9.8	22.4	13.8	7.8	21.6	9.8	11.0	20.8	13.4	11.6	25.1
Quintile 3	11.2	10.6	21.8	9.8	11.5	21.2	11.9	10.5	22.4	13.5	10.8	24.2
Quintile 4	9.3	9.3	18.6	8.7	9.9	18.6	11.7	9.9	21.6	11.7	10.7	22.3
Quintile 5	6.4	6.1	12.5	6.2	3.6	9.8	10.7	10.4	21.1	7.3	9.1	16.4
All	51.3	48.7	100	51.2	48.8	100	51.2	48.8	100	53.2	46.7	100
(b) Bihar												
Quintile 1	12.1	5.1	17.1	13.7	7.9	21.6	2.6	0.4	3.0	3.3	2.4	5.7
Quintile 2	10.6	4.8	15.5	12.8	11.0	23.8	14.6	1.5	16.0	7.3	4.9	12.1
Quintile 3	13.7	6.8	20.4	16.6	10.1	26.7	11.0	3.3	14.4	14.7	8.9	23.6
Quintile 4	16.2	7.4	23.6	11.5	7.9	19.4	18.1	6.7	24.8	14.7	13.1	27.9
Quintile 5	14.4	9.0	23.4	4.2	4.4	8.5	32.5	9.3	41.8	18.3	12.4	30.7
All	66.9	33.1	100	58.8	41.2	100	78.8	21.2	100	58.3	41.73	100

Source: Deepa Sankar, WB

Finally, the effectiveness of a transfer can be gauged also by the coverage of the eligible population. In this regard Table 22 for Argentina, Bolivia and Brazil (Lustig 2013) offers some interesting information. It confirms on very recent data some of the prior findings, but offers a more encouraging picture of the redistributive effect of taxation and social spending. It shows that – with the exclusion of contributory pensions and tertiary education – public social spending is highly progressive as the share of the benefits received by the extreme poor (those with an income (y) of less than 2.5 US$-PPP per day) poor (those with an income of less than 4 US$-PPP per day) – who are respectively 13.0, 19.6 and 15.1 percent and 8.9, 12.9, 11.1 percent - ranges between 22.7 and 36.8 for the extremely poor and 7.4 and 20.9 for the poor (in relation to pre-transfers income shares of 1.2 and 2.3 percent) in Argentina; with corresponding values of 19.6-to-30.4 for the extra poor and 10.6-17.1 for the poor in Bolivia (to be seen in relation to pre-transfers income shares of 2.7 and 4.6); with corresponding values of 9.9-46.0 and 6.5-23.0 in Brazil (income shares 1.5and 2.5). In all three countries the share of the extremely poor and poor covered by the transfers in cash and kind was very high, with modal values of around 40-80 percent for most programs which appeared on the whole well targeted. Such studies concludes that direct taxes and cash transfers reduce inequality (as measured by the Gini coefficient and with respect to market income inequality) by as much as 8.6 percent in Argentina and 7.1 percent in Uruguay but only 2 percent in Bolivia and Peru. In Brazil and Uruguay, the reduction in disposable income inequality is mainly due to the impact of cash transfers. When adding the effect of in-kind transfers (access to free or quasi-free services in education and health), inequality declines substantially in all countries, ranging from 25.2 percent, 24.1 percent, and 20.2 percent in Argentina, Brazil, and Uruguay, respectively, to 7.6 percent in Peru.

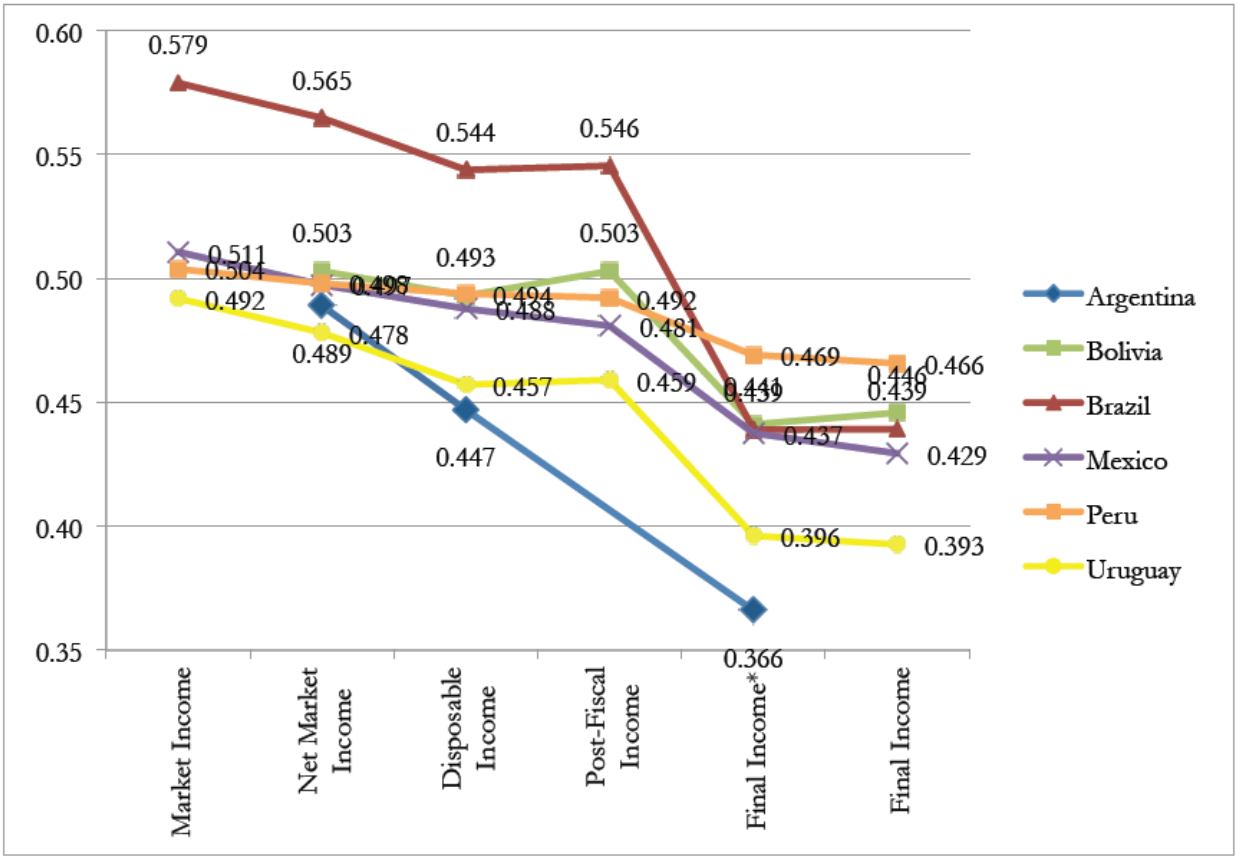
In conclusion, and as mentioned at the beginning of this section, there is now enough theoretical support and empirical evidence that an increase in social expenditure and its efficient targeting – combined with progressive taxation - can reduce substantially the Gini coefficient of the distribution of market income as shown by Figure 14 below. For instance, in the case of Argentina, Brazil, and Uruguay the overall drop in the Gini coefficient due to fiscal operations is respectively of 12.3, 14.0 and 9.9 Gini points.. Even in Bolivia – where GDP/c and tax/GDP ratio are low, and redistributive institutions are more recent and weaker – the Gini drops due to the net effects of fiscal operations by 5.7 point. As already noted in Table 9, and not so differently than in the developed countries, 70-80 percent of the Gini decline is accounted for by public spending and the rest by taxation.

Table 22. Shares of benefits by income groups (defined in terms of net market income per day in US$-PPP) and coverage of the eligible population by income group

	Distribution: Share of Benefits by Income Group [b]						Coverage: Percent of Individuals Receiving Benefits [c]					
	Extreme Poor		Moderate Poor				Extreme Poor		Moderate Poor			
Income Groups [a]	y<2.5	2.5<y<4	y<4	4 <y<10	10<y<50	y > 50	y<2.5	2.5<y<4	y<4	4<y<10	10<y<50	y>50
ARGENTINA [d]												
Cash Transfers												
Asignación Universal Por Hijo	36.8%	20.9%	57.6%	37.0%	5.2%	0.2%	52.9%	46.6%	50.4%	20.6%	3.9%	3.7%
Noncontributory Pensions	35.2%	7.4%	42.6%	37.3%	19.7%	0.3%	33.2%	19.2%	27.5%	17.5%	9.4%	3.4%
All Cash Transfers [e]	34.6%	12.2%	46.8%	38.2%	14.7%	0.3%	91.9%	78.8%	86.6%	47.6%	15.2%	7.9%
In-Kind Transfers												
Education	17.9%	13.0%	30.9%	46.0%	22.8%	0.2%	na	na	na	na	na	na
Education: All except tertiary	22.5%	15.9%	38.4%	47.7%	13.8%	0.1%	31.1%	31.1%	31.1%	19.0%	6.6%	1.1%
Education: Tertiary	5.0%	4.8%	9.8%	41.2%	48.3%	0.6%	1.8%	2.5%	2.1%	4.6%	6.7%	2.8%
Health	26.8%	17.3%	44.1%	44.2%	11.5%	0.2%	68.1%	63.9%	66.4%	34.3%	11.1%	6.1%
Contributory Pensions	0.2%	0.5%	0.7%	23.7%	66.4%	9.2%	1.0%	3.1%	1.9%	12.9%	19.9%	17.4%
Income Shares	1.2%	2.3%	3.5%	25.7%	62.2%	8.6%	1.2%	2.3%	3.5%	25.7%	62.2%	8.6%
Population Shares	13.0%	8.9%	21.9%	42.6%	34.4%	1.1%	13.0%	8.9%	21.9%	42.6%	34.4%	1.1%
BOLIVIA [f]												
Cash Transfers												
Bono Juancito Pinto	30.4%	17.1%	47.5%	40.9%	11.3%	0.2%	70.5%	61.6%	67.0%	48.9%	22.8%	11.2%
Noncontributory Pensions	24.1%	10.6%	34.6%	32.4%	31.5%	1.4%	19.2%	14.3%	17.2%	16.8%	22.2%	20.6%
All Cash Transfers [e]	25.2%	12.8%	38.0%	34.5%	26.4%	1.1%	87.7%	83.2%	85.9%	76.4%	56.2%	41.7%
In-Kind Transfers												
Education	19.7%	12.9%	32.6%	41.4%	25.2%	0.9%	78.4%	72.6%	76.1%	67.5%	47.8%	29.1%
Education: Primary	30.5%	17.1%	47.6%	40.9%	11.3%	0.2%	70.5%	61.6%	67.0%	49.0%	22.9%	11.2%
Education: Secondary	24.0%	13.8%	37.8%	41.8%	20.2%	0.2%	28.3%	28.6%	28.4%	24.2%	15.5%	4.2%
Education: All except tertiary	29.8%	16.3%	46.0%	40.7%	13.1%	0.2%	76.4%	68.8%	73.3%	60.5%	33.0%	11.3%
Education: Tertiary	4.6%	7.9%	12.5%	42.5%	43.2%	1.8%	3.9%	9.9%	6.3%	14.5%	20.0%	20.2%
Health	19.6%	16.2%	35.7%	40.3%	23.4%	0.5%	50.6%	51.8%	51.1%	48.3%	37.4%	22.1%
Contributory Pensions	0.1%	0.4%	0.5%	16.0%	60.6%	23.0%	0.1%	0.2%	0.1%	2.4%	5.3%	11.7%
Income Shares	2.7%	4.6%	7.3%	28.9%	53.5%	10.3%	2.7%	4.6%	7.3%	28.9%	53.5%	10.3%
Population Shares	19.6%	12.9%	32.5%	39.5%	27.0%	1.0%	19.6%	12.9%	32.5%	39.5%	27.0%	1.0%
BRAZIL												
Cash Transfers												
Bolsa Família	46.2%	23.3%	69.5%	26.5%	3.9%	0.1%	85.3%	63.5%	76.1%	25.3%	3.3%	0.4%
Noncontributory Pensions												
BPC (Benefício de Prestacao Continuada)	36.9%	19.3%	56.2%	35.4%	7.9%	0.5%	5.5%	3.6%	4.7%	2.3%	0.5%	0.2%
Special Pensions	9.9%	6.5%	16.4%	27.1%	42.6%	14.0%	12.5%	10.4%	11.6%	11.0%	10.0%	5.6%
All Cash Transfers [e]	16.7%	9.6%	26.2%	27.6%	35.2%	11.0%	93.4%	73.8%	85.1%	42.4%	21.0%	10.8%
In-Kind Transfers												
Education	23.0%	13.9%	36.9%	33.0%	26.6%	3.4%	83.0%	75.3%	79.7%	61.3%	36.2%	13.2%
Education: Primary	28.4%	16.7%	45.2%	36.2%	18.4%	0.3%	68.5%	58.4%	64.2%	43.8%	21.3%	2.3%
Education: Secondary	20.8%	15.8%	36.7%	39.1%	23.7%	0.6%	29.3%	27.2%	28.5%	22.0%	11.5%	2.0%
Education: All except tertiary	27.3%	16.6%	44.0%	36.4%	19.4%	0.3%	82.5%	75.0%	79.4%	60.2%	32.4%	4.4%
Education: Tertiary	4.8%	2.8%	7.6%	19.1%	57.0%	16.4%	0.8%	0.9%	0.9%	2.0%	4.6%	9.3%
Health	13.2%	13.1%	26.3%	44.7%	28.5%	0.5%	27.2%	36.4%	31.1%	34.3%	17.0%	2.4%
Contributory Pensions	0.8%	2.0%	2.8%	14.5%	48.3%	34.3%	13.3%	20.4%	16.3%	26.9%	33.1%	38.6%
Income Shares	1.5%	2.5%	4.0%	15.1%	49.7%	31.2%	1.5%	2.5%	4.0%	15.1%	49.7%	31.2%
Population Shares	15.1%	11.1%	26.2%	32.9%	36.1%	4.7%	15.1%	11.1%	26.2%	32.9%	36.1%	4.7%

Source: Lustig (2013)

Figure 14. Impact of fiscal operations (taxation, transfers in cash and transfers in kind) for 6 LA countries, years 2008-2009-2010



Source: Lustig (2013) Note: 'market income' is the sum of gross market incomes (both labour and capital and mixed incomes, excluding capital gains) including self-consumption, imputed rents of owner occupied buildings, private transfers, gifts and contributory pensions (i.e. deferred wages); 'Net market income' is market income minus all personal income taxes and social security contributions (except contributory pensions); 'Disposable income' is equal to net market income plus government transfers in cash and food; 'Post fiscal income' is the net market income minus indirect taxes and plus indirect subsidies; 'Final income' is the is the post-fiscal income plus the imputed value of government in-kind services in education, health, and housing minus copayments and user fees. Finally, 'Final income*' is disposable income plus government in-kind transfers in the field of health, education, and housing minus co-payments and user fees.

7. Labour market policies

As noted in section 6, the current wage distribution is strongly influenced by the overall supply and distribution of human capital, which depends on the fairness of and access to schooling and spending on human capital during the prior 20-30 years. Nevertheless, current labour policies also affect the distribution of gross wages through the regulation of trade unions, the modalities of wage bargaining, efforts at the formalization of employment, active labour market policies (public works, and re.-training) and minimum wage policies. Unemployment subsidies may be included among the transfer measures or among labour policies.

7.1. Approaches to labour market policies.

- The neoliberal labour market reforms of the 1980s and 1990s. During this period the supporters of the neoliberal approach argued that liberalizing wage formation (i.e. reducing the scope for collective bargaining and assigning greater role to firm level negotiations) was likely to generate a rise in both employment (as enterprises are more willing to hire workers at lower wages and more flexible conditions) and a higher wage dispersion following the decompression of wage distribution

(with workers with higher human capital/experience receiving higher salaries). The net distributive impact of these mutually offsetting effects was indeterminate *ex-ante* and depended on which of these two effects prevailed.

Another prediction of the neoclassical theory of dualistic labour markets was that the abolition of the minimum wage and other regulations (hiring and firing costs) in the formal sector would have raised employment therein, cut employment in the informal sector, and reduced the formal-informal wage gap, especially in countries where a small 'labour elite' was employed in capital-intensive sectors while a large workforce toiled in the low-wage informal sector. Subsequent analyses have provided a more articulated view of such conclusions. For instance, Fields and Kanbur (2005) analyzed the effects of minimum wages in terms of poverty rather than unemployment. They found that a higher minimum wage may raise, reduce of leave unchanged the poverty rate depending on the value of four key parameters: the degree of poverty aversion, the price elasticity of labour demand, the ratio of the minimum wage to the poverty line, and the extent of income-sharing.

An overall explanation of the discrepancy between observed outcomes (see next paras) and the above predictions focuses on the fact that the abolition of minimum wages did not stimulate labour demand (which can be rigid in a given range - see Fields and Kanbur 2005). In addition, while reducing the role of trade unions was expected to remove labour market rigidities, an erosion of their role affected social cohesion, incentives, industrial relations and wage inequality. Thirdly, liberalisation was found to be associated with a rise in the highest wages, a trend possibly related to the expansion of the high-wage finance, insurance and real estate sectors, changes in norms on the remuneration of highly skilled people, the lagged effect of un-equalizing educational reforms, and growing demand for skilled workers due to the 'third industrial revolution'. Finally, wage liberalisation coincided with the opening up of foreign trade and capital movements. The difficulties caused by these measures (rising competition from low-wage exporters, and appreciation of the real exchange rate) pushed firms to try to compress formal sector wages and – whenever this was not possible - to re-organize production by shifting jobs to low-wage informal subcontractors, with the effect of increasing wage inequality.

The evidence is quite unanimous in pointing to a dominance of the negative over the positive effects of labour market liberalization. In LA, such liberalisation was accompanied by slow employment creation, job informalization, an erosion of real minimum wages and mounting wage inequality (Behrman et al. 2000). Similar effects were observed in EE-FSU, where the fall of minimum/average wage ratio correlated with earnings inequality (Cornia 1996). In Asia, minimum wages were very seldom introduced in the past, while after the 1997-8 crisis real wages grew well below productivity including because of weak collective bargaining. Over 2008-11 average wages grew by 5.2 percent a year (0.3% if China is excluded) compared to a GDP growth of 6.8%. This shifted the factorial distribution against labor income while depressing domestic demand (ILO's Global Wage Report 2012/13). In China's labour policies contributed (beyond the pressure exerted by a large rural 'reserve army') to keeping wages low, reduced the labour share in total income from 56.5 to 36.7 percent between 1983 and 2005 (Selden and Wu, 2011), and raised corporate and public savings to finance a rapid capital accumulation. In addition, minimum wages (which are *de facto* set at the local level) declined as a share of average wages (Table 23).

Table 23. Ratio of minimum to average wage in three selected coastal cities in China

Year	Shanghai	Suzhou	Shenzen (SEZ)
1992	44.6	n.a.	49.6
1995	34.9	n.a.	37.1
2000	34.6	39.7	28.5
2005	30.9	33.1	25.5
2008	29.2	28.3	27.6

Source: Selden and Wu (2011) on the basis of the Shanghai, Suzhou and Shenzen Statistical Yearbooks, various years

Part of the increase in wage and income inequality during the last decade pivoted around the *hukou* (internal passport) system. The new version of such system channels labor to industry and the cities while preserving for them much lower wages and social benefits which permit firms and public entities to realize large profits and investments (Selden and Wu 2011). In addition, with the unwillingness to provide subsidized education to the children of migrants, the *hukou* system raises inequality in children education, a fact that will raise long term income inequality.

- ***New approaches to labor policies.*** The new pragmatic/progressive policy model which has emerged during the last decade in several countries has explicitly addressed the problems inherited from the prior two decades in terms of unemployment, job informalization and instability, falling unskilled wages, diminishing coverage of social security, and weakening of institutions for wage bargaining and dispute settlements. In Latin America minimum wages were increased in 14 of the 18 countries of the region (Table 24). In addition, Argentina introduced well targeted and equalizing large scale public work programs, extended the coverage of formal employment, gave

Table 24. Trend in the index of real minimum wages (2000=100) (a

	2002	2004	2006	2008	2010
Venezuela (1999) (b	94.5	92.7	113.9	107.2	93.8
Chile (2000-10)	***106.8***	***111.3***	***116.3***	***118.3***	***127.7***
Brazil (2002)	***114.3***	***121.4***	***145.3***	***160.8***	***182.0***
Argentina (2003)	81.4	***129.8***	***193.2***	***253.3***	***321.3***
Panama (2004-09)	105.8	***107.5***	***108.1***	***109.2***	***113.3***
Uruguay (2005)	88.7	77.5	***153.2***	***176.9***	***196.8***
Costa Rica (2006)	99.5	97.6	***99.5***	***99.5***	***105.8***
Bolivia (2006)	116.0	112.0	***111.1***	***117.0***	***119.9***
Honduras (2006-09)	104.6	114.5	127.4	***131.1***	***225.5*** (c
Nicaragua (2007)	105.9	113.5	128.5	***141.6***	***174.6***
Ecuador (2007)	112.5	122.2	130.0	***146.7***	***161.5***
Paraguay (2008/9)	102.9	102.4	106.7	101.3	***102.5***
Guatemala (2008)	108.6	117.6	119.6	111.9	***122.0***
El Salvador (2009)	94.6	95.3	90.5	92.9	***100.9***
Peru (2011)	101.0	106.9	112.0	114.5	110.1
Mexico (–)	101.2	99.1	99.0	96.2	95.6
Colombia (–)	101.9	103.8	108.0	106.9	111.6
Dominican Republic (–)	105.1	81.2	89.6	87.7	93.5

Source: CEPAL (2011). Notes: a) Nominal wages deflated by the CPI; b) in parenthesis are indicated the years of ruling by left of centre regimes; c) = 2009.

a new impulse to trade-unions and tried to formalize employment (Keifman and Maurizio 2014). In 2004, the Labor Ministry launched the National Program for Labor Regularization. The number of labor inspectors was increased from 20 in 2003 up to 400 in 2010 while during this period more than 800.000 establishments employing 2.6 million workers were inspected. To foster formalizations, labor inspections were accompanied by a simplification of firms registration, a one-year exemption of social security contributions for hiring new employees in SMEs, and tax incentives to formalize domestic workers. Meanwhile average wages grew moderately (Table 25), possibly reflecting the greater concern of the unions and policymakers for creating jobs than for raising average earnings. Such choice contributed to reduce the minimum/average wage ratio.

As noted, in Asia the economies were traditionally characterized by comparatively weak labor policies, a low level of unionization and limited provisions against joblessness. Due to the near full-employment conditions prevailing in the 1980s and 1990s, the creation of labor institutions to

Table 25. Labour market trends for Latin America as a whole, 1990-2007

	Participation rate (%)	Unemployment Rate (%)	% wage earners on total workers	% formal sector workers	%workers paying social sec.	Average wages (constant 2000 US$)**		
						Average	Formal Sector	Informal Sector
1990	63.8	6.2	62.6	55.0	63.3	384	372	278
2002	68.5	10.7	60.9*	52.8	54.6*	397	457	264
2005	70.1	9.7	61.4	53.7	59.4	405	449	267
2007	70.0	8.0	63.1	55.5	61.0	423	452	….

Source: Cornia (2010) on CEPAL data. Notes: * refers to 2000, ** the computation of the regional average is based on 13 Argentina, Brazil, Costa Rica, Dominican Republic, Ecuador, Panama, Paraguay, Uruguay. For Chile, Colombia, Honduras, Mexico and Venezuela the 2007 data are proxied by those of 2006.

protect workers against a variety of risks was considered unnecessary. As a result, these countries lacked the basic institutions needed to tackle a sharp rise in unemployment and inequality in the aftermath of the 1997-8 financial crisis. This situation changed in part after 1997-8 and – especially - during the crisis of the last 3-4 years (ESCAP 2013). Indeed, governments started using minimum wages as a tool to protect low income workers and – at the same time - stimulate domestic demand and promote industrial restructuring towards higher value-added sectors rather than rely on a 'race to the bottom' of labor standards and wages. As a result, since the beginning of 2012, minimum wages were raised or introduced in more than 20 countries of the region (*ibid.*). On January 1 2013 Malaysia raised the minimum wage to 280 US$ a month and Thailand to $ 10 a day. ESCAP (2013) argues that supportive macro measures (targeted tax allowances and a reduced social contributions) need to be introduced to smoothen the adjustment of firms to higher minimum wages.

In contrast, in EE-FSU, during the last decade labour market policies were on average not very active, in part due to the decline in unemployment observed during to rapid growth of 2002-8 and substantive outmigration in half of these countries. The minimum/average wage ratio stagnated at a low level while the skill premium rose because of the liberalization of wage formation, the decline in human capital formation during the 1990s (Cornia and Martorano 2012) and limited efforts at strengthening collective bargaining, unemployment insurance, public works and safety nets.

In recent years the Chinese Central Government has made a major effort to correct the traditional absence of institutional arrangements which had caused a high wage and income inequality, but local governments often ignored the norms about minimum wages and collective bargaining, and did not commit funds to the schooling of the migrants' children. The persistent political control of trade-unions and lack of effective policies on wage regulation also contributed to rising within-urban and within-rural income inequality by moderating the requests for wage increases despite large productivity gains.

As noted by Freeman (2012) the Chinese top policy-makers are well aware of the inefficiency and risks of political instability entailed by the continuous rise in wage inequality induced by the above labour policies. To try to correct this problem, the government strengthened the legal rights of internal migrants by enacting on 1 January 2008 a 'contract labour law' which requires employers to issue written contracts, limit probationary periods to two years, giving a permanent contract to workers with ten years' experience with a firm, restricting worker dismissal, increasing severance pay, raising minimum wages, allowing trade unions to become genuine representatives of workers, and improving the dispute settlement system. Surveys of migrant workers in the Pearl River Delta before and after it took effect suggest that the law was effective in improving the workers conditions (Li and Freeman 2012), though much remains to be done (Table 26) .

Table 26. Percentage of workers in the Pearl River Delta covered by contracts and with social insurance and percentage reporting rights violations, before and after the Contract Labour Law

	2006	2009	Change
Contract coverage	42.7	62.4	+ 19.6
Open-end contract	15.2	17.3	+ 2.1
Union existence	16.0	18.6	+ 2.6
Medical insurance	33.0	52.0	+ 19.0
Old age insurance	21.9	37.9	+ 16.0
Injury insurance	42.9	56.8	+ 13.9
Unemployment insurance	8.3	20.5	+ 12.2
Wage arrears	8.9	7.2	- 1.7
Rights violation experience	23.7	5.7	- 18.0

Source: Li and Freeman (2012).

7.3 Empirical evidence of the impact of the recent reforms

A common criticism of minimum wages, collective bargaining and wage regulations is that they distort price signals and raise labor costs, resulting in layoffs of workers, especially in SMEs. A second criticism is that minimum wages are not enforceable in the informal sector, so that their introduction/increase raises formal/informal wage gap and income inequality. However find only limited support in the empirical literature.

The literature on Latin America confirms that the minimum wage hikes of the last decade produced an equalizing effect (López-Calva and Lustig 2010). In addition, Cornia (2012) found on a macro panel of 18 LA countries over the years 1990-2009 using a regression model with 16 variables that minimum wages interacted with the share of formal sector workers consistently and significantly reduced income inequality. This result holds under a variety of econometric estimators. In addition, the analysis does not show any aggregate trade-off with GDP growth. In addition, econometric evidence for Latin America (Keifman and Maurizio 2012) shows that efforts aiming at strengthening labour institutions reduced income inequality. Indeed, most of the decline in the Gini coefficient of income inequality (Table 27) was due to changes in the distribution of labour income. Similar evidence is provided by Cornia (2014) for six Latin American countries.

Table 27. Decompositions (in percent) of the variations in Gini indexes by sources of income

Income sources	Argentina 2003-2010	Brazil 2001-2009	Chile 2000-2009	Mexico 2000-2008	Paraguay 2004-2009	Uruguay 2006-2010
Labor income	**73**	**62**	**44**	**60**	**55**	**66**
-Registered wage earning jobs	*43*	*34*	*33*	*18*	*-2*	*63*
-Non-regis. wage earning jobs	*13*	*8*	*12*	*71*	*22*	*-2*
- Non-wage earning jobs	*17*	*22*	*-2*	*-29*	*35*	*5*
Pensions	**24**	**14**	**26**	**1**	**3**	**21**
Public transfers	**-5**	**20**	**28**	**26**	**2**	**10**
Other non labour incomes	**8**	**4**	**3**	**13**	**41**	**2**
Variation in Gini Index points	-10.1	-5.1	-3.8	-1.9	-7.4	-3.7

Source: Keifman and Maurizio (2012)

The measures adopted to reach these results included passive and active labour market policies, such as unemployment insurance, retraining programs, and self-targeting public-work schemes. Minimum wages – which reduce earnings inequality in most cases – were also raised without causing efficiency costs. Finally, wage bargaining institutions, which have been weakened

substantially in most countries during the last two liberal decades were strengthened in the Southern Cone. Efforts at 'formalizing employment', did also generate some effects. As a result of the measures described in section 7.2, the number of registered workers in Argentina increased by 43% between 1998 and 2010. Brazil too implemented a few micro-level policy interventions (in the tax, labor inspection and promotion of working rights among laborers). As a result, between 1996 and 2004-2008, the annual number of workers registered increased from 268,000 to 700,00. And in Uruguay, the percentage of formal workers grew from 80 to 87 percent of full-time salaried workers between 2004 and 2010 (Keifman and Maurizio 2012)

The claim that minimum wages are not enforceable in the informal sector also lacks a general empirical verification. A study on 19 LA countries over 1997-2001 (Kristensen and Cunningham 2006) suggests that the increases of minimum wages adopted during such period produced an equalizing effect as the rise in minimum wages raised the pay at the bottom of the distribution and were generally associated with lower dispersion of earnings in both the formal and informal sector. Indeed, though they are not binding in the informal sector, the study found that in 14 of the 19 countries analyzed the minimum wages enhanced the wage distribution also in the informal sector. This suggests that – due to this 'lighthouse effect' – minimum wage represents a sort of 'fair reservation wage' below which the supply of unskilled labor falls.

In Asia, the first signs of a change in labour policies appeared after the 1997-8 crisis in S. Korea where the unemployment rate had risen from 2 per cent in 1996 to 7 per cent in 1998, while the share of employed workers with part time or temporary contracts rose sharply, and the Gini coefficient grew from 27.3 in 1996 to 29.7 in 1999. To respond to this crisis, the Government strengthened the coverage and benefits of the Employment Insurance Program, with the result the percentage of unemployed receiving unemployment benefits rose steadily from only 7.8 percent in 1997 to 33 percent in 1999 (Known et al 2010). In addition, in 1999 the government introduced the Minimum Living Standard Guarantee which provides benefits to poor people, conditionally to their participation to training, public work projects, or community service.

ESCAP (2013) cites a number of studies that indicate that the relationship between the minimum wage and employment is not necessarily negative. A study on Indonesia cited therein suggests that the increase in minimum wage of 2012 boosted manufacturing wages without any job loss for workers and with only a minuscule one on non-production workers. And a 2013 study which investigated the impact of minimum wage laws in South Africa found that this had no significant impact on workers participation in the labor market, while in three of the five sectors studied, increases in real hourly wages resulted in an improvement in real incomes. It must also be noted that, apart from boosting workers' income and reducing income inequality, minimum wage boost domestic demand, while increased labor costs push firms to shift to new activities with higher value-added content. Higher minimum wages may also draw back workers from the informal sector, thus helping to overcome the emerging labor shortage in parts of the region. Finally, Chowdhury (2008) argues that Singapore and Malaysia used a tripartite wage-fixing mechanism for orderly wage increases in order not to jeopardize macroeconomic stability and competitiveness, thereby accelerating industrial restructuring and long term growth of GDP and employment.

8. Financial markets regulation and income inequality.

As Greenwald and Stiglitz (2003) have shown, the level of credit is the critical variable in the determination of the level of output and employment. Indeed, the role of credit had been underestimated by academics and policymakers, who tend to place more emphasis on monetary policy. To the extent that credit is an important macroeconomic variable, good and effective regulation (to promote growth and prevent financial crises) becomes a key policy task.

Financial crises occur for a variety of reasons, including because of domestic policy mistakes concerning the volume, type and riskiness of credit granted to the domestic economy, or because of the impact of highly volatile international portfolio flows. These two types of crises are interconnected but are discussed separately hereafter for ease of presentation.

The last three decades have witnessed a widespread liberalization of formerly 'repressed' domestic banking and financial systems (Table 28, panel (a)). In turn, in the 1990s and 2000s several countries liberalized the international movement of FDI, bank to bank transfers, portfolio flows, and more complex financial instruments (Table 28 panel (b), with the exception of the Asian economies in transition, South Asia and SSA.

Table 28. Changes in indexes of domestic financial liberalization and capital account openness

Regions	1982-90	1991-1997	1998-2002	2002-2010
(a) 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
(b) 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

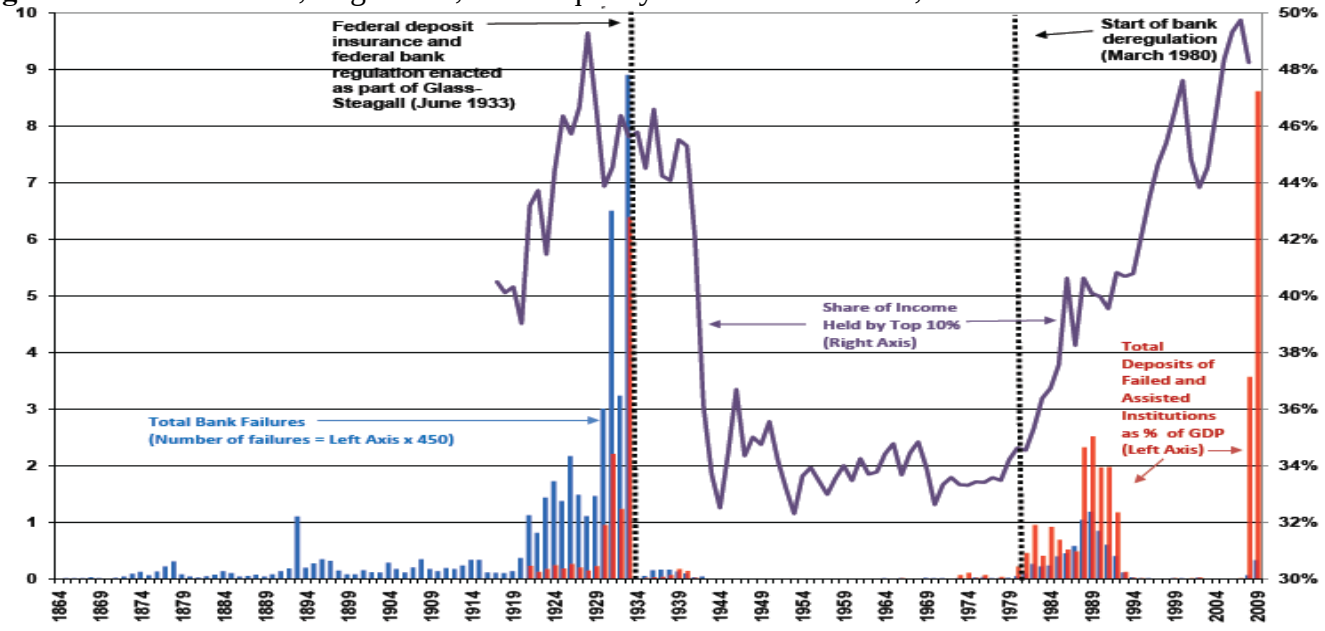
Source: Cornia (2012) on the basis of : *Economic Freedom Dataset (2011),, **Chinn and Ito (2011). Notes: KAOPEN index is a positive function of the openeness. The Index of Domestic Financial Liberalization ranges from 0-10 where 10 corresponds to the highest degree of liberalization. 1/ China and Vietnam.

8.1 Domestic financial liberalization and income inequality

The literature on domestic financial development takes inspiration from analyses for the OECD countries and to a lesser degree from the debate on the 'mobilization of resource 'in economies with an underdeveloped banking and financial sector. As for the first group, Demigurk-Kunt and Levine (2009) argue that improvements in financial contracts, markets, and intermediaries expand economic opportunities of the poor and reduce inequality, as such reforms permit to fund economic agents formerly excluded from the credit market. Delis et al (2013) come to the same conclusions on the basis of cross country data and estimate the impact of various kinds of banking regulation on income inequality. They find that the overall liberalization of banking systems decreases inequality, as it reduces entry barriers. However, this effect becomes insignificant for countries with a low level of institutional development. The liberalization of credit and interest rate controls has the strongest effect in reducing inequality. In contrast, liberalization of securities markets increases it substantially. Beck et al (2007) in turn suggests that after a state deregulates geographical restrictions, income inequality decreases in relation to a state's own level of inequality before deregulation. Deregulation reduces inequality by helping more than proportionately the poor and SMEs (rather than hurting the rich and large firms) as deregulation improves investment opportunities and exerts a positive effect on the demand for low-skilled workers, whose earnings rise relative to higher-income individuals.

However, such literature does not take into account the impact of the excessive liberalization which lead to the recent sub-prime loans and sovereign debt crises. In this case, excessive leverage and risk taking, reduced banking regulation, the boom and bust of credit cycles, weak prudential and accounting norms (about non performing loans), contagion and the proliferation of derivatives and other 'over the counter' contracts (not subject to the surveillance of Central Banks and stock market authorities) generated large increases in inequality through the channels discussed below in section 8.3. These analyses - as well as those inspired by the work of Keynes, Minsky and Stiglitz about the inherent instability of financial markets - emphasize the dangers of an all-out financial liberalization – internal and external – and the need for 'efficient regulation' (different from the 'financial repression' of the past). For instance, Moss (2009) discusses the bank failures and reforms in USA from 1864 to 2006, showing the connection between turning points in regulatory approaches and changes in inequality (proxied by income share of the top 10%) (Figure 15), from which it would appear that the magnitude of the current financial crisis reflects the failure of a regulatory philosophy of the past three decades. His paper suggests that contrary to the prevailing wisdom, New Deal policies (including federal deposit insurance and bank supervision) stabilized the financial system; that the financial catastrophe of 2007-2009 was not an accident, but rather a mistake driven by the faulty post 1994 deregulatory approach, in which all systemically significant financial institutions enjoyed an implicit guarantee from the federal government. To guard against moral hazard and ensure the safety of the broader financial system, these institutions must face significant prudential regulation, be required to pay premiums for the federal insurance they already enjoy, and be subject to an FDIC-style receivership process in the event of failure.

Figure 15. Bank Failures, Regulation, and Inequality in the United States, 1864-2009



Source: Moss (2009)

In turn, the theoretical literature on the developing countries is also characterized by the need to 'de-repress' rigid and un-equalizing financial systems but at the same time to avoid the instability induced by an ideological approach to domestic financial liberalization (Diaz Alejandro 1985 on "Bye-bye financial repression, hello financial crash". This literature suggests that (as portrayed in Figure 15) the relation between the intensity of deregulation and inequality is U shaped.

8.2 The liberalization of capital inflows and outflows

In developing countries, the liberalization of the capital account (Table 29, b) has been presented as a golden opportunity to access a global pool of savings at low interest rates, so as to increase capital accumulation and employment and – as a result of all that - reduce income inequality. Other

purported advantages were that portfolio flows enhance the depth of financial markets (M2/PIL), improve financial intermediation, and 'discipline' the macroeconomy of recipient countries, which will be forced to adopt rigorous fiscal, monetary and exchange rate policies to attract such flows.

Yet these benefits are not easily observed in real life. These flows generally benefit the financial sector and large firms quoted in the stock market and bypass SMEs. In addition, an increase in such inflows is seldom accompanied by a surge in productive investments, especially in labor-intensive sectors. They are also accompanied by an increase in capital outflows (as domestic savers diversify their portfolios) and the need to accumulate currency reserves to face eventual flow reversals and speculative attacks against the exchange rate. In addition, large portfolio inflows cause an appreciation of the real exchange rate which generates an anti-export bias against the labor-intensive traded sector. Finally, portfolio flows are highly unstable and easily reversible (due to contagion, herd-behavior and panics), a feature which is a major cause of the rapid rise in the number of highly un-equalizing banking, currency and sovereign debt crises (Table 30, Figure 16).

8.3 Frequency, economic costs and inequality impact of financial crises

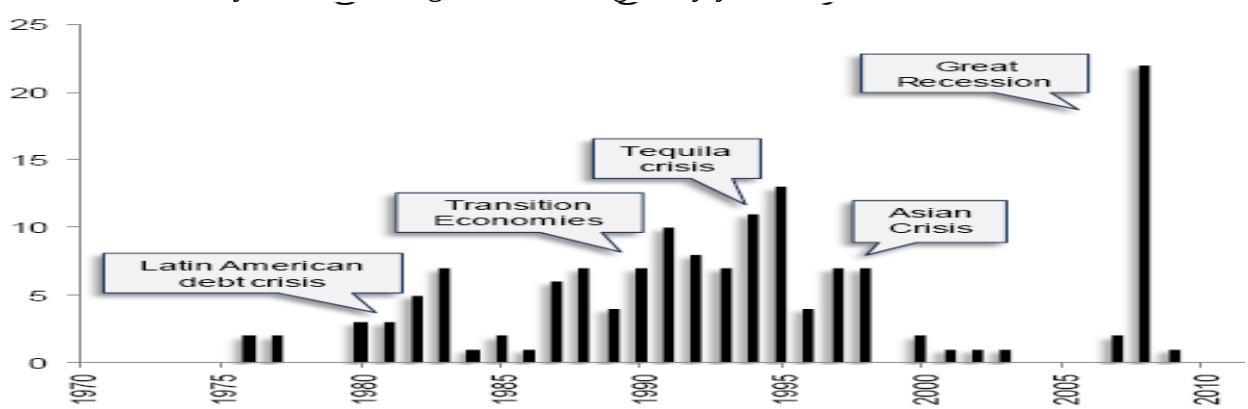
Over 1982-2002 the liberalization of the capital account and domestic banking (Table 29) has been accompanied by a sharp increase in the number of financial crises (Table 29), in particular banking and currency crises. The years 2002-7 experienced a decline in the number of crises but this trend was reversed in the developed economies since 2007 (Figure 16).

Table 29. Number of banking, currency and sovereign debt crises

		1970 – 1981		1982 – 1990		1991 – 1997		1998 - 2002		2002 – 2007	
		number	*Average per year*	*number*	*Average per year*	*number*	*Average per year*	*number*	*Average per year*	*Number*	*Average 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
	Sov. 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)

Figure 16. Number of systemic banking crises starting every year.



Source: Laeven and Valencia (2012)

Reinhart and Rogoff (2008) argue that in the post WWII period the frequency of such crises in the developed and developing countries does not differ much. The period 1973-97 registered more than forty-four crises in developed countries and ninety-five in emerging markets, with average output losses of 6.2 percent and 9.2 percent of GDP respectively. Somewhat different but similar data are provided by Laeven and Valencia (2012) in Table 30.

Table 30. Economic cost of banking crises

Country	Output loss	Increase in debt	Monetary expansion	Fiscal costs	Fiscal costs	Duration	Peak liquidity	Liquidity support	Peak NPLs
	Medians								
	In percent of GDP				In percent of financial system assets	In years	In percent of deposits and foreign liabilities		In percent of total loans
All	23.0	12.1	1.7	6.8	12.7	2.0	20.1	9.6	25.0
Advanced	32.9	21.4	8.3	3.8	2.1	3.0	11.5	5.7	4.0
Emerging	26.0	9.1	1.3	10.0	21.4	2.0	22.3	11.1	30.0
Developing	1.6	10.9	1.2	10.0	18.3	1.0	22.6	12.3	37.5

Source: Laeven and Valencia (2012)

Several papers analyze how financial crises affect different parts of the income distribution. They identify six main channels through which they affect inequality (Baldacci et al., 2002), i.e: (i) a slowdown in economic activity and, consequently, a reduction in labor demand which affect most unskilled workers; (ii) a change in relative trade/non-traded prices following devaluation (usually associated with crises) which increase the price of tradables (including food); (iii) changes in asset returns and the value/distribution of wealth, due to changes in interest rate and bond prices, and the collapse of the stock and housing markets; (iv) cuts in public spending (Table 15) which generally affects most the poor; (v) large costs for resolving financial crises (so as to avoid 'bank runs'). Halac and Schmuckler (2003) show that these large costs are due to the 'financial transfer' from the 'unbanked population' to the 'banked population' (depositors, creditors and even debtors) via increases in taxation, liquidity injections, and monetary emissions needed to recapitalize failing banks (Table 30); (vi) erosion of social capital due to tensions, outmigration, crime and violence.

Empirical research shows that financial crises often do affect income inequality, particularly in countries with weak labour institutions and social safety nets, as underscored by Galbraith and Lu (1999) who found that in LA and Asia financial crises raised inequality in 73 and 62 percent of the cases while no impact was evident in Finland, Norway and Spain. In turn, Lustig (2000) shows that 15 of the 20 crises analyzed in LA lead to a rise in the Gini coefficient. Diwan (1999) arrives at similar conclusions on the basis of panel data showing that the labour share contracts markedly and permanently in the wake of financial crises. In an study on LA over 1980-97, Behrman et. al. (2000) found that the strongest wage disequalizing component of the liberal reform package was the liberalisation of the capital account. And the econometric analysis of Cornia and Martorano (2012) on a panel of annual data for 104 countries and the years 1980-2010 shows that there is a significant statistical association between the Kaopen index of capital account liberalization and the bank deregulation index on the one side and income inequality on the other. Similar results are obtained by Cornia (2014) on a panel of 18 Latin American countries for the period 1990-2009. Finally – following Kumhoff and Ranciere (2012) – econometric estimates by Scognamillo (2013) show on 39 mid-high income countries and the years 1990-2010 that rising household indebtedness lead to financial crisis which – in turn – caused a surge in income inequality. A few analyses have argued that during the first phases of such crises, income inequality may fall as the first people to be affected are the comparatively better paid workers of the financial sector. Yet, analyses based on micro data show that the medium term impact on inequality - transmitted via differential employment, wages and price effects - affect the lower deciles especially hard (Levinshon et al 1999).

8.4 Domestic banking regulation and capital controls to avoid inequality rises

- domestic banking and financial sector regulation. Inequality can be controlled with measures that regulate the domestic financial sector, such as those adopted in some developing regions during the last decade – as suggested by recent literature on LA (see later). Indeed, a remarkable feature of the last decade is that - after the crises of the early 2000s in Turkey, Argentina, Uruguay and Ecuador (Figure 16) the developing countries experienced much fewer significant financial crises, including during the 2007-2010 global crisis (Porzekanski 2009). One of the reasons for this crisis avoidance may have been the broader role played by the IMF since 2008 in lending greater amounts of resources with easier access and conditionality (which allowed to finance 19 Stand-by programs, mostly to transitional countries of EE-FSU). But improvements in banking regulation and financial oversight were also behind the greater financial stability of several developing countries, including in LA (Rojas Suarez 2010). This author argues that – in addition to improvements in the field of macroeconomics balance – most Latino governments re-regulated their banking sector so as to reduce currency mismatches (as in Central and Eastern European countries and Iceland during the North Atlantic crisis) and maturity mismatches; limit loan-to-value ratios and increase minimum down payments especially for loans to real estate; enhance bank capitalization; improving the funding and supervision of the banking systems; encourage the development of local capital markets; introduce a stricter prudential regulation of domestic financial system and of lending leading to reduced bank leverage; enhanced systematic risk-assessment mechanisms in large banks; and appropriate legal, judicial and accounting frameworks, while assigning to state banks a greater role in the mobilization of domestic savings and the financing of economic activity (as in the case of the BNDS in Brazil). Central banks also discouraged lending in foreign currencies to agents who accrued no revenue in those currencies, as done in Uruguay where capital requirements were increased by 25 per cent in case of currency mismatches (Griffith Jones and Ocampo, 2014).

In addition, Griffith Jones and Ocampo (2014) emphasize the need for countercyclical regulation. For instance, in 2009 the US Treasury set the following objectives for countercyclical regulation: (i) reduce the extent to which capital and accounting framework permit risk to accumulate in boom, exacerbating credit cycles; (ii) increase reserve ratios[10] and require banks to build large capital cushions in good times; (iii) raise capital requirements for bank and non-bank financial firms that pose a threat to financial stability due to their size, leverage, interconnectedness, liquidity risk, and systemically risky exposures; and (iv) improve the ability of banks to withstand specific and system-wide liquidity shocks. Particular attention is paid to large banks and those banks more exposed to system-wide shocks. A solution to this problem is to limits the size of the banking sector, by making capital requirements of individual banks a function not only of their own size, but of the size of the total banking balance sheet relative to the government's capacity to raise taxes and cut spending.

One important choice is whether countercyclical buffers should be designed as a discretionary instrument or, rather, as a formula-driven rule. With a direct approach, the regulatory authorities could for instance set limits to the increase of leverage. Another proposal is to increase the existing capital requirements by three multiples, one linked to the growth of credit, the second to maturity mismatches, and the third in case of reliance on inappropriately risky sources of funding. All this in view of the widespread conviction that the optimal level of capital is recognized to be significantly higher than what regulators considered appropriate in the past. Last, the case for a tighter countercyclical regulation of financial entities is increasingly accepted. This is particularly true for

[10]As noted by D'Arista and Griffi th-Jones (2009b, cited in Griffith Jones and Ocampo 2014), in 1951 US banks held reserves with the Federal Reserve at a level of over 11 per cent of their deposits, while by the early 2000s, the banks' reserve balances had shrank to 0.2 per cent of their deposits.

OTC (over-the-counter) derivatives trading, and for non-bank financial institutions, such as hedge funds and investment banks. No part of the financial system should be allowed to escape appropriate regulation.

- *capital controls.* The financial instability caused by portfolio flows can be addressed at both the national and systemic level. The development of alternative capital account regimes should start from the principle that national capital accumulation should mainly be funded through a mobilization of domestic resources achieved through the strengthening of indigenous financial institutions (as observed in the past in Malaysia, China, Singapore), and a policy of moderate 'financial restraint' (followed in Japan in the 1950s and 1960s) (Cornia 2006). Second, capital account liberalization should be delayed in countries with large budget deficits and weak regulatory capacity. Third, even in the presence of sound macroeconomic policies (which will minimize the risk of crises) and strong regulatory institutions, countries should be free to impose market-based and administrative controls on portfolio inflows and outflows if these are likely to cause large swings in the real exchange rate which are harmful to growth and inequality. Such measures have been introduced during the 2000s in Argentina, Brazil, and Colombia, were only slightly relaxed in 2009 in China, and were common in the 1990s and 2000s in Colombia, Spain, Chile, Taiwan, Malaysia, India and other countries. In addition, as noted above, the central bank can set limits on the foreign exposure of domestic banks, forbid banks to borrow internationally and to extend loans to the non-tradable sector. For instance, between January and August 1994, the Malaysian authorities subjected the bank funds to stricter reserve and liquidity requirements, imposed limits on non-trade-related foreign indebtedness of domestic banks and restricted the sale of short-term monetary instruments to non-residents. In turn, following the exodus of funds during the East Asian financial crisis, strict controls were imposed on short-term outflows by banning offshore ringgit trading, restricting ringgit exports and imports, limiting ringgit loans to non-residents and compelling non-residents to retain their investments in Malaysia for at least 12 months.

A key issue in this regard is the duration of the controls. The IMF (2011) supports the introduction of temporary controls during crisis periods, but countries may consider extending such measures as long as they are needed, as in the case of China. The example of India also illustrates the possibility for an emerging economy to attract foreign capitals amid continued, if slowly declining, capital controls, without being subject to sharp and potentially destabilizing capital inflows.

Capital controls are not easily implemented, especially in countries with limited administrative capacity. Helleiner (1997) suggests that their effectiveness is influenced by the administrative capacity of the country and that controls can be circumvented. Others underscore that countries that adopted controls, such as Chile and India, abandoned them at a later stage. Altogether, it would appear that while capital controls are unable to stop all inflows and outflows, they could — in conjunction with other measures — constitute a deterrent against massive shifts in financial assets. In turn, the central bank can forbid domestic banks to borrow abroad to invest in the non-traded sector, limit foreign ownership in sectors such as real estate, require commercial banks to allocate a share of their lending to the agricultural sector and SMEs and set up loan guarantees to these sectors. Finally, policy makers can also apply measures to offset the monetary effects of undesired capital inflows. Such measures include 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 part of their assets abroad.

References

Agenor, P.R. and P. J. Montiel (2008), "Development Macroeconomics" Princeton University Press

Baldacci, E., L. de Mello, and G. Inchauste (2003), "Financial Crises, Poverty, and Income Distribution", Fiannce and Development¸June 2002, Vol. 39

Barrientos, A. (2013), *Social Assistance in Developing Countries*, Cambridge University Press.

Beck, T., R. Levine and A. Levkov (2007), "Big Bad Banks? The Impact of US Branch Deregulation on Income Distribution", NBER Working Paper 13299

Berhrman, J., Birdsall, N. and M. Székely (2000), "Economic Reform, and Wage Differentials in Latin America", *Working Paper of the Research Department* n. 435, Inter-American Development Bank, Washington, D.C.

Birdsall, N., N. Lustig, and D. McLeod (2010), "Declining Inequality in Latin America: Some Economics, Some Politics", Routledge Handbook of Latin American Politics

CEPAL (2007), "Panorama Social de America Latina", Santiago de Chile.

CEPAL (2009) "Panorama Social de America Latina", Santiago de Chile.

CEPAL (2010), "Balance Preliminar de las Economias de América Latina y el Caribe", Santiago de Chile

CEPAL (2012), "Panorama Social de America Latina", Santiago de Chile.

Chinn, M. D. and H. Ito (2008), "A New Measure of Financial Openess", *Journal of Comparative Policy Analysis*, 10 (3), 309 – 322.

Chowdhury, Anis (2008). Labour market policies as instruments of industrial policy: what can Europe learn from Southeast Asia? American Journal of Economics and Sociology, vol. 67. No. 4, pp: 661-681.

Chu, K., H. Davoodi, and S. Gupta (2004). "Income Distribution and Tax and Government Social Spending Policies in Developing Countries", IMF Working Paper, 00/62.

Contreras D. and R. Ffrench-Davis (2014), "Policy Regimes, Inequality, Poverty and Growth: The Chilean Experience, 1973-2010, in Cornia (2014), op cit.

Cornia, G. A., R. Jolly and F. Stewaart (1987), " Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth", Oxford University Press

Cornia, G. A. (1996), " WIDER.

Cornia, G. A. (2004), "*Inequality, growth and Poverty in an Era of Liberalization and Globalization*", Oxford University Press, Oxford.

Cornia, G. A. (2006), "*Pro-poor Macroeconomics*", Palgrave Mc Millan, London and Basingstoke.

Cornia, G.A. (2010)," Transition, Structural Divergence, and Performance: Eastern Europe and the former Soviet Union over 2000-2007" UNU/WIDER Working Paper 32/2010

Cornia, G.A. (2011),"Economic Integration, Inequality and Growth: Latin America versus the European economies in transition", *Review of Economics and Institutions*, 2 (2), Spring 2011,

Cornia, G.A. (2012a), "Inequality trends and their determinants: Latin America over 1990-2010", UNU/WIDER Working Paper 2012/09, Helsinki.

Cornia, G.A. (2012c), "The New Structuralist Macroeconomics and Income Inequality,"Working Papers Series wp 2012_25, Universita' degli Studi di Firenze, Dipartimento di Scienze dell'Economia e Dell'Impresa.Cornia

Cornia, G.A. (2013), "Income Inequality Level, Trends and Determinants in Sub-Saharan Africa, 1980-2010", mimeo, University of Florence.

Cornia G.A. (2014), "Falling Inequality in Latin America: Policy changes and lessons", OUP, Oxford.

Cornia, G.A. J.C. Gomez Sabaini and B. Martorano (2011), "A new Fiscal pact, Tax Policy Changes and Income Inequality: Latin America during th Last Decade", UNU/WIDER Working Paper 2011/70, Helsinki.

Cornia, G.A. and B. Martorano (2012), " Development policies and income inequality in selected developing countries", UNCTAD Working Paper n. 2010, December 2012, Geneva.

Cruces, G., C. García Domench, and L. Gasparini (2011), "Inequality in Education: Evidence for Latin America", UNU-WIDER Working Paper No. 2011/93, Helsinki.

Davoodi, H., E.R. Tiongson, and S.S. Asawanuchit (2003) "How Useful Are Benefit Incidence Analyses of Public Education and Health Spending?" IMF Working Paper 2003/227, IMF.

Delis, M., I. Hasan and P. Kazakis (2013), "Bank Regulations and Income Inequality: Empirical Evidence", *Review of Finance* (2013) pp. 1–36

Demigurk Kunt, A. and R. Levine (2009), "Finance and Inequality: Theory and Evidence", NBER Working Paper 15275, Washington DC.

Diaz Alejandro, C. (1985), "Bye bye financial repression, hello fiscal crash", *Journal of Development Economics* 19 (1985) 1-24. North-Holland

Diwan, Ishac (1999) "Labour Shares and Financial Crises". Preliminary draft. The World Bank, Washington, D.C.

ESCAP (2003), 'Economic and Social Survey of Asia and the Pacific' chapter II on The Role of Public Expenditure in the Provision of Health and Education" Bangkok.

ESCAP (2013), "Economic and Social survey of Asia and the Pacific", Bagkok

Fields G.S and R. Kanbur "Minimum Wages and Poverty", Cornell University, May 2005 http://www.ilr.cornell.edu/directory/gsf2/downloads/Fields-kanburMinWgMay05.pdf

Galbraith, James and Lu Jiaqing (1999), "Inequality and Financial Crises: Some early Findings" *UTIP Working Paper* Number 9, LBJ School of Public Affairs, The University of Texas at Austin.

Gasparini, L., Cruces, G., Tornarolli, J. and M. Marchionni (2009), "A Turning Point? Recent Developments on Inequality in Latin America and the Caribbean", CEDLAS Universidad Nacional de La Plata, Documento de Trabajo Nro. 81.

Gil Diaz (1984) (*Income Expenditure Survey)*;

Greenwald and J. Stiglitz (2003), "Towards a New Paradigm in Monetary Economics", Mattioly Lectures, Cambridge University Press, Cambridge

Griffith Jones, S. and J.A. Ocampo J. A. (2014), "H Helping control boom- bust in finance through countercyclical regulation" in G.A. Cornia and F. Stewart (eds.) "Towards Human Development: New Approaches to Macroeconomics and Inequality", OUP, Oxford

Halac M. and S.Schmukler (2003), "Distributional effects of crises : the role of financial transfers", The World Bank, Policy Research Working Paper Series 3173.

Helleiner, G.K. 1997. 'Capital account regimes and the developing countries.' In *International Monetary and Financial Issues for the 1990s, Vol. VIII*. UNCTAD, New York and Geneva.

ILO (2012). Global Wage Report 2012/13: Wages and Equitable Growth. Geneva.

IMF (2011), "Recent Experiences in Managing Capital Controls: Cross Cutting Themes and Possible Policy framework", February 14, 2011, IMF, Washington D.C.

Keen, M., Kim Y. and R. Varsano (2008),"The "flat tax(es)": principles and experience", *International Tax Public Finance*, 15(6), 712–751.

Keifman S.and R. Maurizio (2012), "Changes in Labour Market Conditions and Policies: Their Imopact on Wage Inequality during the Last Decade", UNU-WIDER Working Paper No. 2012/14, Helsinki.

Koujianou–Goldberg, P. and N. Pavcnik (2007), "Distributional Effects of Globalization in Developing Countries", NBER Working Papers 12885.

Kristensen, N.i and W. Cunningham (2006), "Do Minimum Wages in Latin America and the Carribean Matter? Evidence from 19 Countries", World Bank Policy Research Working Paper No. 3870, World Bank, Washington D.C., March 2006

Kwon, H., Dong, G. and H. Moon (2010), "The Future Challenges of the Developmental Welfare State: The Case of Korea", paper presented at the Social Policy Association 2010 conference: Social policy in times of change in University of Lincoln, 5th-7th July 2010.

Kumhof, M. and R. Rancière (2011), "Inequality, Leverage and Crises", IMF Working Paper, WP/10/268

Kwack, S. Y. (2010), "Wage Inequality and the Efficiency of Workers in Korea, 1965 – 2007", The Bank of Korea, Institute for Monetary and Economic Research, Working Paper n. 437.

Jiménez, J.P., and J.C. Gómez-Sabaini (2009). 'The Role of Tax Policy in the Context of the Global Crisis: Consequences and Prospects'. (LC/L.3037) Montevideo, 19-20 May.

Laeven L. and F. Valencia (2012), 'Systemic Banking Crises Database: An Update', IMF Working Paper n. 12/163

Li, X., and R. B. Freeman (2012), "How Does China's New Labor Contract Law Affect Floating Workers?" NBER Working Paper, February 2012

Levinshon, J., S. Berry and J. Friedman (1999), 'Impacts of the Indonesian Economic Crisis: Price Changes and the Poor' mimeo, University of Michigan.

Lopez Calva, L.F. and N. Lustig (2010), *Declining Inequality in Latin America: A Decade of Progress?*, Brookings Institution Press and UNDP.

Lustig, N et al. (2013), ' The impact of Taxes and Social Spending on Inequality and Poverty in Argentina, Bolivia, Brazil, Mexico, Peru and Uruguay: an Overview" CEQ Working Paper, No. 13.

Menchi-Rogai, L.(2012), "Democracy and Inequality in Sub-Sharan Africa", MsC thesis, University of Florence

Martorano, B. (2012), "The Impact of Uruguay's 2007 Tax Reform on Equity and Efficiency", University of Florence, Economic department. Working Paper, n. 06/2012.

Moss, D. (2009), "An Ounce of Prevention: The Power of Public Risk Management in Stabilizing the Financial System, Working Paper 09-087, Harvard Business School, Harvard.

Panizza, F. (2005), "Unarmed utopia revisited: the resurgence of left-of-centre politics in Latin America", *Political studies*, 53 (4), 716-734.

Porzekanski, A. (2009), "Latin America: The Missing Financial Crisis", Munich Personal PePEc Archive, No. 18974.

Prasad, E., Rogoff, K., Wei, S-J. and M. Kose (2003), "Effects of Financial Globalisation on Developing Countries: Some Empirical Evidence", *IMF Occasional Paper* 220, IMF, Washington D.C.

Ragayah, H. M. Z. (2011), "Malaysia's New Economic Model: An Assessment of Its Strategies for Inclusive Growth", Paper to be presented at the Asia-wide regional workshop on Social Inclusiveness in Asia's Emerging Middle Income Countries, 13 September 2011, Jakarta, Indonesia,

Ranis, G. and F. Stewart (2000), "The priority of Human Development", Yale University

Reinhart, C. and K. Rogoff (2008)

Roberts, K. (2012), "The Politics of Inequality and Redistribution in Latin America's Post-Adjustment Era", in G. A. Cornia (2014), op. cit.

Robinson, J.(2010).'The Political Economy of Redistributive Policies'.In L. López-Calva and N. Lustig (eds), Declining Inequality in Latin America: A Decade of Progress?. Washington, DC and New York: Brookings Institution Press and UNDP.

Rodrik, D. (1997), *Has Globalization gone too far?*, Peterson Institute, Washington D.C.

Rojas Suarez, L. (2010), "The International Financial Crisis: Eight Lessons for and from Latin America", Centre for Global Development, Working Paper 202, January.

Selden, M. and J-M. Wu (2011), "The Chinese State, Incomplete Proletarianization and Structures of Inequality in Two Epochs", *The Asia-Pacific Journal Vol 9, Issue 5 No 1, January 31, 2011.*

Sung, M. J. (2009), "The Effects of Taxes and Benefits on Income Distribution and Poverty Rates in Korea", paper prepared for presentation in the 65th Annual Congress of IIPF at Cape Town, South Africa.

Tanzi, V. (2007), "Foreword: Tax System and Tax Reforms in Latin America", in L. Bernardi, Barreix, A., Marenzi, A. and P. Profeta (eds), "Tax Systems and Tax Reforms in Latin America", SIEP, Working Paper N. 591.

Taylor, L. (2004), "External Liberalization, Economic Performance and Distribution in Latin America and Elsewhere", in Cornia G.A. (2004) op.cit.

UNCTAD (2012), "Trade and Development Report", UNCTAD, Geneva.