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Giovanni Andrea Cornia and Bruno Martorano

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Development policies and income inequality in selected developing regions, 1980-2010

by
Giovanni Andrea Cornia and Bruno Martorano[1][2],
University of Florence and Unicef-IRC

Abstract. The paper discusses the income inequality changes which have taken place in a few representative developing regions during the last 30 years. While inequality rose in the majority of the countries of these regions in the 1980s and 1990s, the last decade was characterized by a bifurcation of inequality trends. This divergence offers the possibility to contrast the experience of virtuous regions (Latin America and parts of East and South-East Asia) and non-virtuous regions (the European economies in transition and China) so as to draw useful lessons. Since the global economic conditions affecting inequality in these countries were not too dissimilar and since no major variations in endogenous factors were evident across the regions analysed, the difference in inequality trends between virtuous and non-virtuous regions was most likely due to institutional factors and public policies. An econometric test confirms that the reduction of inequality is possible even under open economy conditions if a given set of appropriate macroeconomic, labour, fiscal and social policies is adopted by governments.

Keywords: trends in income inequality, factor income distribution, democracy, policy reforms, international economic integration, international crisis, China, South East Asia, Latin America, transition economies of Europe.

JEL classification: D31, E60, I38, J08, P51

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[1] The authors of the paper respectively work at the Department of Economics of the University of Florence and UNICEF - OoR. Corresponding author: Giovanni Andrea Cornia (email: giovanniandrea.cornia@unifi.it).

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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 on income inequality, of its determinants, and of its effects on economic development. Several factors explain this renewed interest including a perceptible and widespread deterioration of income distribution (once considered by many an immutable feature of any economy) during the 1980s and 1990s, increased data availability, and important theoretical advances. Other factors which stimulated the analysis of inequality changes were the desire to assess the distributive impact of the ITC revolution and domestic and external liberalization which dominated the policy scene since the early 1980s. Last but not least, a number of new analyses focused on the distributive impact of the spread of democracy in numerous developing countries during the last two decades. Thus, while the analyses of the 1950s, 1960s and 1970s focused on the structural determinants of inequality such as land concentration, inequality in education, and the urban bias of public policy, the new literature – including this study – pays greater attention to the impact of technological, policy, and political economy factors.

Table 1 summarizes the trends in the Gini coefficients of the within-country distribution of household income per capita during the 1980s and 1990s (a period characterized by the spread of neo-liberal policies and a string of financial, banking and currency crises) and over the 2000s, a period dominated by an improvement in the global economic environment and the adoption of pragmatic macroeconomic and social policies in several developing regions. Table 1 shows that the 1980s and 1990s were characterized by a dominance of increases in within-country income inequality in all regions but Middle East and North Africa (MENA), while over 2000-2010 there was a bifurcation in inequality trends. On the one side, there was a marked and unanticipated decline in income inequality in practically all Latin America (LA) and in parts of Sub-Saharan Africa (SSA) and South East Asia (SEA). On the other, inequality continued its upward trend – if at a lower pace - in the majority of the countries of the Organisation for Economic Co-operation and Development (OECD), in the European and Asian transition economies, in South Asia (SA) and in MENA. A closer examination of the time trends in within-country income inequality shows that the year of inflection of the Gini trend varied somewhat as a result of region-specific circumstances. In particular, the majority of countries of the OECD, SA and Asian economies in transition (Cambodia, China, and Viet Nam) experienced a steady inequality rise in

both sub-periods. In contrast, after a rapid surge between 1990 and 1998 (the years of the transformational recession and economic liberalization), the countries of Eastern Europe and the Former Soviet Union (EE-FSU) recorded an average modest decline in the Gini coefficient during the years 1998-2003 during which macroeconomic balance was reinstituted and gross domestic product (GDP) growth recovered. This decline, however, was followed in the subsequent years by a further income polarization. In turn, in SSA income inequality started falling in the majority of the 21 countries with sufficient data (out of a total of 44 countries) since 1995, while in LA the inequality decline began in 2002-2003 following the end of the 2001 dotcom and Argentinean crises of 2001-2002, both of which affected the entire region. Finally, the MENA region shows no major changes in inequality trends.

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[/2]

	OECD	European Transition Econ.	Asian Transition Econ.	Latin America	MENA	South East Asia	South Asia	Sub-Saharan Africa	World
1980s (or earlier available year) and **1990s**									
Specific period for each region[/3]	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: authors' calculations on the basis of SWIIDv3_0, IDLA database, EUROSTAT, World Development Indicators (WDI), African Development Bank database (AfDB), Asian Development Bank database (ADB), Economic and Social Commission for Asia and Pacific database (ESCAP) and National sources. **Note**: [/1] Countries have been assigned to the rising inequality, no change or falling inequality categories on the basis of an analysis of time trends and of the difference between the initial and final Gini coefficients for each of the two sub-periods considered i.e. 1980-2000 (top panel) and 2000-10 (bottom panel) [/2]. The countries included in the analysis are reported in Appendix Table 1 [/3]The trend analysis shows that the periodization in two periods (1980-2000 versus 2000-2010) varies somewhat from region to region. The above data reflect therefore specific regional turning points.

2. The widespread rise of income inequality during the 1980s and 1990s

During the 1980s and 1990s (though – as noted – the trend inflection differed somewhat from region to region) inequality rose in 73 of the 105 countries with adequate statistical information, that is with at least ten well spaced Gini data points, while it fell in only 24 (Table 1). What factors explain this widespread deterioration in income inequality? Barring in most cases an aggravation of the structural causes of inequality (high land and human capital concentration, curse of natural resources, and urban policy bias), the three sets of causes most frequently mentioned in the literature and briefly reviewed hereafter are:

(i) The Skill Biased Technical Change (SBTC) hypothesis: according to this hypothesis the technological upgrading (in ITC and other advanced sectors) induced by the trade liberalization of the 1980s and 1990s raised the demand for skilled workers (who are complementary in production to the new technologies), while their supply did not increase because of insufficient public expenditure on secondary and tertiary education and due to the inability of poor students to finance their studies. These factors led to a rise in the wages of skilled workers while those of unskilled workers declined. While there is widespread evidence that the ratio of skilled/unskilled wages rose during the 1980s-1990s, it is not obvious whether the technological upgrading was the sole or even the main driver of the observed rise in the skill premium and in 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 likely 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 played an important role in the inequality increase during that period.

(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 the rise in exports of goods with high content of unskilled labour depressed the wage rate in both the

[3] Between 1980 and 2005, the effective global labour supply increased almost four-fold with most of this growth occurring since 1990 (IMF 2007, p.162). East Asia contributed half of this increase because of a large rise in the working age population and greater trade openness.

countries of origin and destination, i.e. in high and middle income countries. In addition, migration raised inequality in the countries where the unskilled poor were less likely to migrate than mid-income workers better able to finance the high costs of informal migration (between US$ 3,000 and US$ 20,000 per person). Remittances therefore accrued to households in the 40th to 80th percentile of the income distribution, bypassing the people of the lowest rung. At the same time, migration of skilled workers may have raised their wage at home, leading to a jump in the wage premium and overall inequality in the countries of origin. However the evidence in this regard is less than conclusive. Docquier and Rapoport (2003) for instance argue that migration may be equalizing in source countries if it is state-sponsored or if large migrant networks in the countries of destination reduce the cost of migration.

(iii) The often premature and unfettered adoption on a grand scale of policies of domestic and external liberalization: the literature argues that – contrary to the predictions of the Herkscher-Ohlin theorem - trade liberalization was un-equalizing in most cases, especially in the 1980s when tariff rates were slashed sharply. While the evidence about the impact of trade liberalization over the 1970s and part of the 1980s has been fairly equally divided between studies suggesting an improvement of income inequality or its deterioration, a fairly recent empirical review for Mexico, Colombia, Chile, Brazil, Argentina, Hong-Kong (China), the Russian Federation and India covering the 1980s and 1990s (Koujanou-Goldberg and Pavcnik 2007) identifies a generalized increase in income inequality during the years of fast trade integration, owing to problems of factors immobility from the declining import-competing sector to the new export sector; the erosion of comparative advantages vis-à-vis the OECD of the middle income countries (Latin America, Eastern Europe, South East Asia) in the labour-intensive sector due to the entry on the world market of the low-wage Asian exporters; the unequal distribution of the abundant factor (i.e. in the case of land- or mineral–intensive exports in countries dominated by *latifundia* and large mining corporations); the import of skill-intensive investment goods mentioned above; 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 observed in most cases on occasion of the liberalization of the FDI which were – in contrast - expected *ex-ante* to improve labour absorption and reduce inequality in labour-abundant developing countries (Te Velde and Morrissey 2002). This discrepancy

between theoretical expectations and empirical evidence is largely explained by the increasing (till about two thirds) of the share of FDIs currently allocated to capital and skill-intensive mining, manufacturing (chemicals, metallurgy and machinery), finance, telecommunications, and business services (UNCTAD 2009, Table A.I.9); the increasing share of FDI which take the form of Mergers and Acquisitions which generally shed labour and have adverse short term distributive effects (Baldwin 1995, Morley 2000); and by the entry of capital-intensive FDI in markets which were supplied by labour-intensive domestic firms (as in the case of supermarkets which 'stole the business" of numerous and less efficient small-shops) . Even stronger evidence concerns the distributive impact of the capital account liberalization, which has almost been found to be strongly un-equalizing (Galbraith and Lu 1999, Diwan 1999, Behrman et al. 2000) due the appreciation and/or instability of the real exchange rate, the allocation of such flows to capital- and skill-intensive firms in the FIRE (finance, insurance, and real estate) sectors; their volatility which can lead to destabilizing financial crises; and the negative effects of deregulated financial systems owing to problems of incomplete information, markets and contracts, herd behaviour, panics, weak supervision and assets price speculation (Prasad et al. 2003).

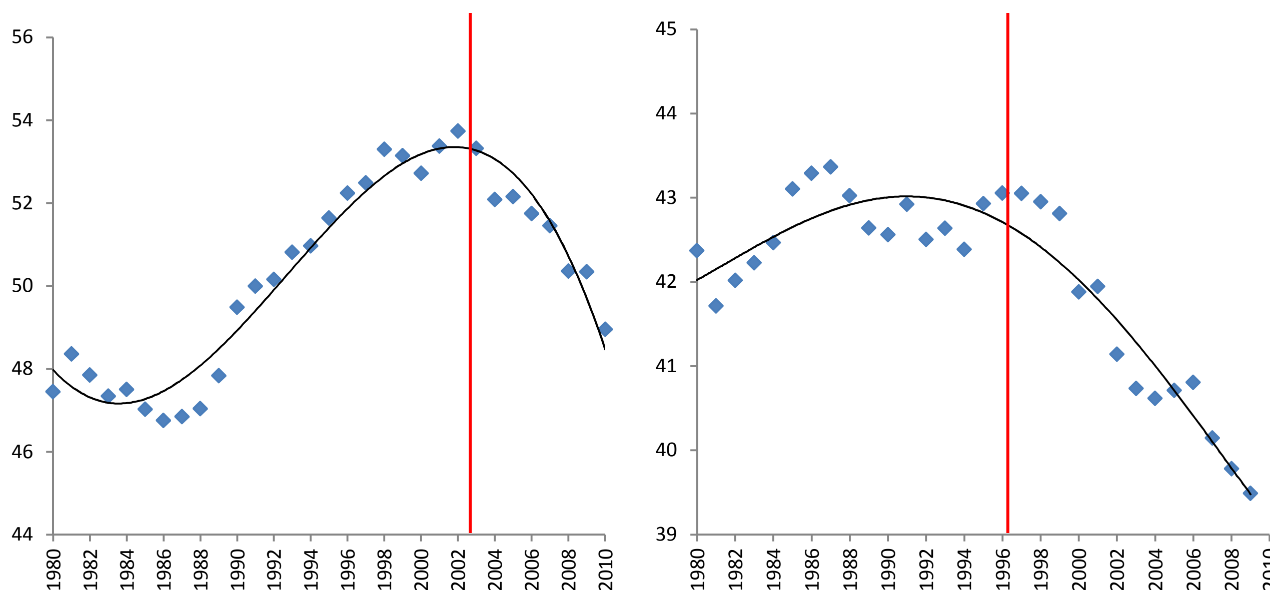
The impact of domestic neo-liberal reforms was possibly more nuanced. Financial de-repression was found to be highly un-equalizing owing to: the attraction of destabilizing foreign capitals whenever it was carried out in the presence of large budget deficits; the failure to create competition among liberalized banks and weak regulatory capacity of the newly liberalized banks which led to instability and banking crises. The liberalization of wage formation had mixed effects (depending on whether the employment-creation effect prevailed over the wage-compression effect), the institutional changes in the labour market (e.g. a drop in minimum wages) a negative effect, the liberal tax reform reduced the tax/GDP ratio and did not improve tax incidence. Finally, the impact of privatization varied according to the approach followed: the egalitarian redistribution of land, housing, small business and State-owned enterprises (SOEs) shares observed in some transitional economies generated favourable effects (as in the case of the distribution of the Communes' land in China and state factories in the Czech Republic), while the insider privatization of the Russian Federation was highly un-equalizing.

3. Inequality trends and their determinants in selected regions during the last decade.

As noted in section 1, the last decade was characterized until 2008 by a fairly general return to growth – including in regions (such as SSA, LA, EE-FSU) which had been affected by the debt crisis of the 1980s, the instability caused by the liberalization of the 1990s and, in the case of EE-FSU, by an extremely severe transformational recession. As noted in section 1, the last decade was characterized by (i) a slow down in the intensity and frequency of inequality rises, possibly due to the petering out of the dis-equalizing effect of the liberal reforms of the 1980s and 1990s, and (ii) a bifurcation of inequality trends among regions (Table 1): while Latin America, as well as South East Asia (and Sub-Saharan Africa[4]) (Figure 1) experienced a reversal in past trends, all other regions continued exhibiting rises in inequality both on average and in the majority of the countries of each region (Table 1 and Figure 2). The most dramatic case of inequality decline is that of Latin America, as between 2002 and 2010 the average regional Gini decline by 5.5 points, while Argentina (9 points), Brazil and Peru (7 points) and the Bolivarian Republic of Venezuela (6.3 points) recorded much larger declines.

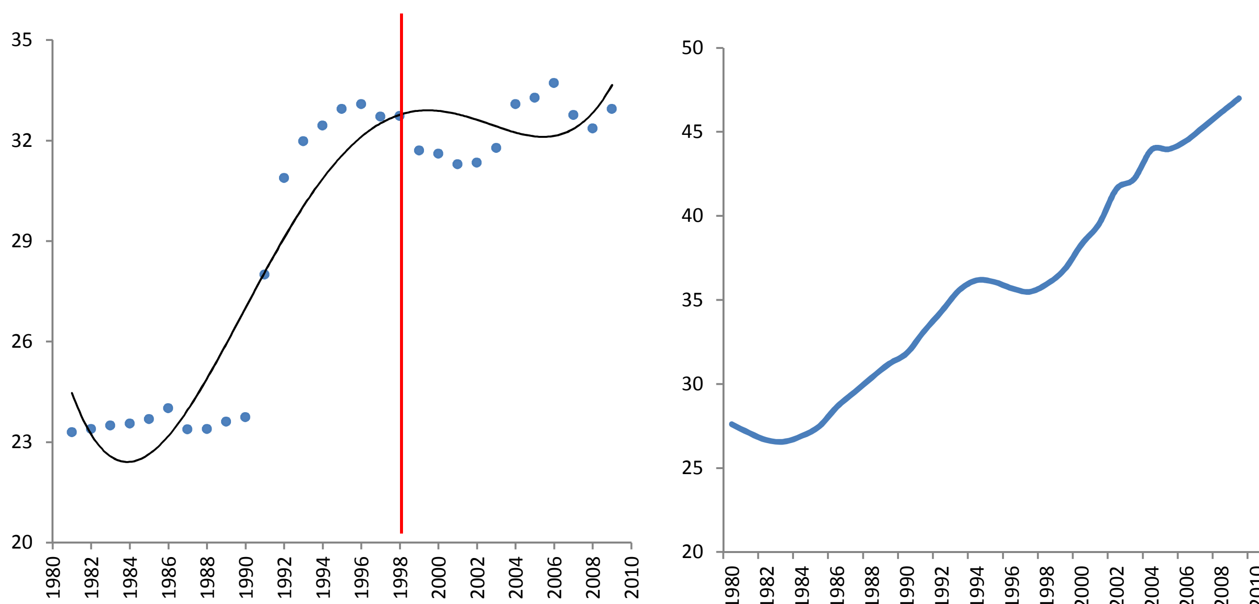
[4] Since the mid-late 1990s, several Sub-Saharan countries recorded improvements in the field of income inequality, growth and democracy (Radelet 2010, Gualdani 2012). According to both the Polity IV and Freedom House index, the number of democracies rose from three (Botswana, Mauritius and Namibia) in the early 1990s to 20 (out of 44 countries) in 2008. In turn, growth of GDP per capita – negative over 1980-1995 in two thirds of the countries of the region - turned positive in nearly 80 per cent of them over 1995-2010. And during this period, the distribution of income improved in 13 of the 21 countries with reliable information. While these gains concern on average less than half of the countries of the region (17 according to Radelet, 2010) they are nevertheless encouraging. No doubt, the achievement of macroeconomic stabilization in the mid-late 1990s and the end of the foreign debt crisis helped reduced volatility (Kayizzi Mugerva, 2000). Yet, the gains of the 2000s are highly heterogeneous, were often due to exogenous factors (rather than to the implementation of a new policies), and may not be sustainable over the long term. The main source of the recent growth and decline in inequality is an exogenous improvement of the global economic environment, in particular: (i) a rise of the international demand and prices of the commodities exported by the region, such as oil, copper and other metals, diamonds, rare earths, timber and so on; (ii) greater Chinese FDIs in the primary and infrastructural sector (as in Ethiopia, Mozambique, Ghana, Angola, Zambia and, especially, South Africa); (iii) slowly rising tourist receipts (as in Cape Vert and Rwanda) and a small rise in migrant remittances, and (iv) large increases in aid (as in Tanzania). More sustainably, growth intensified also because of the spontaneous diffusion of new technologies (such as cell phones) or because of the policy-driven diversification of the economy (as in Mauritius and Uganda) and better technology policies and incentives to farmers (as in Malawi and Mozambique) which helped the recovery of agriculture in about half of the region. Overall, after many years of decline, agriculture and food production per capita have grown at low but positive rates until 2008, in most cases leading to an equalizing increase in food production per capita. Thus, the sources of the welcome gains recorded in part of the region seem very heterogeneous, mostly exogenous, and may be not be sustainable over the very long term (as in the case of the increase in commodity prices). Some of these growth drivers may also exacerbates the previous neo-colonial pattern of international division of labour which assigned to Africa the role of commodity exporter. Meanwhile, some of the traditional problems (limited or even declining industrialization, poor governance, slow growth and political instability) still grip more than half of the continent. Thus, while there are glimmers of hope that a new economic policy model may emerge in the future in Sub-Saharan Africa, this does not seem to have morfed yet on a clear and broad enough scale.

Figure 1. trends in the Gini index of the distribution of disposable per capita income in 18 Latin American countries (left panel) for 1980-2010, and of 4 South East Asian countries for 1980-2008 (right panel).



Source: Martorano and Cornia (2012). Note: Latin American and Caribbean countries included are Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela (Bolivarian Republic of). South East Asia countries included are Malaysia, the Philippines, the Republic of Korea and Thailand.

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



Source: Martorano and Cornia (2012). Note: Eastern Europe and the Former Soviet Union countries included are Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, the Republic of Moldova, Romania, the Russian Federation, Slovakia, Slovenia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkmenistan, Ukraine, and Uzbekistan. The data for EE-FSU 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 periods are not strictly comparable with those for the years 1992-2005.

This trend bifurcation raises a number of questions. Indeed, while practically all developing and transitional regions were affected during the last decade by a rapid expansion of world trade, gains in terms of trade for some countries, easier access to global finance, rising migrant remittances, and so on, only some countries experienced a drop in income dispersion. In a sense this trend bifurcation represents a kind of 'natural experiment' helping to disentangle the sources of the inequality decline in the virtuous regions and of the increase in the others. In fact, as the structural and exogenous conditions were not too dissimilar, the regional divergence in inequality trends might then be due to differences in domestic policies. With the possible exception of the OECD and SSA, most developing and transitional regions are in fact 'similarly heterogeneous': most of them benefited from either high commodity prices, or rising remittances, financial exuberance, and rapid world growth. Nor, does the inequality bifurcation of the last decade seem to be driven by growth differentials. Indeed, all fast growing Asian countries (e.g. China, India, and Viet Nam) experienced a sharp rise in inequality during this period. Other (mostly policy) factors discussed in sections 3.1 to 3.4 are thus likely to explain the better performance of LA and countries of SEA in relation to those of the EE-FSU and China. By comparing the experience of virtuous and non-virtuous regions one may thus learn important policy lessons on how can inequality be reduced under the current economy conditions.

3.1 Declining inequality and Latin America's new policy model of the 2000s.

As already noted, during the last decade Latin America experienced a nearly universal drop in income inequality. According to an expanding body of literature (Lopez Calva and Lustig 2010, Cornia 2012) the factors which could explain such unexpected phenomenon include: the partial or general equilibrium effect of the improvement in external conditions (terms of trade, remittances, access to foreign finance); the acceleration of GDP growth made possible by the relaxation of the balance of payments constraint due to the above factors and to domestic policy changes; endogenous changes in dependency ratios and activity rates; the lagged effect of growing public expenditure on education during the 1990s and 2000s; and the adoption of a new policy model – which we name 'open economy growth with equity' - by a growing number of left-of-centre government and, in part, by more conservative political coalitions.

Such literature (and the related econometric evidence) suggests that the partial equilibrium effects of the improvements in the global economic environment were either un-equalizing or not sufficiently general to cause an improvement in inequality (see below). Indeed, the improvement in international commodity prices benefited 8 countries out of 18 and occurred in a context of a high ownership concentration of land and mines i.e. sectors where production is very large, skilled-labour, and capital intensive. Nevertheless, in a few countries the increase in commodity rents raised government revenue and so allowed to augment progressive public subsidies. Likewise, as argued above, the direct effect of an increase in remittances in seven countries likely benefited the middle-class people, though there is evidence that remittances were equalizing in the case of Mexico and El Salvador (Acevedo and Cabrera 2012). In turn, the remarkable inflow of foreign capital at declining interest rates of 2004-2007 mainly benefited large, capital- and skills-intensive companies and banks and did not ease the problems of access to credit by labour-intensive, small-medium size enterprises, while causing a dis-equalizing appreciation of the real exchange rate in most countries (Ocampo, 2009). All in all, the partial equilibrium effects of the improvement in external conditions is unlikely to explain, with a few exceptions (i.e. some of the countries where such phenomena were very pronounced), the recent decline of inequality. However, there is evidence that the general equilibrium effects of the boom in terms of trade, remittances and capital inflows relaxed the balance of payments constrain to growth (Thirlwall 2011), and raised the rate of growth of GDP and, through that, of employment and revenue collection. As the new jobs were mainly taken by low-income workers, there was a downward pressure on the decline of wage inequality.

Third, inequality might have declined due to an endogenous decline in dependency rates (which concerned mainly low income household) and increase in activity rates. Yet, dependency rates had fallen also in the 1980s and 1990s i.e. years during which inequality rose. Also, the econometric evidence suggests that their impact was non-significant (Cornia 2012) or modest (Lopez Calva and Lustig 2010). Likewise, case studies for Argentina, Brazil and Mexico show that the increase in activity rates had only a very small equalizing effect on income inequality, while the opposite was true in Peru *(ibid)*. Fourth, the redistribution of the human capital stock among households following the rise in secondary enrolment rates (particularly among the poor) recorded since the early 1990s (Cruces et al. 2011) led to an improvement in the distribution of human capital among workers and a widespread and pronounced drop in the skill-

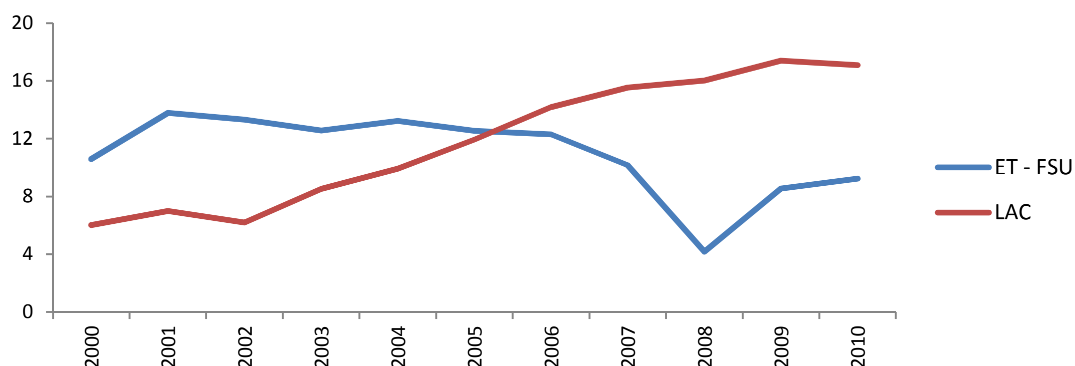
premium and income inequality. Last but not less important, the econometric evidence shows that the inequality decline was also in part explained by policy changes which followed the return to and consolidation of democracy, and the election of left-of-centre (LOC) regimes caused by the growing frustration with the disappointing results of the neo-liberal policies implemented during the 1980s and 1990s (Latinobarometro, various years). By mid 2011, of the 18 Latin American countries analysed 13 were ruled by LOC regimes which assigned greater importance than their predecessors to matters of social justice while at the same time retaining a prudent approach to macroeconomics.

The policies introduced by the LOC regimes pivot around an orthodox fiscal and monetary stance emphasizing low inflation and a long term budget equilibrium. There are however considerable elements of novelty in the field of macroeconomics as well, including in terms of the adoption of: (a) a countercyclical (or a-cyclical) fiscal policy (which led over 2006-2007 to a zero average fiscal deficit for the region as a whole); (b) the achievement of fiscal balance through an increase in tax revenue rather than expenditure cuts. Indeed, tax revenue rose during the last decade by three points of GDP for the region as a whole, with much larger increases recorded in Brazil and Argentina, and smaller ones in Central America. The increase in the tax/GDP ratio was achieved by raising the taxation of commodity rents in the seven key commodity exporters, broadening progressive taxation (including income tax) and reducing regressive taxation[5]. As a result, the Reynolds-Smolensky index - which measures the redistributive effect of taxation - improved in 11 of the 12 countries with available data (Cornia, Gomez Sabaini and Martorano 2011); (c) a countercyclical monetary policy aiming at controlling money supply during periods of bonanza through the accumulation of reserves, sterilization and (in the case of Argentina, Colombia and Brazil) the introduction of some capital controls while reducing sharply the monetary policy rate and expanding public lending in the crisis years; (d) the near universal abandonment (with the exception of fixed-peg Bolivarian Republic of Venezuela and dollarized Ecuador, El Salvador and Panama) of the free floats and fixed peg regimes introduced during the 1980s and 1990s, and the adoption of a managed exchange rate aiming at limiting its real appreciation. The goal was to shift economic activity towards the labour-intensive traded sector (e.g. manufacturing and agriculture) with favourable effects on income distribution,

[5] 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 tax regime (Martorano, 2012).

exports and growth. To support this policy, a few countries introduced temporary capital controls and allowed Central Banks to intervene in the currency market. Despite these measures, the management of the real exchange rate remains a problem, as fourteen countries recorded between 2003 and 2010 a real appreciation (CEPAL 2010) which in five exceeded 10 per cent. Yet, without an accumulation of reserves and sterilization efforts, several countries would have shown stronger symptoms of Dutch Disease and accelerating asset price inflation with negative effects on income inequality; (e) the free trade policies adopted since 1980s – which had led to a shift in resource allocation against unskilled-labour intensive sectors - were not overturned, in part because the newly adopted exchange rate regimes offered some protection to the tradable sector. However, there was a substantial reorientation of trade destinations favouring the intra-regional trade (including in manufacturing products) and trade with the Asian countries (mainly for primary commodities). Conscious of the risks of 're-primarization' involved in the intensification of trade with Asia, tariff rates have been increased in 2011 in part of the region (Brazil and Argentina ahead of all) while the use of non-tariff barriers seems to be intensifying; (f) finally, there was a reduction of foreign public debt – which had been a major source of economic instability - through advanced reimbursements, defaults and cancellations, while currency reserves increased sharply. As a result, LA's gross foreign debt declined from 40 per cent of the regional GDP in 2002 to 17.4 per cent in 2008 and 20.4 in 2009, while the debt net of foreign reserves fell even more (Figure 3).

Figure 3. Net foreign asset position (% of GDP) in LA and EE-FSU , 2000-2010



Source: Author's compilation based on data extracted from World Development Indicators. Note: LA countries include: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela (Bolivarian Republic of); the EE–FSU countries include: Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Poland, the Republic of Moldova, Romania, the Russian Federation, Slovak Rep. , Slovenia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkmenistan and Ukraine.

The new LOC policy model introduced also perceptible changes in the labour market and social policies, including (a) labour policies explicitly addressing the problems inherited from the prior two decades, i.e. unemployment, job informalization, falling minimum wages, diminishing coverage of social security, and weakening of institutions for wage negotiations. In this respect a few countries enacted income policies consisting in public works, extending the coverage of formal employment, re-introducing tripartite wage bargaining and sizeable hikes in minimum wages (but less so in average wages) which appear to have generated equalizing effects; (b) a near universal acceleration in the upward trend in public social expenditure on social security, social assistance and education made possible by the rise in tax/GDP ratios mentioned above and in a few cases by the cancellation of debt servicing obligations which generated short and long term redistributive effects as suggested by Table 2. There is evidence also that democratization and the abandonment of clientelistic policies improved the incidence of social expenditure (Lopez Calva and Lustig 2010); (c) the nearly universal introduction of highly targeted social assistance conditional and non conditional cash transfers which generated a sizeable impact on income inequality (Cornia 2012). Such programmes are funded by the budget (rather than foreign aid), 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 labour, ensuring that children remain in school and have access to health services, and that the jobless can get employed or enter a training scheme.

Table 2. Incidence of government expenditure and concentation coefficients by quintile over 1997-2004.

(Panel a) Shares of public social expenditure By sector and income quintile					**Expenditure Sector**	**(Panel b) Concentration coefficients of public social expenditure**		
I quintile	*II quintile*	*III quintile*	*IV quintile*	*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.

As a result, between 2003 and 2010, the fall of inequality entirely offset its increase recorded during the 1980s and 1990s. However, it is unclear whether this inequality decline can be sustained in the future, unless specific measures are introduced to address the structural causes of inequality in the region. In this respect, with the

exception of the Bolivarian Republic of Venezuela and the Plurinational State of Bolivia, few measures were introduced so far to broaden access of the poor to land, industrial assets, tertiary education, and credit, to reduce ethnic segregation, and reduce overdependence on primary commodities and foreign capitals. In particular, the new LA development model has, on average, progressed less in promoting the spread of manufacturing and reducing the dependence on foreign savings and technology. In the absence of a clear industrial policy – which some argue may be emerging in the form of non-tariff barriers, as observed very recently in some countries - there are mounting concerns about the 're-primarization' of the economy.

3.2. Renewed 'growth with equity' in South East Asia during the last fifteen years

The 'growth with equity' or 'East Asian Miracle' (World Bank 1993) have for long been considered the most successful development strategy ever adopted. Nonetheless, such approach started loosing strength in the mid-1980s (as growth continued but inequality rose also in several countries of the region, see Table 1) and collapsed during the 1997-1998 Asian crisis. Already prior to the Asian crisis several countries experienced un-equalizing structural transformations: for instance, the acceleration of technological change pushed up the skill premium in countries with a limited publicly funded supply of skilled workers. In addition, economic liberalization reduced the scope for redistributive policies. However, not all countries of the region experienced a rise in inequality post-1997. Indeed, since peaking in 1999, the Gini coefficient dropped in Malaysia, Thailand and the Republic of Korea (Table 3), the countries analysed in this section, as well as in the Philippines, while it rose in Indonesia, Taiwan and Singapore.

Table 3. Trend in Gini Coefficient for three Asian countries, from 1970s to late 2000s

	R. of Korea	Malaysia	Thailand
1970s	36.1	51.4	45.8
early 1980s	35.1	47.2	46.1
1990	28.2	45.9	50.2
1998	29.0	46.1	48.2
1999	29.7	45.2	48.0
Late 2000s	28.3	44.1	40.0

Source: Martorano and Cornia (2012), Milanovic (2005); Jomo (2006); Ragayah (2011)

The decline of inequality in these three countries is not due to a single set of factors. Unlike in other developing regions, the changes in dependency rates were

comparatively small (with the exception of Thailand) as the demographic transition occurred earlier. Indeed, while the regional dependency ratio rate fell from 70.8 to 53.6 between 1980 and 1997, it then dropped only from 52.9 to 47.0 between 1998 and 2010, making it unlikely that the inequality trend observed during the later period was driven by a large decline in dependency rates among the poor. The same applies to activity rates which rose from 65.4 in 1980 to 66.2 in 1997 to slight decline to 65.5 in 2010. As for terms of trade effects, these appear to have been limited or negative and cannot therefore account for the decline of income inequality in these countries.

In contrast, a few common policy factors help explain the distributive gains recorded in these countries in the post 1997-era. These include a pragmatic macroeconomic policy which assured stability and boosted growth (especially in Malaysia[6] and Thailand); large investments in public education which raised the number of years of schooling of the labour force and improved the distribution of human capital among the workers, thus allowing to take advantages of new technical advances while avoiding a further rise of the wage skill premium; and a strengthening of redistributive policies focused on social protection (of the Republic of Korea), the reduction of the rural-urban gap (in Thailand), or the narrowing of income differentials among ethnic groups (in Malaysia).

(a) A pragmatic macroeconomic policy: after the Asian crisis of 1997, the three EA economies analysed adopted prudent macroeconomic policies which led to low inflation and the consolidation of a sound fiscal position. Positive fiscal balances were recorded by the Republic of Korea and Thailand, and only a small deficit by Malaysia. The government expenditure remained relatively small and almost was exclusively financed with domestic revenue (ADB's Statistical Database System online). A peculiarity of these three countries is the large contribution of direct taxes to total tax revenue, a fact which helped improving the post-tax distribution of income. In turn, trade policy remained open, as signalled by broadly constant or declining tariff rates practiced for the most favoured nation between 1995 and 2010 (stagnant at 7 per cent in the Republic of Korea, and falling from 10 to seven per cent in Malaysia, and from 20.6 to 9.5 in Thailand). Export growth was sustained by means of a stable and competitive real exchange rate. Thailand adopted de facto a managed float, while

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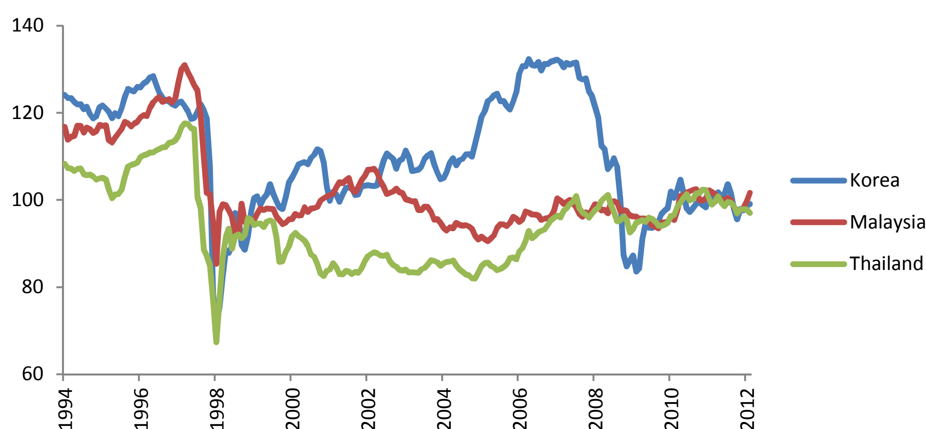
[6] The Malaysian macroeconomic policy has historically been growth-driven. As noted by Wee and Jomo (2006, p.194), "Malaysian macroeconomic policy has been summarized as 'optimizing growth subject to restraint on prices and the balance of payments'". The Government increased public investment in a way complementary to market forces.

Malaysia first turned to a fixed exchange regime and shifted to a managed float in 2006. In both cases, after the large devaluations of 1997-1998, the real effective exchange rate (REER) remained broadly stable including after the post 2008-2009 crisis (Figure 4).

Figure 4. Real effective exchange rate over the period 1994 – 2012



Source: BIS Real effective exchange rate. Notes: 2010=100

Unlike the Republic of Korea, Malaysia and Thailand introduced policies to attract green-field FDI by means of tax, export and reinvestment incentives. However, to reduce the pressure on the real exchange rate they introduced controls on portfolio flows (in 1994 on inflows and 1998 on outflows in the case of Malaysia; in 2006 in Thailand). Indeed, the Kaopen index - which measures the openness of their capital account - declined in the case of Malaysia and stagnated at a partially opened level in the Republic of Korea and Thailand (Table 4).

Table 4. Kaopen Index of capital account openness, selected countries over 1980 – 2009

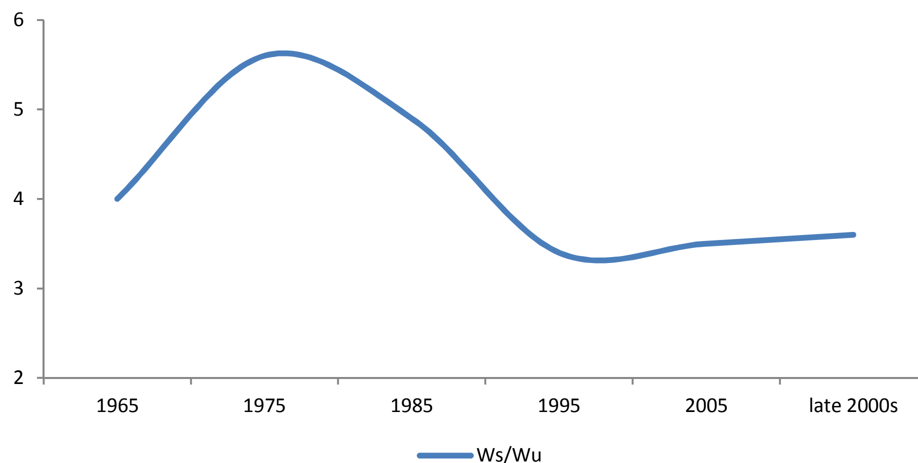
	Indonesia	Philippines	Singapore	Hong kong	R. Korea	Malaysia	Thailand
1980 – 1989	2.23	-1.04	2.40	2.48	-0.73	2.23	-0.10
1990 – 1997	2.38	-0.08	2.35	2.48	-0.36	1.60	-0.10
1998 – 2009	1.16	0.10	2.39	2.48	-0.21	0.07	-0.27

Source: Chinn and Ito (2011). Note: The Kaopen index is a positive function of the openness. The index has a zero mean.

b) High investments in education: although the East Asian countries historically assigned to education public resources in line to those of other developing countries, they achieved more favourable results in this area due to the ways in which such

spending was allocated. This assured a high level of educational quality for all, in particular in the field of scientific education (Zhang, 2008). Indeed, a rapid expansion of secondary and tertiary education not only during the 1980s and 1990s but also the recent decade enhanced the possibility of profiting of rapid technical progress in the ITC and other sectors while at the same time avoiding an increase in the wage skill premium and in overall inequality, as the higher demand for skilled labour was matched by an increase in its supply. The clearest example of this policy is provided by the Republic of Korea which in the late 1990s switched to knowledge-intensive, high-tech productions without experiencing an increase in the skill premium which remained stable at 3.5 during the 2000s (Figure 5).

Figure 5. Wage skill premium in the Republic of Korea between 1965 and late the 2000s



Source: Kwack (2010)

Malaysia too invested heavily in education. In particular, two specific strategies were followed: first, improving access to post–primary education and second, promoting the creation of employment opportunities (Ragayah, 2011). As a result, the average years of education of the workforce steadily increased from 8.2 in 2000 to 9.5 in 2010 with faster than average increases recorded among the poor (*ibid*). Less pronounced, but of similar nature were the 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 promoted a reduction of wage inequality (di Gropello and Sakellariou 2010, Kwack 2010, Ragayah 2011).

c) Labour market and social policies: social objectives have traditionally been an integral part of the Malaysian development strategy and constituted an important chapter of the National Development Policy (NDP) (1991 - 2000) and the National Vision Policy (NVP) (2001 - 2010). "While …. NDP and NVP have different tag lines and some slight variations in approaches and emphasis, in the main the policies and strategies for poverty eradication and income distribution remain pretty much the same, being pursued along the ethnic lines" (Ragayah, 2011: 2).

To achieve these objectives, the government favoured the creation of a Malay middle class by promoting their acquisitions of assets and well-paid jobs, financial and management training for firms run by Bumiputeras, fixed enrolment quotas in tertiary education, and support for the poorest household's activities (*ibid*). In turn, the regional development strategy tried to balance growth between regions, control migration towards urban areas and promote agricultural development. In all this, the state investments in infrastructure (transport, water and electricity, health and education) were of paramount importance. As a result, vertical inequality decreased, the rural-urban income gap remained broadly unchanged while household income disparity between Chinese, *Bumiputera* and Indians fell steadily (Table 5).

Table 5. Peninsular Malaysia: Ratio of mean monthly household incomes by ethnic group and location

	1970	1979	1990	1999	2004	2009
Chinese/Bumiputera	2.30	1.91	1.74	1.74	1.64	1.38
Indian/Bumiputera	1.73	1.54	1.29	1.36	1.27	1.10
Urban/Rural	2.14	1.77	1.70	1.81	2.11	1.85

Source: Jomo (2006) and Ragayah (2011).

Traditionally, the three economies analysed have been characterized by comparatively weak labour market policies, a low level of unionization (the Republic of Korea is an exception) and limited social provisions against joblessness. Due to the near full-employment conditions prevailing in the 1980s and 1990s, the creation of a welfare system - and in particular of unemployment insurance and labour market institutions - was considered unnecessary in much of the region. As a result, these countries lacked the labour market and social assistance institutions to prevent a sharp rise in unemployment and inequality in the aftermath of the 1997-1998 financial crisis.

For instance, in the Republic of Korea the unemployment rate rose from 2 per cent in 1996 to 7 per cent in 1998 (Yamamura et al, 2008), 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 substantially the coverage and benefits of the Employment Insurance Programme, with the result the percentage of unemployed receiving the unemployment benefits rose steadily from only 7.8 per cent in 1997 to 33 per cent in 1999 (Known et al 2010). 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 (Kwon 2005). In addition, the social protection system was built on "five social insurance programmes (Industrial Accident Insurance, National Health Insurance, National Pension Programme, Employment Insurance Programme, and Long-Term Care Insurance), one social assistance programme (the Minimum Living Standard Guarantee), and public pension programmes for special categories" (Kwon, et al 2010: 8).

The expansion of the welfare system strengthened the redistributive capacity of fiscal policies (Sung 2009), and in 2007 the difference between the Gini of market income and disposable income was close to 4 points (Table 6). 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 6. Redistributive Effects Based on the Rates of Changes in Gini Coefficients (2007)

	Reynolds – 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)

Also Thailand introduced in the post 1997 era a set of redistributive measures 'with a populist face' which gained considerable political support, especially in poor rural areas (Table 7). Such measures (introduced in 2001) included a three-year suspension of the debt of small farmers which benefited 1.9 million families (Trakarnvanich 2010), and the introduction of micro-credit schemes via the Thailand Village and Urban Revolving Fund (URF). Although the programme had a little impact

on average household spending and income, Boonperm, et al (2009: 20) showed that "most of the effect of URF borrowing is concentrated in the poorest quintile of the population …, where it raised spending by 5.2 per cent, making the programme markedly pro-poor". A similar project was introduced in 2005, at village level with the intention of helping each village to cope with their communitarian problems. To reduce migration to the city and to favour local income generation, the government introduced also the One Tambon-One Product (OTOP) programme which provides people with advice, and technical assistance for the sale of their home productions. Finally, in 2005, government implemented the "Special Purpose Vehicle" (SPV) programme focusing on the creation of state enterprise supporting agricultural activities through the provision of inputs. In turn, a reform of the social protection system assured monetary transfers to poor elderly, introduced universal health coverage and extended free education to 15 years. All in all, these policies likely contributed to the poverty and inequality reduction recorded in recent years due to a significant shift away from old-style politics targeting benefits towards well-to-do constituencies and a new approach that aimed to build more consensus, providing the benefits of development in the poor rural areas (Ong, 2011).

Table 7. Thailand: Selected Interventions for Poverty Reduction

	Selected interventions
Macro and micro economic Management	Village and Urban Revolving fund Debt moratorium for small farmers and agriculture One tambon - one product
Capital building and enhancing employment ability	School bicycle programme Ensuring completion of 9 years of compulsory education 12 years of basic education of school-aged children from poor households
Social protection and social safety nets	Universal health insurance coverage (30 Bath treat all scheme) Cash transfers for indigent elderly
Natural resources Management	Water resource management Land reform scheme

Source: Authors's elaboration on Trakarnvanich (2010: 53)

3.3 *Rising inequality in most European economies in transition during the last decade*.

Between 2000 and 2007 EE-FSU recorded a solid rate of GDP growth (6.9 per cent) driven by large inflows of FDI and hard currency loans and - particularly for Central Europe and the Baltic – fast growing trade with Western Europe (by 2008 the

exports/GDP ratio had reached 50 per cent as compared to 23 per cent in LA). Yet, despite fast growth and a modest improvement in income distribution between 1998 and 2003 (Figure 2), in 2003 income inequality started climbing slowly again with the result that over the conventional period 1998 -2010 inequality rose (if less rapidly than during the transitional recession of the 1990s and often from still low levels) in 13 of the 24 countries of the region with comparable data (Table 1).

What are the main features of the liberal policy approach followed in most of EE-FSU during the last decade? The key elements were: (a) fiscal policy was cautious and public deficits fell on average from about 3 per cent in 2000 to zero by 2007 (Hungary was a major exception); (b) tax policy introduced administrative simplifications, widened the use of VAT and introduced a flat tax on personal and corporate income. While the Baltic countries retained the highest pre-reform flat tax rate and increased the no-tax area (thus making the tax schedule relatively more progressive), most countries adopted very low rates (Table 8). The *ex-ante* partial equilibrium effect of such reform was thus likely un-equalizing including because there is no evidence that the introduction of a flat tax generated Laffer-type responses leading to an increase in revenue and greater employment (Keen et al. 2008). While the effects of flat taxes are not necessarily regressive, it appears that the way such tax reform was introduced likely reduced tax progressivity, with the possible exception of the Baltic States (cfr. columns 3-8 in Table 8 below).

Table 8. 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
Russian Federation	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
the former Yugoslav Rep. of Macedonia	2007	15- 24	12	15	12	Unchanged
Kazakhstan	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)

In addition, (c) monetary policy and a broadly fixed exchange rate (see later) allowed or even encouraged a large increase in private indebtedness, which stimulated growth and imports but raised markedly the current account deficit which reached a startling 10-25 per cent of GDP over several years in the Baltics, Hungary, Bulgaria, Romania, Belarus, Ukraine and Moldova. These huge deficits were funded by an inflow of FDI and easy access to 'cheap money', i.e. hard-currency loans (both corporate loans and household mortgages) to the non-traded sector which gave rise to major currency mismatches, excessive dependence on global banks, high external indebtedness (Aslund 2009) a sharp deterioration in the net foreign asset position of the region (Figure 3) and growing vulnerability to the 'sudden stops' in capital inflows of 2009-2010 which had a negative effect on growth and income inequality; (d) trade policy was characterized by a free trade approach but a very high proportion of the output (especially that produced by the FDI) was exported to Western Europe, the same region from which most FDI originated. This made the external accounts of EE-FSU totally dependent on the business cycle of Western Europe; (e) most EE-FSU countries anchored their exchange rates [7] and only Poland, Hungary, the Czech Republic and Serbia adopted a managed float. Yet, fixed pegs attracted short-term capitals which expanded money supply, appreciated the real exchange rate and worsened income distribution by shifting resources towards the capital- and skilled-intensive non-traded sector and required drastic internal adjustments to respond to the 2008-2009 crisis. For instance, in the Baltics, the balance of payments shock of 2008-2009 triggered a severe output collapse, bringing per capita income back to 2005 levels, which required an 'internal devaluation' consisting of an unprecedented fiscal adjustment (varying between 8.0 and 13.9 per cent of GDP in 2009 alone) a large wage compression (governments cut public wages by up to 35 per cent, and the private sector followed suit, Aslund 2010) and a sharp rise in unemployment which compounded the fall of GDP caused by the 2008-9 crisis (Purfield and Rosemberg 2010). One and a half years after the onset of the crisis, the exchange rate was maintained, the banking system survived by injections of funds by the parent banks, and external imbalances and inflation largely disappeared. However, unemployment rose by 10-12 percentage points, fiscal sustainability was still out of reach (despite the adjustment mentioned

[7] Slovenia and Slovakia adopted the Euro; Montenegro *de facto* adopted the Euro, the Baltic countries and Bulgaria established a currency board, and Ukraine, Belarus, Moldova, Kazakhstan adopted a dollar peg (Aslund 2009).

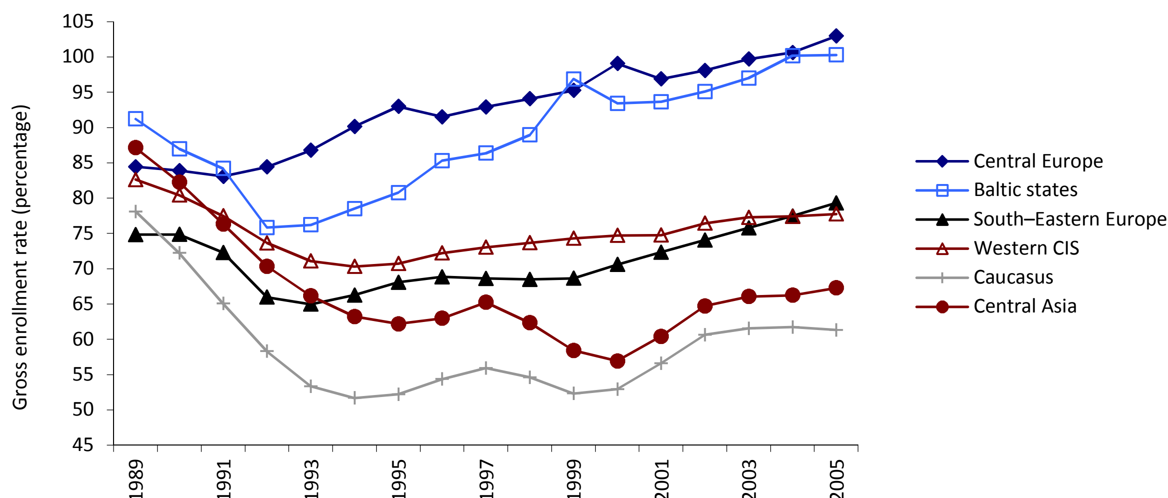
above), and the non-performing loans ratio of the banking system was 16-19 per cent in Latvia and Lithuania and 35 per cent in Ukraine (*ibid*)[8].

With the major exception of the five Central European countries, the neo-liberal policy model adopted in much of the region during the 2000s placed a limited emphasis on labour market, public social expenditure and social assistance, possibly because such policies had been prominent (if not always efficient) during the communist period. In practice: a) labour market policies were on average not very active in part due to the decline in unemployment observed during the rapid growth and substantive outmigration in almost half 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 (see later) and limited efforts at strengthening collective bargaining, unemployment insurance, public works and safety nets[9]. (b) Despite rapid GDP growth, 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 (Figure 6). The enrolment decline was very marked among pupils of vocational schools from low and middle income groups. These trends suggest that a growing number of youth did not enrol in secondary education, and 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.

[8] Aslund (2010) argues that crisis resolution in Latvia, Lithuania, and Estonia was successful. He praises the decision to pursue an "internal devaluation" policy (which he argues is becoming the rule for eurozone countries facing financial difficulties) and the political economy of the crisis resolution, as the East European public accepted the hardship entailed by internal devaluation with minimal protests as external devaluation was seen as greater evil.

[9] Over 2000-2007 earnings inequality rose in one third of the countries, stagnated in another third and fell in the rest (Unicef 2009). Returns to education rose following wage liberalization, technological modernization and growing informalization (Mitra and Yemtsov, 2006) .

Figure 6. Trends in gross enrolment rates in upper secondary education in sub-regions of EE-FSU (percentage of the population aged 15-18)



Source: UNICEF (2009). Note: changes in the definition of the variable do not allow to update these time series.

(c) Social protection and social assistance: social protection systems in the region were and are highly heterogeneous, and the related outlays range between 4 and 20 per cent of GDP. Except for the comprehensive and highly progressive systems operating in 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 much 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 the mid 2000s (UNICEF 2009). 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.

All in all, the liberal policy model adopted in the region generated a considerable growth acceleration until 2007-mid 2008 but run into four main problems which did not prevent a further increase in income inequality even for the pre-2008 years. First, the policies of pure trade and financial liberalization were lopsided. While they raised the region's global integration, they rendered it excessively dependent on Western Europe (Nuti 2009). Second, the region experienced a persistent and large current account deficit and rising external indebtedness which made it extremely vulnerable to the 2008-2009 crisis during which GDP contracted by over 5 percent, as opposed to 0.4 per cent drop in LA and a 0.2 expansion in SEA. In this respect, the recent EE-FSU

crisis is a repeat of the LA debt-led growth of the 1970s that ended with the debt crisis of the 1980s. Third, controversial macro, exchange rate and tax policies, reduced the policy flexibility required to respond effectively to the external shocks that hit the region since mid 2008. Furthermore, these policies gave rise to a pattern of growth that was often un-equalizing including during the roaring years of 2000-2007. Finally, the hands-off approach in the field of labour and social policy reduced (with the exception of the Central European countries) the volume of social transfers. Yet, the combined effect of rapid growth and moderately rising inequality made that the real incomes of the bottom deciles nevertheless increased.

3.4. The rapid rise of inequality in fast- growing China

After 30 years of breakneck growth, in 2010 China overtook Japan to become the world's second largest economy. In many respects – growth, poverty alleviation, industrial transformation, macroeconomic balance, resilience to external shocks and so on – China outperformed all other emerging economies, let alone the advanced ones. Yet, this miraculous growth has not been without problems, in particular in terms of a seemingly unstoppable increase in income inequality which raised the Gini coefficient of the distribution of household income from 26.0 in 1975 and 30.4 in 1978 to 47.3 (or higher according to other estimates) in 2009[10] (Table 9).

The distributive impact of market reforms in China has varied markedly according to the various reform waves. The first reforms of 1978-1984 pivoted around the Household Responsibility System in agriculture which replaced the rural communes with egalitarian family-based farms and raised the food procurement prices paid to farmers. Such measures led to an acceleration of agricultural and overall growth and reduced overall inequality thanks to a faster rise in rural incomes (Table 9 and Figure 2) while halving rural poverty from 30.7 per cent in 1978 to 15.1 per cent in 1984 (Gustafsson and Zhong 2000)[11]. Meanwhile the urban Gini coefficient stagnated at a low level (*ibid*), as the initial introduction of performance-related bonuses in urban-based state enterprises did not cause any visible rise in income disparity.

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[10] Other problems of the 'Chinese growth miracle' concern an excessive dependence on exports, imported technology and foreign firms in the export sector (Fisher 2010); low expenditure on R&D, private consumption, public spending in education, health and social security; and growing pollution and low energy efficiency. The proposed strategies to solve these problems place greater emphasis on the domestic market (Yongdin 2011), raising the share of domestic consumption and R&D on GDP, reducing the investment rate and the income gap between classes, urban-rural areas, and coastal areas and the hinterland, raise the share of services and make the economy less carbon-and energy intensive.

[11] Overall inequality dropped also in the mid 1990s due to the increase in grain purchase price which reduced the urban-rural income gap (Luo and Zhou 2008),

Table 9. Evolution of the Gini coefficients and the income gap in China, 1953–2009

	Gini coefficients					Percentage contribution to overall Gini				Inter provincial income gap
	Overall	Rural	Urban	Intra rural-urban	Interaction term	Rural Inequality	Urban inequality	Intra r-u inequality	Interaction term	
1953	56.0[a]	….	…..	…..	….	….	…..	…..	….	…..
1978	30.4	21.2	16.0	18.3	0.1	36.7	3.3	59.2	0.5	12.6
1984	27.1	24.4	16.0	12.4	1.2	44.7	4.8	45.8	4.6	9.2 [b]
1990	35.1	31.0	23.0	17.7	1.9	36.3	7.6	50.5	5.4	7.5
1995	41.1	34.1	28.0	23.6	1.8	27.9	10.4	57.3	4.3	9.8
2000	43.2	35.4	31.9	25.1	2.2	20.2	16.4	58.0	5.1	….
2006	46.2	37.4	33.6	28.0	1.8	12.7	22.9	60.7	3.8	….
2009	47.3	…..	….	……	…..	….	….	….	…..	…..

Source: Chen et al (2010); for 2009 Selden and Wu (2011); last column China's State Bureau of Statistics. Notes: [a] Non comparable with the rest of the data; [b] refers to 1985.

In contrast, income concentration rose rapidly during the second phase of the reforms which began in 1985, and which focused on promoting the urban-based industrial sector, with the result that the national Gini coefficient reached 41.1 by 1995 to rise further till the end of the decade (Table 9, Figure 2). Such rise can be traced to (i) a rise in the urban–rural income gap driven by a faster expansion of urban activities, a 30 per cent decline in agricultural prices and a tripling of agricultural taxes levied by the central and local authorities (Ping 1997); (ii) a rise in inter-provincial income inequality (last column of Table 9) due to the unequal spread of non-agricultural activities; (iii) a widening within-rural and within-urban income inequality in most provinces due to a rise in corporate profits and earnings inequality driven by a rising demand for skilled workers in the modern sector and a surge in the skill premium (Luo and Zhong 2008).

Though it succeeded in promoting growth and modernizing the economy, public policy was a main factor behind the income polarization observed during this period. Industrial policy favoured the coastal provinces over the interior ones through the selective granting of special administrative, tax and other privileges which facilitated the development of export industries and the inflow of FDI in coastal areas. In addition, the fiscal decentralization of 1978 led to a decline in the national tax/GDP ratio (which fell to 12.6 per cent by 1996) and substantially reduced the ability of the central government to control regional inequality by means of transfers to poorer provinces.

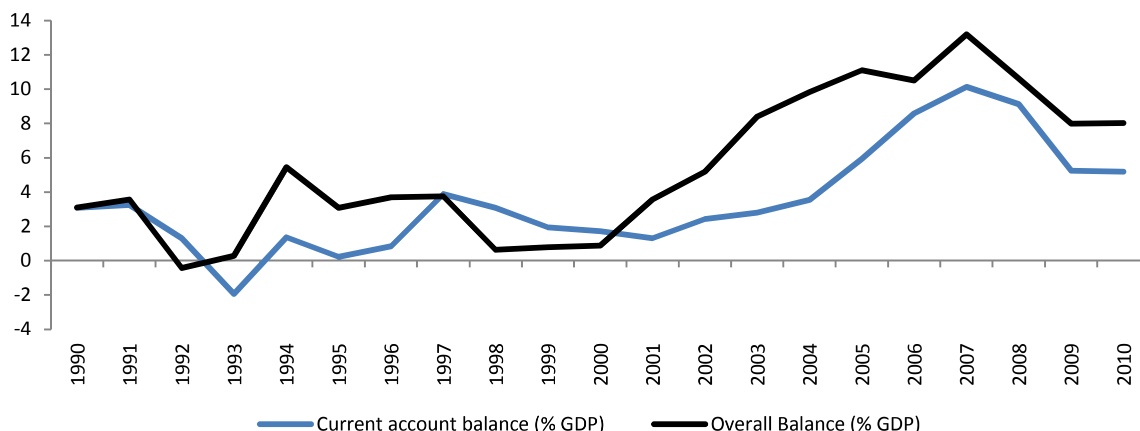
Despite mounting concern among the central authorities, during the third phase (the 'mercantilist era' broadly coinciding with the last decade) the Gini coefficient grew further from 43.0 at the turn of the century to 47.3 in 2009 (Selden and Wu, 2011) or a slightly higher levels according to Luo and Zhu (2008). The recent increase in inequality derives from a number of offsetting tendencies. A fairly orthodox macroeconomic policy focused on low inflation, a low budget deficit (1.6 per cent of GDP on average over the last decade) and low 'explicit' government debt/GDP ratios[12], while capital controls and the accumulation of reserves minimized the importance of foreign savings in total investments and the impact of financial contagion. Cross-border capital controls were somewhat liberalized only after 2009. As a whole, these policies increased the macro resilience of the country and likely generated a neutral or mildly positive distributive effect. However, tax policy targeted a low tax/GDP ratio, preventing in this way to assign sufficient funds to public spending on health, education, pensions and other social areas, while its allocation continued to favour workers in the urban formal sector. Also, while the tax reform of 1994 re-centralized revenue collection and allocation, it failed in reducing income disparities across provinces, as the transfer mechanism from the centre to the provinces was not progressive. These problems started to be tackled only during the last few years (see later), as the tax/GDP ratio rose from 12.2 in 1996 to 22.5 in 2010.

This third reform phase emphasized more than the previous two an export-led growth strategy. Despite public programmes such as "Go West" and the improvement of infrastructure in the Western and Central provinces, trade and industrial policy continued to target the creation of Special Economic Zones in coastal areas, export-oriented firms, and the capital intensive sector over the small-scale sector. Imports were gradually liberalized, particularly after the country joined the World Trade Organization (WTO) in December 2001, though average tariffs remained comparatively high (16.5 per cent for the decade as a whole, and 7.6 per cent in 2010). While in 1995 China officially adopted a managed floating exchange rate, until 2005 the yuan was *de facto* pegged (at a competitive rate) to the US dollar. Since then, it fluctuated somewhat and over 2005-2011 it appreciated by 35 per cent vis-à-vis the US dollar. Such export-led approach generated since 2001 large surpluses in

[12] If the non-performing loans of state banks are included, the debt/GDP ratio would be around an estimated 80 percent.

the current and capital account (Figure 7) which triggered a rapid accumulation of huge – excessive, according to some - currency reserves (US$ 1.3 trillion in 2011) which allowed to respond easily to the 2008-9 crisis, thus minimizing its potentially negative distributive effects.

Figure 7. China's current account and overall balance of payments as % of GDP



Source: authors' compilation on Asian Development Bank Database

The success of this approach depended crucially on exchange rate and labour market policies. While the former may have generated offsetting effects on income inequality (more industrial jobs, if at lower real wages), labour policies contributed (beyond the pressures due to a large labour supply) to keeping wages low, reduce the labour share in total income, and raising private, corporate and public savings to finance a rapid accumulation of capital. Indeed, much of the escalation in income inequality (prior to and) during the last decade pivoted around the *hukou* (internal passport) system, which means that migrants from rural areas receive lower wages and social benefits than urban workers. As noted by Selden and Wu (2011) while until the early 1980s the *hukou* system bound villagers to their local communities, the new system channels labour to industry and the cities while preserving highly differentiated wages and pay structures which permit firms and public entities to realize large savings and investments (Table 10). Ironically - in the absence of health, education and retirement benefits - rural migrants must save out of their meager incomes to pay for housing, health, retirement and their children's education.

Table 10. Chinese saving rate by sector (per cent of GDP)

Year	Personal	Corporate	Government	Total
1992	22.6	11.6	6.1	40.3
1995	19.8	14.6	5.8	40.2
2000	16.5	15.6	6.4	38.5
2005	21.2	20.0	6.3	47.5
2007	21.8	18.4	10.6	50.9

Source: Selden and Wu (2011) on the basis of the Chinese National Accounts, various years.

One of the most negative impact of the *hukou* system is rising inequality in children education, a trend which will influence the future distribution of human capital among workers and long term income inequality. In recent years China has made a major effort on higher education (Freeman 2012) but the distributional aspects of this policy remain uncertain. Indeed, migrants often leave their children in their hometowns for schooling or send them back to lower quality rural schools after a brief period of education in the city where it is very difficult for them to enter public schools (Selden and Wu 2011). In 2003, the State Council instructed local governments to allocate funds for the compulsory education of migrants' children but did not commit any funds to this programme.

State controlled trade-unions and lack of effective policies on wage regulation contributed to rising within-urban and within-rural income inequality by moderating the requests for wage increases despite large rises in profits and productivity. According to the ILO's Global Wage Report, real wages in China grew at an average rate of 12.9 per cent during 2001-7. However, their initial level was very low, wage growth did not keep pace with output growth, and the distribution of wages shifted in favour of skilled workers in the high-tech, financial and services sector (Luo and Zhu 2008). Thus, the labour share in GDP – which had peaked at 56.5 per cent in 1983 during the agricultural reform years - fell to 36.7 per cent by 2005 (Selden and Wu, 2011). In addition, minimum wages (which are *de facto* set at the local level) declined as a share of average wages (Table 11). This trend has been reversed very recently in a few provinces, as in 2011 over half of the municipalities and provinces in China raised their minimum wages by over 20 per cent.

Table 11. 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

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 (Bardhan 2010). 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 (Selden and Wu 2011), as after the 1994 tax reform, many local areas were left with unfunded mandates for basic social services.

As noted by Freeman (2012) the Chinese top policy-makers are well aware of the inefficiency and political instability entailed by the continuous rise in inequality, and that such trend runs in the face of their stated goal of 'constructing a harmonious society'. Indeed, as a result of growing polarization, social protests and wildcat strikes have become endemic. The number of labour disputes that workers brought to Labour Dispute Arbitration Committees increased from about 48,000 in 1996 to 1,280,000 in 2010 (*ibid*). The government has tried to respond to the perceived political threat posed by rising inequality by strengthening the legal rights of migrant workers by enacting on 1 January 2008 a 'contract labour law' which requires employers to issue written contracts (which workers could take to court), limiting 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 resolution system. Surveys of migrant workers in the Pearl River Delta before and after law took effect suggest that the law was effective in improving the workers conditions (Li and Freeman 2012), though much remains to be done.

Table 12. 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
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).

3.5. Summing up: lessons from the four regional case studies discussed above

Despite the structural differences existing among the four regions analysed, a comparison of the drivers of the inequality changes recorded therein over the past two decades permits to come to a few fairly general conclusions which – *mutatis mutandis* - may help inspire future policy action in developing countries. The first observation is that – after the shocks induced by the domestic liberalization and opening of the economy of the 1980s and 1990s – some countries (especially in South America and South East Asia) 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 in an important way 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.

The 'open economy growth with equity model' which has taken shape in those developing regions which experienced a drop in inequality during the last decade is a 'hybrid model' which combines elements of the orthodox liberal model (a focus on fairly low inflation, budget deficit and public debt) with innovative approaches in the fields of countercyclical fiscal and monetary policy, taxation, managed exchange rate

regime, reduction of the foreign debt, banking regulation and the role of domestic 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 operate. Interestingly, while all four regions analysed followed a broadly similar stance in terms of low inflation, budget deficit and public debt, the countries adopted more pronounced changes – which contributed to the reduction of inequality - in terms of managed exchange rates, external indebtedness, progressive taxation, domestic banking regulation, capital controls and trade diversification (China is an intermediate case, as it adopted some of these policies but not others).

Clear differences were recorded also in terms of educational, labour market and social protection policies. A key driver of the inequality changes was the extent of support of public education (especially at the secondary level). In this regard, the strong increase in public expenditure on education recorded during the last 15-20 years in most Latin America as well as in the Republic of 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' (i.e. a drop in the ratio of skilled to unskilled wages), which helped equalizing the wage distribution. In contrast, in both China and some European economies in transition (with the clear exception of the Central European ones), public expenditure on education dropped substantially while several services were privatized with the effect that the supply of skilled worker stagnated or declined and the wage premium increased. Also labour market policies differed drastically between the regions which experienced declining inequality and the two which saw it rise. In the first, there was a clear drive towards re-formalizing employment, strengthening collective bargaining, increasing minimum wages and other policies favourable to labour, while the opposite was true (until very recently) in the two counterfactual region, especially in China where the *hukou* system segments the labour market and affects negatively the wage distribution. Finally, important policy differences were recorded also in the field of social protection and especially social assistance. While the initial conditions were more favourable in the European economies in transition and China (both of which enjoyed fairly universal social protection systems during the communist era), the subsequent trends point to a weakening of such provisions in these countries and an increase in targeted social assistance and protection programmes in Latin America and South East Asia.

Interestingly, not much of the inequality decline recorded during the last decade in Latin America and South East Asia can be attributed to policies aiming at removing the "structural causes of inequality" – such an unequal distribution of assets, credit, subsidies and opportunities, removing market inefficiencies, and reducing rural-urban, spatial and ethnic income gap. Thailand (which attempted to reduce rural-urban inequality) and Malaysia (which reduced inter-ethnic differences) are obvious exceptions (see above). And so were the greater efforts in the field of education recorded in a greater number of countries.

Finally, as well demonstrated by the Chinese experience, the recent changes in inequality, seems to be more affected by the pattern of growth, rather than by the rate of growth. Likewise, exogenous changes in international conditions (terms of trade, financial exuberance and remittances) do not appear to have played on average a major role, with the possible exception of a limited number of countries in Latin America where these factors are central to the functioning of the economy (such as migrant remittances in El Salvador). Also in this case however, the effect appears to be due to specific local conditions, as no decline in inequality was recorded in other countries with similar – if less marked - characteristics. A similar conclusion seems to hold for the impact of dependency rates and participation rates, which did at best influence marginally the changes in inequality over the last decade in the four regions analysed.

3.6 An empirical test of the determinants of income inequality

Within the constraints imposed by data availability we now test empirically the contribution of the factors discussed in the prior two sections to the observed changes in income inequality. To this end, a database was built including annual data for 104 countries and the variables specified below over the period 1980-2010 (Martorano and Cornia 2012). Given the panel structure of such database, the estimation procedure must take into account that each country is observed over several periods. The most suitable specification for this type of dataset takes the following form:

$$GINI_{it} = \alpha + \beta X_{it} + \eta_i + y_t + u_{it} \qquad i = 1, 2, \ldots, N;\ t = 1, 2, \ldots, T \qquad (1),$$

where i and t denote country and time period, η_i is the time-invariant country's fixed effect, y_t is the error term for each year and u_{it} a joint error term for countries and time periods. The dependent variable is $Gini_{it}$ that is the Gini coefficient of the

distribution of household disposable income per capita (see appendix table 2). X is a vector of explanatory variables[13] which are clustered into six groups: (i) external conditions i.e. international terms of trade, migrant remittances and FDI; (ii) the rate of growth of GDP (which might be expected *ex ante* to reduce inequality, though as argued above this effect depends more on the pattern than the rate of growth); (iii) the distribution of human capital among workers, proxied by the average years of education (which is also expected to reduce inequality); (iv) fiscal policies, proxied by the ratio of direct on indirect tax revenue and the share of social protection on total public expenditure (both expected to reduce inequality); and (v) macroeconomic policy, proxied by the real effective exchange rate, the Kaopen and the financial regulation indexes both of which are expected to increase inequality.

The signs of the parameters presented in Table 13 (Model 1) confirm in most cases the direction of causality predicted ex ante. To start with, the gains in terms of trade contributed directly to the reduction of income inequality. Moreover, the parameters of the linear and quadratic term of the migrant remittances are both significant, confirming that in the early phase migration is dis-equalizing (as the middle income people are generally the first to migrate and send back remittances) but that with the creation of migrant networks which reduce the cost of migration also the low income people have a chance of seeking employment abroad and send back remittances to their low income families, with an equalizing effect on the distribution of income. Lastly, the FDI stock increases inequality but its coefficient is not statistically significant though analyses for Latin America show they are strongly un-equalizing (Cornia 2012).

Secondly, the coefficient of the GDP growth rate is non-significant, thus confirming that the inequality decline depends more on the growth pattern than on the growth rate. As expected, the years of education of workers is negatively related to income inequality. As for the impact of fiscal policy, direct taxation is found to be associated in a strongly significant and negative way to income inequality, while the ratio of outlays on social protection on total public expenditure is not significant. This result is likely due to the impossibility of breaking down the time series of social assistance into social security expenditure (which has a limited or even regressive effect on income inequality) and social assistance (which is strongly equalizing). As for the

[13] See Appendix Table 2.

macroeconomic policies, the REER coefficient is positive and strongly significant, confirming that a competitive real exchange rate could help equalizing income distribution, while – as expected - the index of capital account liberalization (Kaopen index) and those of financial regulation are both dis-equalizing, even though only the former is significant.

Table 13. Regression of the Gini coefficient of household disposable income per capita (models 1 and 3) and the growth rate of GDP (models 2 and 4) on several independent variables, 1980-2010, by means of the Least Square Dummy Variables estimator (columns 1 and 2) and 3SLS estimator (columns 3 and 4).

	Model 1 LSDV	*Model 2 LSDV*	*Model 3 3SLS estimator*	*Model 4 3SLS estimator*
	Dependent variable			
Independent Variables	**Gini income inequality**	**Growth rate of GDP**	**Gini income Inequality**	**Growth rate of GDP**
Gini coefficient of income inequality	……	-0.0131	…….	-0.4654*
International terms of trade index	-0.0086**	0.0066	0.0015	0.0088
Remittances (%GDP)	0.4373***	……..	0.3820***	……..
Remittances (%GDP) ^2	-0.0203***	……..	-0.0171***	……..
FDI (%GDP)	0.0161	…….	0.018	…….
Investment rate (%GDP)	………	0.2402***	……….	0.6982***
Kaopen index of capital account liberalization	0.3278***	0.0668	0.2386***	-0.1195
GDP growth rate	-0.0089	………..	-0.0763	……..
Average years of education of the workforce	-1.2107***	………..	-1.1366***	……..
Annual absolute change of share of workers with 2ary/3ary education	……	-1.6556	……..	1.8703
Direct/Indirect Taxes	-0.6554***	………	-0.5816***	…….
Social protection (% Government Expenditure)	0.0109	………	-0.0132	…….
Bank deregulation index	0.0209	0.1137	0.3302***	-0.1426
Real effective exchange rate index	0.0155***	-0.0027***	0.0101***	-0.0194***
Currency reserves (% GDP)	…….	0.0015	……..	0.0185
Change of Debt/GDP ratio (if > 60 %)	…….	-0.0634***	……..	-0.0731***
Annual percentage change in inflation rate (if > 40%)	…….	-0.0008**	……..	-0.0007*
Annual absolute change in Polity IV index	…….	0.0987**	…….	0.1446
Constant	44.216***	-5.9237**	39.7984***	18.3863
Country Dummies	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes
Observations	1329	1583	1272	1272
R-squared	0.961	0.459	0.968	0.298
Hansen-Sargan test for overidentifying restrictions (p-value)	n.a.	n.a.	0.5219	

Source: authors' calculations. Note: * significant at 10%; ** significant at 5%; *** significant at 1%.

3.7 An empirical test of the determinants of the growth rate of GDP per capita.

We now estimate a regression of the determinants of GDP growth rate, as this variable is generally considered an important determinant of income inequality and in view of estimating simultaneously the Gini equation and the GDP growth equation so as to solve any possible endogeneity problem due to the circular causation effects between these two variables (see section 3.8).

In addition, it is important to explore what is the likely impact on GDP growth of the inequality changes discussed above. In particular, is there any evidence that the rise in income inequality observed in many countries affected growth? The relation between income inequality (or its changes over time) and GDP growth has been extensively analysed in both theoretical and empirical terms, and 80 per cent of the theoretical models posit a monotonically negative or concave relation between these two variables. Except for the Keynesian models which focus on differences in rates of savings of profit recipients and high-wage earners in relation to low-wage earners (Pasinetti 1974) and the Upper Mobility theories (Alesina and La Ferrara, 2005), most theoretical analyses and empirical studies show that high inequality correlates negatively with GDP growth. The 'political economy models' (Alesina and Rodrik 1994) argue that high initial inequality damages growth as it leads to the election of governments which favour redistribution through high marginal tax rates, which depress private investment and growth. In turn, in the 'capital-market imperfections' model (Aghion et al. 1999) high inequality harms growth as it leads to slow human capital formation, locks investments by the rich in low return activities while the poor - who have projects with higher rates of return - cannot invest more than their limited endowments due to capital market imperfections. Thirdly, Venieris and Gupta (1986), Bourguignon (1998) and others show that high inequality may cause street protests and high crime which create uncertainty among investors, erode property rights, raise transaction and security costs and reduce growth. Fourthly, high asset and income inequality reduce the scope for conducting rational economic policies, as they restrict the supply of pro-growth public goods, lead to the adoption of lax macroeconomic policies and a high risk of defaulting on international debt, as governments are unable to tax the elites and are so impelled to borrow abroad or rely on seignorage (Birdsall 2000). In turn, Cornia (2004) argues that the relation between inequality and growth

is concave. Before a given Gini threshold (estimated between 0.35 and 0.42, and varying across different types of economies), inequality improves incentives and growth, while beyond that it increases labour shirking, free riding and supervision costs, erodes the social contract, and may force the poor to over-exploit common goods such as forests and grazing land. Finally, a recent article by Kumhof and Rancière (2011) on the advanced economies argues that high income concentration affects growth as the poor and middle class increasingly borrow (including from abroad) so as to maintain their consumption level despite falling incomes, with the effect of increasing their debt-to-income ratios, worsening the current account/GDP ratio and – because of all this – increasing the vulnerability to crises.

A key point in this debate is whether it is the level of inequality or its change over time which affects growth. In this regard, it is often argued that fast growth in countries such as China and Viet Nam has been accompanied by a substantial increase in income inequality which in 2008/9 exceeded that of Argentina and Uruguay. For sure, the impact of an inequality rise on growth depends on its 'initial inequality level'. In this sense, as in China the initial Gini was extremely low, particularly in urban areas (Table 9), several years of increases did not generate any perceptible effect on growth. Yet, as suggested by Cornia (2004) and by section 3.4, further increases from say a Gini of 40-42 may generate adverse effects on growth through one or another of the pathways mentioned above. A second observation is that there are medium to long time lags between a rise in inequality and GDP growth. This means that even under the present authoritarian regime, rising social tensions could affect growth in China and countries in similar situations in a few years. Fifthly, the relation between inequality and growth is influenced by the kind of political regime existing in a country. Under democracy, high inequality may lead – as recently shown by different waves of the Latinobarometro (see section 3.1) – to the election of governments which attach greater importance to social justice much faster than in authoritarian regimes (as in "growth superstars" such as China and Viet Nam). Econometric evidence shows that in Latin America increasing demand for distributive justice lead to redistributive policies more frequently and pronouncedly in centre-left regimes than centre right regimes (Cornia 2012). Be what as it may, the empirical evidence show that stable and high inequality affects growth – if moderately – both during the current period and/or with some time lag.

To test the relation between inequality and growth, we chose the specification chosen for the GDP growth equation is as follows:

$$GDP_growth_{it} = \alpha + \beta \cdot GINI_{it} + \gamma \cdot X_{it} + \eta_i + y_t + u_{it}; \qquad i = 1,\ldots, N;\ t = 1, \ldots, T \quad (2),$$

where beyond the *Gini*$_{it}$ - the coefficient of the distribution of household disposable income per capita – we included some of the other explanatory variables (defined in detail in appendix table 2) used in standard growth equations. The first is the ratio of gross fixed capital formation (both private and public) to GDP, as higher investments increase aggregate demand and the GDP equilibrium level over the short term, as well as the potential growth rate of GDP over the long term. Many new growth theories also emphasize the role of human capital. In particular, in the endogenous growth model, human capital generates perpetual growth by either preventing returns to a capital from falling or by increasing capabilities for the innovation and adaptation of new technologies. To capture this effect, we use as proxy the changes in human capital formation the change over time in the share of workers with secondary and tertiary education. We also introduced a set of control variables (some of which were used also in the Gini inequality equation), such as the international terms of trade index, the real effective exchange rate, the Kaopen index and the financial regulation index to proxy some of the macroeconomic policies. In addition, we added the level of the currency reserves/GDP (which is expected to improve economic performance), the changes in debt/GDP and inflation which are expected to reduce growth in heavily indebted countries (60 per cent of GDP) and when the rate of inflation exceeding 40 per cent a year. Finally, we introduce the Polity 2 index which measures the quality of democracy, so as to capture the impact of democracy and institutions on economic performance.

As can be seen from table 13 (Model 2), in almost all cases the parameters of these variables take the signs predicted ex-ante on the basis of the literature. As expected, an increase of the investment rate affects favourably economic performance. For instance, a growth of one point of the investment/GDP ratio increases the GDP growth rate by 0.24 points. As for the macroeconomic variables, GDP growth is negatively conditioned by the increase of the debt level and the inflation above a certain threshold (Table 13). Furthermore, a high level of the REER (indicating appreciation) affects growth negatively showing that a competitive real exchange rate could be not only good in equalizing income distribution (Table 13, model 1) but also for growth

(ibid, model 2). Also, the process of democratic consolidation favoured economic growth as shown by the coefficient of the annual change in the Polity 2 index which is positive and significant. Finally, Table 13 (model 2) shows that the coefficient of the Gini index, human capital, gains in terms of trade, reserve level, Kaopen index of financial liberalization and the index of financial regulation are not statistically significant.

3.8 A simultaneous estimation of the determinants of inequality and growth.

Until now, we estimated the Gini and growth equations as single equations even though economic theory suggests there can be a reverse causation between these two variables. If true, this would mean that the parameters estimated in Model 1 and 2 are biased and that there is a need to use a different estimator to solve this problem of circular causation. To do so, we estimate a system of simultaneous equations - where both the Gini and Growth equation are jointly determined – by means of the three-stage least squares (3SLS) estimator. The post-estimation tests (Table 13 models 3 and 4) show that the system is correctly identified while the Hansen - Sargan test confirms that the instruments are valid[14].

The results of the 3SLS procedure generate better estimates of the parameters and – to a very large extent – confirm the findings of Models 1 and 2. In particular, in the inequality equation, all variables show the sign expected ex-ante and the bank deregulation index becomes significant though the international terms of trade index is no longer significant. In addition, the parameters of the linear and quadratic terms of migrant remittances are again both significant. In the same way, a rise in the average years of education of the workforce is associated with a lower Gini coefficient. As for the impact of tax and macro policies, a greater contribution of direct taxation and a competitive exchange rate regime are found to equalize income distribution. Finally – as expected – an increase of the index of capital liberalization (Kaopen index) and those of financial regulation are un-equalizing. As in the single Gini equation, the FDI stock, GDP growth and the ratio of social protection on total public expenditure are again not significant.

[14] To check identification status of the simultaneous equations system we used the *checkreg3* stata module developed by Baum (2007). To compute the Hansen-Sargan test of the overidentifying restrictions we used the *overid* stata module developed by Baum et al (1999).

Finally, considering the parameters of the growth equation estimated with the 3SLS, it is interesting to observe that inequality affects negatively economic development (while it did not in Model 2) possibly due to the erosion of individual work incentives and of social cohesion. Thus, a reduction of one points of Gini income increases GDP growth rate by 0.5 points. Moreover, changes in the Kaopen index, bank regulation and REER which are detrimental for income inequality affect negatively also economic performance. Nonetheless, only the REER coefficient is statistically significant. Again, the coefficient of debt and inflation are negative and significant. Finally the coefficient of reserve and human capital and that for the international terms of trade are not statistically significant (as in Model 2), while the variation in Polity 2 index become non significant.

4. The impact of the 2009-2010 crisis on inequality

The inequality impact of the economic crisis which began in 2008 and is still gripping parts of the world economy (despite a modest return to growth in 2010) is not yet well documented, except in the OECD, EE-FSU and Latin America (Table 14). The evidence in Table 14 refers to only 39 countries and does not seem to suggest a generalized inequality rise, though Figure 8 on Latin America shows that the pace of inequality decline slowed during 2009-2010. This somewhat surprising result may also be due to the fact that the crisis has affected more the advanced and middle income economies rather than the low income ones.

Table 14. Absolute changes (Gini points) in the main regions over 2000-8 and 2008-2010.

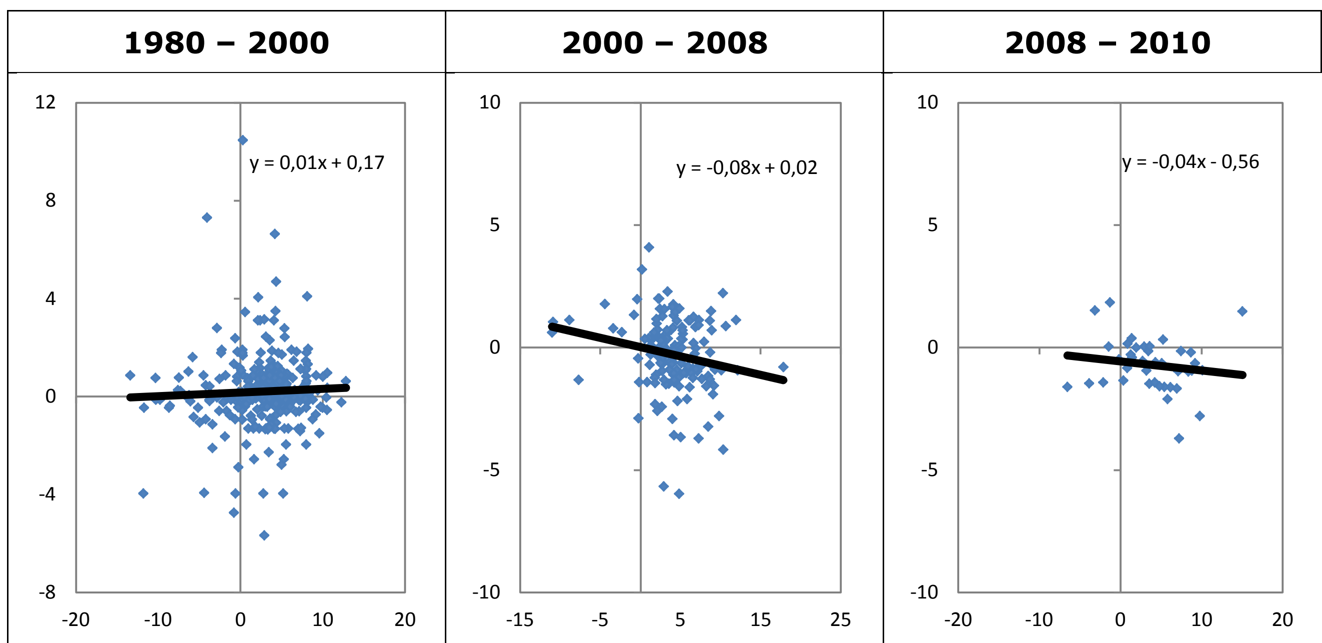
Region	2000-2008 (countries with falling inequality /number of countries per region)	2008-2010(countries with falling inequality /number of countries per region)
Latin America	-2.0 (13/18)	-1.5 (7/9)
SSA	-0.5[a] (9/21)	…….
MENA	-0.2[a] (3/8)	…….
South Asia	+2.2[a] (0/5)	-0.2 (0/2)
South East Asia	-0.7 (3/6)	+0.9 (1/2)
EE – FSU	+1.4 (7/24)	-0.2 (3/10)
Advanced Economies	+0.9 (3/21)	-0.5 (4/16)
China	+ 7.9	+ 0.8 [b]

Source: authors's compilation on the basis of Martorano and Cornia (2012). Notes: [a] 2008 or latest available data in the 2000s; [b] 2008-9

In the absence of adequate empirical information, a few theoretical and historical considerations may be of help to fathom the impact of the current crisis on inequality. The first observation is that the relation between crises and inequality is a complex one, the outcomes of which depend on the specific genesis, characteristics and extent

of each crisis, the functioning of the labour market, the crises duration and the nature of the macroeconomic, labour market and social policies adopted to confront them. Economic theory suggests that in developing countries with flexible labour markets and no formal social safety nets a recession worsens labour absorption and, under certain conditions, the wage rate, with negative distributive effects, as illustrated by the change in the regression parameters across the three panels on Latin America for the period 1980-2000, 2000-2008 and 2008-2010 (Figure 8). In contrast, in the advanced countries with unified labour markets, downward sticky wages and unemployment insurance, recessions may reduce inequality as firms hoard labour so as to avoid future selection and hiring costs. Thus profits fall while the job contraction is mostly compensated by unemployment benefits. However, the increasing segmentation of labour markets and protection policies in the OECD has eroded the validity of these conclusions.

Figure 8. Percentage of change in GDP (x-axis) and in Gini coefficient (y-axis) in Latin American countries in three periods: 1980-2000, 2000-2008 and 2008-2010

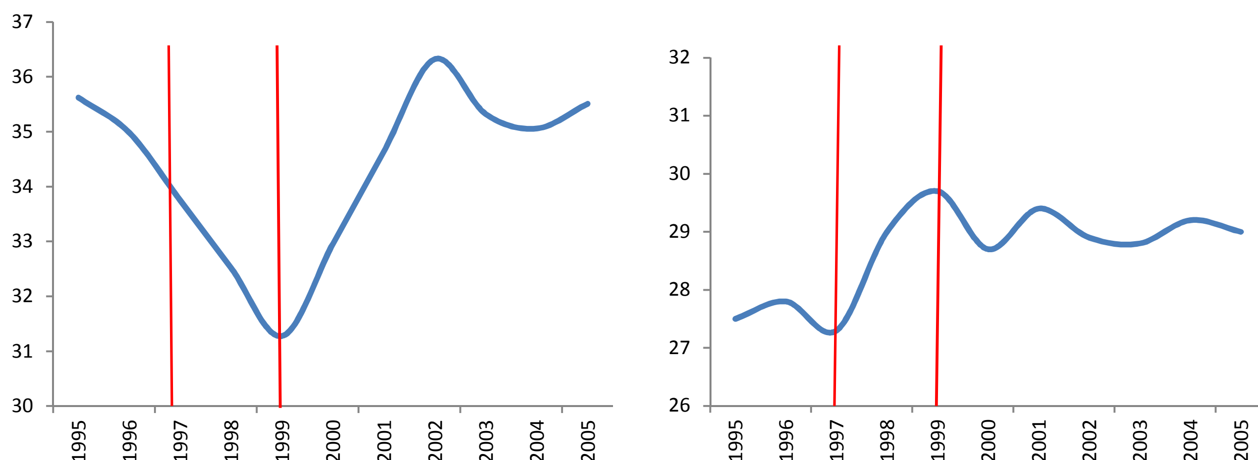


Source: authors' elaboration on data included in Martorano and Cornia (2012)

Secondly, it is necessary to pay attention to the genesis of each crisis and ensuing recession given the structure of the economy analysed. For instance, in Indonesia inequality fell over 1997-9 in the aftermath of the Asian crisis which hit first the employees of the highly-paid financial sector and only subsequently the unskilled workers who often returned to rural areas where they could count on alternative livelihoods unavailable to the upper income group (Figure 9, left panel). In contrast, in

the more urbanized Republic of Korea (which then lacked unemployment insurance – see section 3.2) the Gini coefficient rose for two consecutive years after the crisis, despite a rapid return to the long-term growth path, as the unemployment rate thus rose sharply, to return then to 4.6 by 2001 (see section 3.2). In addition, the share of part time and daily workers not covered by social insurance jumped from 42.5 to 52.5 per cent and the wage spread by employment type widened (KLSI 2001). As a result, between 1996 and 1999, the labour share in total income fell from 64 to 60 per cent while Gini rose (Figure 9, right panel).

Figure 9. Impact of the Asian crisis of 1997 on the Gini coefficient of income inequality in Indonesia (left panel) and in the Republic of Korea (right panel)



Source: authors' elaboration on data included in Martorano and Cornia (2012)

Thirdly, the inequality impact depends also on the functioning of the labour market and related policies. For instance, labour markets in Latin America were little affected by the 2009 crisis. While unemployment rose in eight of the 11 countries analysed in a World Bank (2010) study, the average increment was of only 0.9 while the real wages remained strong, in part due to the fall of inflation of 2009. Informality rose modestly (0.3-0.4 points on average) mainly in countries with rising unemployment. Finally, the skilled/unskilled, formal/informal and male/female wage gaps continued to fall, possibly because of the adoption of vigorous labour market and social protection policies in several countries of the region. As a result, average income inequality in the region continued falling – by 1.5 Gini points – as six countries continued experiencing a drop in inequality and three no changes (Cornia 2012).

5. Conclusions: policies to reduce inequality and promote growth in an open economy

While, as noted in section 2, the unfettered liberalization and globalization of the 1980s and 1990s led to a widespread increase in growth instability and income inequality, the recent experience of Latin America and a few South East Asian countries suggests that public policy can help reducing inequality even under open economy conditions (and containing its increase under crisis conditions) if a given set of macroeconomic, taxation, labour and social policies is adopted by governments which – under democracy – face strong incentives to focus on equity. This is an important conclusion which is at variance with earlier findings about the 'race to the bottom' and related distributional worsening of fast globalizing countries. The policy approach illustrated below may thus permit to enjoy the static and dynamic efficiency gains from trade (due to economies of scale in production, 'vent for surplus' effects, easier access to technology and other factors) and a selective access to foreign finance without causing an inequality-efficiency trade-off. A second important message is that the experience of the European economies in transition and of China debunks the common view that income inequality is best reduced by rapid growth and the subsequent increase in labour absorption. While growth may lead to lower inequality, what matters the most is the pattern of growth (whether capital-intensive, jobless, or employment-intensive, agriculture-driven and so on). At the same time, there is evidence that – at least under democracy - inequality may make growth less sustainable over the medium term for social reasons.

Which are then the policies which would allow to achieve an equitable growth? The suggestions below – inspired to a large extent by the regional experiences reviewed in section 3 – are of general nature. Specific measures will have to be introduced to reflect the different size, economic specialization, level of development, and institutions of the countries analysed. Yet, these general measures offer a general guidance on how to avoid crises, promote growth and reduce inequality. The first set of policies (section 5.1) concern the new (broadly understood) macroeconomic policies and the complementary labour and social policies which have been shown to reduce inequality under open economy conditions. However, as well illustrated by the Latin American and South East Asian experience discussed in sections 3.1 and 3.2, while such measures offset to a considerable extent the rise in inequality due to the Washington Consensus policies of the 1980s and 1990s they hardly made a dent in

the deep-seated ‘structural inequality’ inherited from the past and due to the time-old social stratification still observed in many developing countries. For reasons of space, the policies required to reduce structural inequality are discussed only very briefly alluded to in section 5.2 for reasons of completeness, but obviously require a much more detailed and country-specific analysis of what is presented below.

5.1. Policies to reduce the income inequality induced by the opening of the economy

The world within which policy decisions are taken has profoundly changed, especially since the 1990s. To start with, the traditional problems (e.g. high foreign debt and inflation) that led to the adoption of Draconian austerity measures in the 1980s and 1990s have been eliminated and therefore no longer require painful adjustments. This guarantees more degrees of freedom in policy making. At the same time, during the 2000s policy-making in developing and transitional countries has been increasingly influenced by the seemingly unstoppable spread of financial globalization, the unsustainable fiscal policy of the United States, the sovereign debt crisis of Europe, and the contagion caused by banking and financial crises emanating from advanced countries lacking adequate banking regulation and financial supervision. Meanwhile, a widespread trade and capital account liberalization has drastically narrowed the scope of domestic policy making and forced governments to adopt (at times sub-optimal) ‘defensive policies’ (such as the accumulation of huge reserves) to compensate for the instability and expectations of global markets and the constraints imposed by the WTO. Finally, as countries are now much more interdependent than before, cross-country and cross-sectoral contagion is far more pervasive and damaging than before, especially as firewalls and global safety nets to stop or offset its impact are still broadly missing. Given all this, and while waiting for the development of appropriate global policies and institutions to reduce instability and contagion, the comparison of the regional experiences discussed above suggests that a reduction of inequality under (often unstable) open economy conditions requires the adoption of the following domestic macro policies and complementary industrial, labour and social policies:

5.1.1 Macroeconomic policies, including trade policy and financial regulation

The experience of the last ten years points to the emergence of a ‘new macroeconomic approach’ compatible with the reduction of inequality which includes the following measures:

- *Limiting foreign indebtedness and mobilizing domestic savings*: the liberalization of the current account has been presented as a golden opportunity to access a global pool of savings and speed up capital accumulation and job creation. Yet, the experience of the European economies in transition (section 3.3) and the related literature suggest that excessive reliance on foreign finance often ends up in 'financial traps' characterized by currency mismatches, high risk-premia, exposure to sudden stops, rises in domestic interest rate driven by the spreads on foreign loans, an appreciation of the real exchange rate, and the allocation of funds to non-priority sectors, i.e. all phenomena which affect both growth and inequality (see Table 13). Such risks decline but do not disappear if the capital inflows take the form of FDI. In contrast economies with larger banking systems and high investment ratios have smaller portfolio inflows than those depending on foreign savings (China and Malaysia are good examples in this regard).

Thus, the recourse to foreign resources should be selective and sustainable, and countries with large foreign debt should reduce it, as done successfully in recent times in several developing regions. This means that capital accumulation should be funded mainly by mobilizing domestic savings through the development of a well regulated banking network, as shown by the past experience of Japan, and more recently of Malaysia, China and some Latin American countries (Rojas Suarez 2010). It means also assigning a greater role to public banks which can behave counter-cyclically, as observed in the case of the Brazilian BNDES which in 2009 expanded credit to compensate the 'flight to security' of foreign and domestic private banks. Domestic savings can be raised also by harnessing the resources of pension funds, tightening consumption credit and - obviously - ensuring there are sufficient incentives to invest. Finally, especially in the 60 or so developing countries with tax/GDP ratios below 10–12 per cent, public savings can be raised to finance SME, infrastructure and the green economy by increasing tax pressure, as observed during the last decade in parts of Latin America, the three South East Asian countries analysed and, very recently, China.

- *Controlling capital inflows and harnessing their sectoral allocation*: in countries with an abundant labour supply, green-field FDI in manufacturing are likely to generate positive growth and distributional effects, as shown by the past experience of

Malaysia, Mauritius and a few Central American countries. The impact of FDI in other sectors needs instead closer assessment as they may generate trade-offs and require compensatory measures, e.g. public work schemes for the people made redundant. In contrast, even in the presence of sound macroeconomic policies 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 the regression analysis in Table 13 shows is key for both inequality and growth). Such measures have been introduced recently in Argentina, Brazil, and Colombia, were only slightly relaxed in 2009 in China, and were common in the 1990s in Colombia, Spain, Chile, Malaysia, India and other countries. In addition, 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. The IMF (2011) now supports introduction of temporary controls during crisis periods, but countries may consider introducing them ex-ante and to keep them in place as long as they are needed, as China has done for long.

- *Long term equilibrium or small surplus of the current account balance:* consistently with the objective of reducing dependence on foreign savings, and contrary to the policy of large current account deficits recorded during the 1980s and 1990s, the developing economies should aim at improving their current account position and at recording where feasible a long term fiscal balance or modest surplus. This objective was achieved during the last 20 years by several economies, with the exception of the non-oil transitional economies of EE-FSU where current account deficit rose sharply to over 10 per cent of GDP (see section 3.3).

- *Choosing an intermediate exchange rate regime:* such a regime should minimize the risk of currency crises, and at the same time provide incentives for the expansion of the traded sector where the majority of the poor often (but not necessarily) works. This means rejecting the views about the superiority of 'two corner solutions' over intermediate regimes. Indeed, as shown in section 3.3 the EE-FSU countries suffered larger GDP falls in 2009 including because of the adoption of currency boards and fixed pegs, while the countries of Latin America and the South East Asia analysed in this paper adopted intermediate regimes which allowed them to stabilize to a considerable extent the real exchange rate and to swiftly respond to external shocks. It is obviously difficult to generalize, but in small-medium developing countries

exporting a large share of their output an intermediate regime aiming at credibly stabilizing the real exchange rate and its expectations seems to be the best option. An example of such an exchange rate regime is the 'basket, band and crawl' regime adopted in Chile in the 1990s (Williamson 2003) and in Argentina during the 2000s (Frenkel and Rapetti, 2008). In these countries, a managed float, combining nominal exchange rate flexibility with discretionary interventions of the central bank in the foreign exchange market and the accumulation of substantial currency reserves[15] (to mitigate the appreciation of the real exchange rate during periods of bonanza or its collapse on occasion of large external shocks) appear to be the best policy[16]. The econometric results in Table 13 as well the empirical evidence (Rodrik 2008) confirm that a stable and competitive exchange rate is a key factor in kick-starting growth, improving long-term performance and keeping inequality within a reasonable range. However, this approach leads to a slower decline of inflation, and needs to be supported by countercyclical fiscal and monetary policies, capital controls and interventions in the currency market.

- *Trade policy*: as noted in section 2, in many cases the trade liberalization of the 1980s and 1990s led to a worsening of income distribution due to short run factors immobility, trade-induced skilled biased technological change, the perverse effects of simultaneous trade and capital account liberalization, and other factors (Koujanou-Goldberg and Pavcnick, 2007, Taylor 2004). Yet, practically nowhere free trade policies were overturned during the last decade[17] though there is no evidence that the low average tariff rates continued generating un-equalizing effects during the last decade (Székely 2012). Yet, any additional liberalization must consider both its growth and inequality impact, and foreclose any further opening if the expected results appear negative or uncertain. In addition, policy should actively promote trade diversification by sector and destination (see section 3.1 on Latin America and 3.2 on South East Asia) so as to limit the potential contagion of dominant trade partners, as

[15] In many developing countries the accumulation of reserves was facilitated by gains in terms of trade, as the world prices of primary commodities rose and those of manufactures fell.

[16] This approach may not fit the distributive objectives of countries where the poor work in the non-traded sector, the traded sector is skilled labour intensive — as in most mining economies — or the poor are located in the traded sector but structural factors reduce the pass-through of the benefits of devaluation. In very small economies with volatile terms of trade and difficulties in diversifying exports, dollarization may be preferable. Finally, in large developing economies with comparatively low trade/GDP ratios, a competitive real exchange rate is just one of the possible viable options, as growth and distributive goals can also be pursued through an expansion of domestic demand driven by fiscal policy.

[17] Yet, in 2011 Argentina and Brazil (whose real exchange rates are appreciating due to mounting inflows) raised tariff rates to 35 percent, the maximum allowed by WTO rules when domestic industry is threatened by excess imports.

observed in EE-FSU in 2008-2010. In brief, there should be a drive towards a trade liberalization that avoids a collapse of the import competing sectors, actively seeks to diversify the composition and destination of exports, while quickly removing any remaining anti-export bias and promoting regional trade integration, especially in manufacturing. Finally, whenever trade liberalization promotes growth (e.g. via technological modernization) but raises simultaneously inequality (e.g. by making redundant unskilled workers), it must then be accompanied by compensatory programmes and active labour market policies to reduce the impact on wage inequality (see later).

- *Countercyclical fiscal policy and stabilization funds*: in many countries government revenue and deficits swing widely because of fluctuations in the demand and prices of their exports. Capital markets behave pro-cyclically and are therefore unable in stabilizing consumption. All this has traditionally led to IMF-recommended public expenditure cuts that exacerbate the shocks and worsen growth and inequality. However, as the recent experience of a few Latin American and some S.E. Asian countries shows, these problems can be tackled with countercyclical policies which expand public expenditure and cut interest rates in crisis years (as in 2009) and realize budget surpluses, reduce public debt, accumulate reserves, and cut inflation during boom years. In commodity exporters, countercyclical fiscal policies can be helped by the creation of 'stabilization funds' which set aside resources during periods of bonanza and release them in crisis years, as in the Bolivarian Republic of Venezuela and Chile. During the boom years, such policy reduces the inflationary pressures arising from the non-traded sector, while during crises it sustains public consumption and aggregate demand. An alternative solution consists in the *ex ante* adoption of 'contingency fiscal rules' (as introduced recently in Latin America) that establish that, in case of unanticipated shocks, governments are not bound by the usual fiscal targets and are free to raise public expenditure and budget deficit. Such measures provide credibility to an expansionary fiscal stance in countries where similar discretionary measures are looked upon with suspicion by the markets and the IMF.

A key policy issue concerns the choice of a sustainable deficit under crisis situation, and the pace of its reduction. In this regard, there is evidence that large and rapid fiscal cuts reduce growth over the short and long term. While deficits do need to be reduced, this should be done gradually. As suggested by Adam and Bevan (2001),

deficit reductions of up to 1.5 per cent of GDP per year help re-establish fiscal balance with a minimal impact on output, but larger reductions actually hurt growth[18]. The allocation of budget cuts also has a major impact on income inequality. In this regard, recent evidence shows that – unlike in the 1980s and 1990s – in 2009 the IMF recommended to protect or expand spending on health, education, public works, income support, infrastructure and key public investments (Ortiz et al 2010), though this stance was abandoned in 2010. The last decade has also seen the massive diffusion of strongly equalizing targeted cash transfer programmes as in Brazil, Malaysia (section 3.2) and Thailand (Table 7) as well as non-contributory social pensions in Southern Africa, and India's National Rural Employment Guarantee Scheme. Such programmes are now found in at least 18 countries in Latin America, 20 in SSA, 6 in South Asia and 5 in South East Asia and cover 860 million people (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1672090). While these transfers are not usually considered a component of macro-policy, they have come to play the role of 'automatic stabilizers' similar to that played by unemployment insurance in the OECD. This makes it possible to introduce macro policies that otherwise would generate hard-to-shoulder social and political costs.

- *Increased taxation to reduce budget deficits and improve macro stability:* in many developing countries, the budget deficits recorded in the 1980s and 1990s resulted not so much (or not only) from excessive public expenditures, but mainly from low and falling tax/GDP ratios (Chu et al 2004) which often led to costly fiscal adjustments or to cuts in social provisions with un-equalizing effects (see section 3.4 on China). Indeed, as argued by Singh (2006) the macroeconomic fragility of the 1980s and 1990s in several developing countries was due to their low tax collection. As argued in section 3.1 this has changed in over half of the countries of Latin America, the Republic of Korea and other regions, though it is worsened in countries of EE-FSU following the implementation of tax reforms during the 2000s (Table 8). Latin American witnessed during the last decade (in some cases starting during the late 1990s) a fairly universal and progressive rise in tax/GDP ratio (which rose by a staggering 9-10 points in Brazil and Argentina) and which improved perceptibly the distribution of after-tax income, a phenomenon observed also in the Republic of Korea (Table 6). Yet, this was not the case until very recently in several developing countries

[18] The IMF position changed in 2009, as it now plays a role close to that of lender of last resort, largely along the lines demanded by developing countries. It is plausible that in 2008-9 its action helped avoiding severe crises in small economies suffering from financial and external fragility.

including China where the effective tax collection remained below the potential (Cornia, Gomez Sabaini and Martorano 2011).

- *A countercyclical and accommodating monetary policy*: the liberal stance has traditionally aimed at single digit inflation by means of raises in interest rates and credit restrictions. Yet, Bruno and Easterly (1998) have shown that driving inflation below 40 per cent per year produces no discernible economic benefits, while our results (Table 13) show that price increases above such threshold do affect the growth of GDP. In turn, rapid disinflation is likely to cause a contraction in GDP and — because of the endogeneity of tax revenue to GDP — a widening of the fiscal deficit. Furthermore, a policy of high interest rates increases the concentration of financial wealth in the hands of bond holders and raises production costs, the financial charges borne by firms and cost-push inflation. In view of all this, monetary policy should aim at a more gradual decline of inflation which, after the rapid disinflation of the 1990s, is in any case smaller than in the past. This means that while real interest rate may aim at the 2-3 per cent range, nominal rates ought to increase less markedly than in the standard approach. This policy should help contain cost-push inflation and at the same time avoid a contraction in investment and employment. While the money supply compatible with this approach needs to be accommodating, the policy maker should simultaneously introduce microeconomic reforms to deal with the causes of cost-push inflation. At the same time, the experience of the last decade (see section 3.1) suggests that monetary policy should be actively used in a countercyclical way so as to contain the impact of crises, and for the sterilization of changes in the foreign exchange market. In extreme cases, capital controls are necessary to preserve monetary autonomy.

- *Banking and financial sector regulation*: inequality can also be reduced by measures to regulate the domestic financial sector similar to those adopted in some developing regions during the last decade – as confirmed also by our econometric analysis (Table 13, Model 3). Indeed, a remarkable feature of the last decade is that - after the early 2000s crises in Turkey, Argentina, Uruguay and Ecuador (Halac and Smuckler 2003) – there were fewer significant financial crises, including during the 2007-2010 global crisis. One of the reasons for this crisis avoidance was be the broader role played by the IMF since 2008 in lending greater amounts of resources with easier access and lower conditionality. This shift allowed the financing of 19 Stand-by programmes

(mostly to EE-FSU countries) between July 2008 and November 2009. But improvements in banking regulation and financial oversight were also behind the greater financial stability of several developing countries, including in Latin America (Porzekanski 2009, Rojas Suarez 2010). These authors have argued that – in addition to the improvement in the field of macroeconomics – most Latin American governments reduced currency mismatches, enhanced the capitalization, funding and supervision of their banking systems, encouraged the development of local capital markets, introduced a stricter prudential regulation of their domestic financial system and of lending, enhanced risk-assessment mechanisms in large banks, created appropriate legal, judicial and accounting frameworks, while assigning to state banks a greater role in the mobilization of domestic savings and the financing of economic activity.

5.1.2 An 'open economy industrial policy'

Sustainable long term growth and an acceptable level of inequality require also a steady evolution in the structure of production, export and imports of a country. Historically, such objective was achieved by means of a 'closed economy industrial policy' which protected for years the infant industry by means of tariffs, subsidies and public investments. This approach is now foreclosed to practically all countries by participation in the WTO and other institutions though as noted in footnote 16 tariff and non-tariff protection is now on the rise in Latin America (possibly due to the inability to fully control the real exchange rate). However, during the last decade Australia, Chile, China, Finland, Ireland, Malaysia, the Republic of Korea, Singapore and Viet Nam showed that it is possible to develop an 'open economy industrial policy', diversify output and exports, and raise the knowledge content of production thanks to proactive macroeconomic and industrial policies, both economy-wide and sector specific. A first powerful way to diversify output is to adopt a stable and competitive exchange rate which appears to have a greater protective effects on the import-competing domestic manufacturing sector than tariff rates of 30 per cent or so (Helleiner 2011), though this may require the introduction of drastic capital controls. Small developing countries may in contrast choose to rely on selected-FDI as a vehicle of industrial policy, while making sure to "crowd-in" domestic investments and do not displace workers in the traditional sector. A third approach, such as that followed in Chile, is of microeconomic nature. The country diversified its export basket towards resource-based products (wood, fresh-fruit, wine, salmon) by generating high levels

of public knowledge, R&D and infrastructure – by means of a strong long-term alliance between the public and private sectors.

5.1.3. Labour market, public expenditure and social protection policies.

These measures may be introduced to offset the adverse distributive effects of macro measures which may be desirable in terms of growth but not of income inequality. In addition, some of these policies have been shown in section 3 to stimulate growth while reducing the un-equalizing effect of some measures.

- *Labour market policies:* econometric evidence for Latin America (Cornia 2012, Keifman and Maurizio 2012) shows that efforts aiming at strengthening labour institutions - which regulate the distribution of earnings by addressing the problems of unemployment, job informalization, minimum wages and weak institutions for wage negotiations and dispute settlements - reduced income inequality. Specific programmes in this area include passive and active labour market policies, such as unemployment insurance, retraining programmes, and self-targeting public-work schemes. Minimum wages – which reduce earnings inequality in most cases – can also be raised moderately without causing efficiency costs. Finally, wage bargaining institutions, which have been weakened substantially in most countries during the last three decades need to be strengthened. Efforts at 'formalizing employment', if at the cost of greater employment flexibility, may also be needed. Lack of data prevented us from introducing such variables in regression analysis in Table 13.

- *Progressive taxation:* income inequality can also be reduced through tax reforms which, in addition to strengthening budgetary balance (see above), aim at greater after—tax equity and redistribution (Cornia, Gomez-Sabaini and Martorano 2011). As noted in sections 3.1, in Latin America about half of the three point average increase in the tax/GDP ratio was generated by the income tax, presumptive taxation, financial transaction taxes, consumption taxes on luxury items, a reduction of dis-equalizing excises on oil, alcoholic beverages and tobacco. As a result, between the 1990s and 2000s the Reynolds–Smolensky index (which measures the redistributive effect of taxation) improved by between 0.6 and 3.8 Gini points in ten countries out of the 11 with available data (*ibid*). Even stronger effects of taxation were evident in the Republic of Korea (Table 6). In contrast, in the European transition economies, the adoption of a flat tax on personal and corporate income (Table 8) likely generated an

un-equalizing impact on post-tax income distribution in several countries, while spatial inequality rose in China due to the weakness of the tax and transfer reforms of the early 1980s and 1994 (section 3.4). Though the tax/GDP ratio increased in many developing regions during the last decade (*ibid)* there still is considerable room to improve 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 rates and a sizeable no tax area, progressive indirect taxes, and an appropriate taxation of mining rents and windfall profits.

- *Public social expenditure and educational investment:* an adequate level of taxation permits also to supply in non inflationary way essential public goods, carry out progressive social transfers, and finance compensatory programmes to offset the adverse effects of efficient but un-equalizing macro policies. As noted, in section 3 several countries of Latin America and South East Asia increased in recent times public expenditure on education, while the transition economies of Central Europe (but not those of the former Soviet Union, the Balkans and – until recently - China) preserved the high level of public expenditure on education/GDP inherited from the socialist era. As noted in all four regional case studies analysed, an improvement in the distribution of educational achievements among the members of the workforce has a strong impact on the distribution of wages, as it increases the supply of skilled and semi-skilled workers (the 'quantity effect') and reduces the rise of the skill premium (the 'price effect'). In many middle income developing countries this means expanding enrolment and completion rates in secondary education and broadening the access to subsidized tertiary education. The effects on inequality are lagged by 5-10 years but tend to be powerful. Of course, the inequality impact of an increased supply of skilled labour is not automatic, as an increase in employment and drop in wage inequality can come about only if additional jobs are created.

- *Income transfers:* they can generate strong redistributive effects, though their composition is crucial, and though such programmes are often introduced to offset the dis-equalizing impact of restrictive macroeconomic policies, as observed for Central Europe and a few Latin American countries. While steadily rising (Brazil, Malaysia, Mexico and Thailand 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 or may even be regressive, as it mainly covers the few comparatively well-off formal sector workers. Focusing only on its expansion would thus be regressive. This suggests that while actively extending the formal sector social insurance, 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 middle income countries, both approaches should be pursued at once.

5.2 Tackling the structural causes of high inequality

In several countries, the policies illustrated above have succeeded in offsetting the rise in inequality induced by the crisis of the 1980s and liberal policies implemented to respond to it. But additional measures are needed to tackle the structural causes of high inequality. Though not part of the focus of this paper, such sectoral measures are briefly mentioned hereafter for sake of completeness.

- *Agrarian reforms:* as notes in section 3.4, the egalitarian redistribution of the land of the Chinese and Vietnamese communes and of state land in Malaysia had a very positive equity and growth effect. Some redistribution occurred also in a few economies in transition and a few other countries. In contrast, despite the persistence of a high land concentration, no agrarian reform took place in the rest of Asia and Latin America. Meanwhile, the number of potentially dis-equalizing 'land grabs' increased in countries with both high and low land-man ratios. Yet, in labour surplus countries, the redistribution of large farms, plantations and state-run farms to the landless, near-landless and smallholders can improve both equity and efficiency (Lipton 2009). Indeed, with land reform the distribution of farm output improves while the wages of agricultural labourers rise, rural-urban migration falls, and the urban reservation wage grows. Yet, despite the election of progressive regimes (and initial promises in this regard) there was no redistribution of land in Latin America, South Asia and Southern Africa — and over one third of rural households remain landless. Indeed, there is a danger that the social assistance transfers introduced on a growing scale in many countries during the last 10 years (see above) may reduce the pressure to redistribute land. If this is the case, other measures can been tried, including market and tax incentives to trigger a market-based redistribution of land

(Binswanger and Deininger, 1997). At present, land taxes are low or non-existent in much of the developing world often due to the lack of good land records. Yet, large landowners often benefit disproportionately from public investment in rural infrastructure. Introducing progressive land taxes would reduce the net subsidy to large landowners. Since large farmers typically underuse their land—which can be sold to pay taxes—the output effect of well administered land taxes need not be large. Land released into the market can be purchased by community funds for the poor.

- *Correct market failures, in particular in the credit and insurance markets:* well designed bank- and microcredit-based programmes can do much to raise the incomes of the poor (Mosley and Hulme, 1998). It is therefore necessary to develop a capillary network of financial institutions accessible to the poor in both rural and urban areas. This entails facilitating the establishment of easier-to-set-up-and-capitalize micro-credit schemes, savings associations, cooperative banks, credit-unions, and to establish branches of commercial banks in marginal areas, as happened during the rapid development of the 19th century in Germany and Italy and more recently in Bangladesh where the famous Grameen Bank and BRAC Bank now reach millions of low-income users. Less attention has been given to insurance. The development of insurance markets for smallholders and micro-entrepreneurs would enable them to insure against household-specific and covariant shocks affecting the entire community. In poor countries, both types of formal insurance are unavailable to most people. Insurers are few, they possess imperfect information about risk, and gathering more information is costly and unprofitable when average household income is low. Consequently, specific and covariant shocks result in distressed asset-sales, and increased inequality.

- *Contain 'the curse of natural resources':* while natural resources, especially energy and metals, generate considerable wealth, they also cause problems of exchange rate volatility, Dutch Disease, dependence on food imports, lack of structural diversification and – central to the topic of this paper - high income inequality. Measures which have been shown can address these problems include the sterilization of export proceeds that cannot be absorbed productively into the economy (and which would raise the exchange rate) in offshore sovereign funds for the benefit of future generations. Other measures concern the creation of fiscal stabilization funds (section 5.1), as well as an adequate taxation of the resource sector (which often benefits from various

exemptions), so as to finance the diversification of the economy and a reduction in income inequality via non-contributory income transfers to the poor (see section 5.1).

- *Improve the quality and incidence of social and infrastructural expenditure:* the distribution of public spending in many countries is neither conducive to growth nor to lower inequality. The non-poor disproportionately benefit from public spending, their benefits far exceeding their taxes (van de Walle, 1998). Refocusing public spending on the poor (on basic health care, primary education, and safe water and sanitation) requires however better state capacity in addition to political will. In Uganda only one third of every dollar spent on primary education reaches schools as a result of budgeting and planning problems, despite the government's pro-poor commitment. The wealthy block reform and corrupt tax authorities, and in doing so undermine support for taxation among middle and low income groups, who rightly perceive the tax system to be unfair—an effect that is very evident in EE-FSU (Pirttilä, 1999).

- *Reduce regional and ethnic inequalities that cause poverty and social conflict:* racial and ethnic bias has been prevalent in public spending and public employment. This has exacerbated horizontal inequality, leading to adverse growth effects through social conflict and localized violence. Large countries often combine a well developed modern sector with remote and very poor backward areas, often inhabited by people of a specific ethnic origin (as in Brazil's North- East or Xinkiang in China). In Mexico, 80 per cent of the indigenous population is poor, while only 18 per cent of Caucasians are poor (Psacharopoulos and Patrinos, 1994). Malaysia (section 3.2) is a good example of how such regional and ethnic inequality can be reduced while China (section 3.4) has so far adopted policies which exacerbated both spatial and ethnic inequality.

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Appendix Table 1. List of countries used in regression analysis

REGION	Country
OECD	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, the United States
European Transition Economies	Armenia, Azerbaijan, Bulgaria, Belarus, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, the Republic of Moldova, Romania, the Russian Federation, Slovakia, Slovenia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkmenistan, Ukraine, Uzbekistan
Asian Transition Economies	Cambodia, China, Viet Nam
Latin America	Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela (Bolivarian Republic of)
MENA	Algeria, Egypt , Iran (Islamic Republic of), Israel, Jordan, Morocco, Tunisia, Turkey
South East Asia	Indonesia, Malaysia, the Philippines, Singapore, the Republic of Korea, Taiwan, Thailand
South Asia	Bangladesh, India, Nepal, Pakistan, Sri Lanka
Sub- Saharan Africa	Botswana, Cameroon, Cape Verde, Cote d'Ivoire, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritius, Mozambique, Nigeria, South Africa, Uganda, the United Republic of Tanzania, Zambia

Appendix Table 2. Description of the variables used in the regression analysis

Variable	Description	Unit of Measurement	Data Source
Gini coefficient of income inequality	Gini coefficient of disposable income	Index (0 -100)	SWIIDv3_0, IDLA database, EUROSTAT, World Development Indicators (WDI), African Development Bank database (AfDB), Asian Development Bank database (ADB), Economic and Social Commission for Asia and Pacific database (ESCAP) and National sources
International terms of trade index	International terms of trade, goods and services	Index, 2000=100	UNCTAD and WDI
Remittances (per cent of GDP)	Workers' remittances / GDP	Share of GDP	UNCTAD
FDI (per cent of GDP)	Net Stock of Foreign Direct Investment/GDP	Share of GDP	UNCTAD
GDP growth rate	Growth rate of GDP per capita	Rate of growth	USDA/ERS - International Macroeconomic Dataset (2011)
Average years of education of the workforce	Number of years of education of adults (25+)	Absolute Number	Barro and Lee (2010)
Direct/indirect taxes	Ratio of direct taxes on indirect taxes revenue	Ratio	Asian Development Bank database (ADB), EUROSTAT, Government Finance Statistics(GFS), IDLA database, National sources, OECD stat, World Development Indicators (WDI), World Tax Database.
Social Protection (per cent of Government Expenditure)	Social Protection expenditure as percentage of government expenditure	Ratio	Asian Development Bank database (ADB), Easterly (2010), EUROSTAT, Government Finance Statistics (GFS), IDLA database, National sources, OECD stat, World Development Indicators (WDI), World Tax Database
Real effective exchange rate index	Real effective exchange rate index	Index 2005=100	Darvas, Z. (2012)
Bank deregulation index	Frazer Institute Index, varying between 0 (no deregulation) and 10 (complete deregulation)	Index (0 – 10)	Gwartney et al (2011)
Kaopen Index of Capital account openness	The Kaopen index is a positive function of the openness.	By construction, the series has a mean of zero	Chinn and Ito (2011).
Change of Debt/GDP ratio	Change of total public debt if the debt/GDP ratio is > 60 per cent	Annual change of the ratio	The World Economic Outlook (WEO) database 2011 and Reinhart and Rogoff (2010)
Investment rate (per cent of GDP)	Investment rate (per cent of GDP)	Percentage of GDP	The World Economic Outlook (WEO) database 2011
Annual percentage change of inflation	Change of the inflation rate if inflation rate is > 40 per cent	Annual change of the ratio	World Development Indicators (WDI)
Currency Reserves/GDP	International reserves as a share of GDP	Percentage of GDP	UNCTADstat (2011)
Annual change in Polity iv Index	Annual change of Index of democracy measuring the quality of democratic institutions	Annual change of the ratio	Polity IV Project