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**Inequalities in Asia:**
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**"Control of Agricultural Prices, Rural-Urban Migration and Primary Distribution:**
**Reasons behind Inequality in China, 1978-2007"**[1]

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**Abstract**

Most analyses explain the increase in China's overall inequality during the reform period principally by means of the expansion of urban-rural income gap. This paper tries to shed light on a more complex relationship that appears to exist between primary distribution of income, top income share, and the Gini index. This relationship is mediated by the same urban-rural disequalizing mechanism existing in the Chinese economy, which is based on the *hukou* system. After presenting the main theoretical contributions that clarify the general relationship among those three variables, we describe that mechanism which has connected them in China during three last decades. As we shall see, there exists a link between the relative impoverishment of Chinese peasants, due to declining agricultural prices, the consequent flow of rural-urban migration, its depressive effect on industrial wages, the resulting increase in the profits' share, and rising top incomes. The enrichment of urban top income households drives the increase in the urban-rural gap, while labour's loss of share in national income ultimately accounts for the overall increase in the Gini index. The paper ends with a reflection on the ability of the latest policy measures taken by the Chinese government to reverse this pattern of inequality during the current global economic crisis.

**Key words**: Agricultural Prices; Urban-Rural gap; Rural-Urban Migration; Functional Distribution of Income; Gini Index.

**JEL**: O11, E25, P25, E64, D31.

**Disclaimer**: The author declares that he has not any personal or professional link with the institutions he is writing about.

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# Introduction

China's growth rates (averaging 9.9% between 1978 and 2007[2]) have allowed the Asian country to become the second largest economy in the world since 2010. However, those rates have also been accompanied by an unprecedented rise of income inequality (Figure 1). The Gini index of income inequality has increased from 31.0 in 1981 to 48.4 in 2007[3]. According to Barry Naughton, "there may be no other case where a society's income distribution has deteriorated so much, so fast" (Naughton, 2007: 218). Not surprisingly, "in the course of two decades China has gone from being one of the most egalitarian societies about as equal as Japan, to being more unequal than the United States" *(ibid.)*.

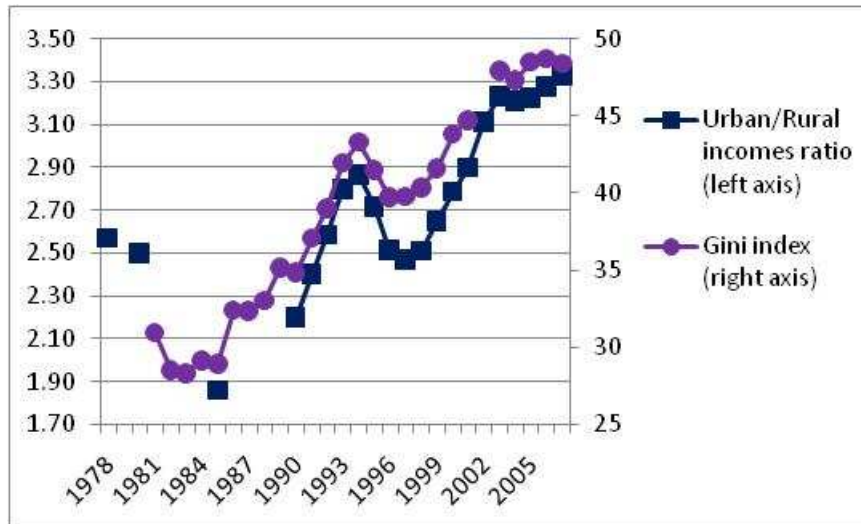Figure 1: China's Economy Growth and Inequality (1978-2007)
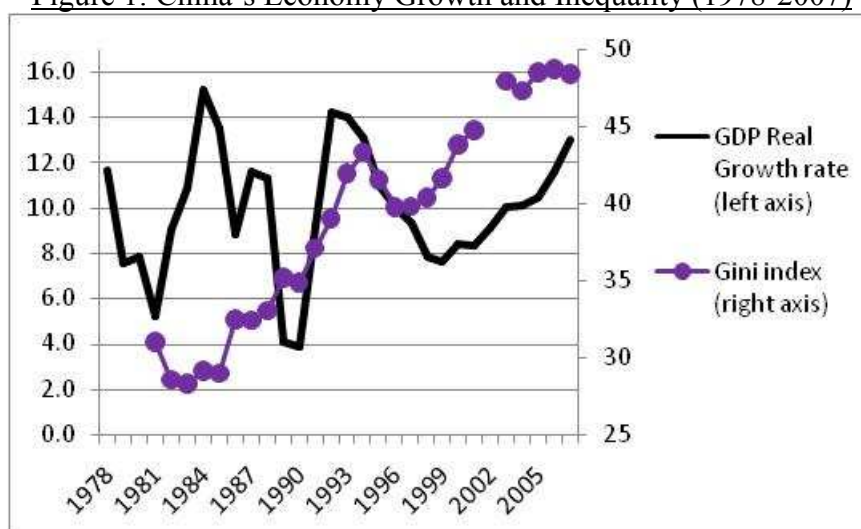


Source: GDP growth: Own calculations based on NBSCh (various years (a));
Gini index: from 1981 to 2001: Ravallion and Chen (2007); from 2003 to 2007: NBSCh (2013)

This increase in income inequality has attracted wide attention in recent decades. Many studies attribute it to varying general factors, mainly related to urban-rural inequality (see, for example, Wu and Perloff, 2005; Benjamín, Brandt, Giles, Li, Li and Wang, 2007; Liu, 2010). In fact, the relationship between urban-rural income differences and overall inequality can be easily contrasted by reference to the parallel evolution of the urban-rural gap and the Gini index (Figure 2).

Figure 2: China's Urban-Rural Inequality and Gini Index (1978-2007)

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[2] Own calculations based on the data from the National Bureau of Statistics of China (NBSCh): *Statistical Yearbook* (various years).
[3] Data from Ravallion and Chen (2007) and NBSCh (2013).

Source: Urban-rural income ratio: Own calculations based on NBSCh (various years (a));
Gini index: from 1981 to 2001: Ravallion and Chen (2007); from 2003 to 2007: NBSCh (2013)

Other studies have deepened these analyses by taking more complex explanatory causes into account (Yu and Wu, 2008; Zhou, Harrel and Hua, 2008; Qian, 2008). However, along with Ravallion and Chen (2007), whose Gini index data for the 1981-2003 period we use here, the research of Khan, Riskin *et al.* (Khan, Griffin, Riskin and Zhao, 1992; Khan and Riskin, 1998 and 2005; Gustafsson, Li and Sicular, 2008; Li, Luo and Sicular, 2011)[4] is still the reference point on the topic since theirs was the only research based on their own survey of Chinese household incomes (the Chinese Households Income Project (CHIP)), conducted in 1988, 1995, 2002 and 2007 by the Chinese Academy of Social Sciences (CASS).

The figures for households' incomes obtained by Khan, Riskin *et al.*'s study differ from those of other studies based on the official NBS surveys. Khan and Riskin present a figure of real household income growth lower than that calculated by using the NBS data, mainly since the latter "exclude from household income numerous elements that standard accounting elsewhere normally includes" (Khan and Riskin, 2001: 56). Indeed, China's population would have suffered a decrease in those elements (typically non-cash subsidies, widely received during the previous Maoist period), which, if not taken into account, would "seriously bias estimates of distribution of income and poverty" (*ibid.*)[5].

In any event, Khan, Riskin *et al.*'s principal conclusions coincide with the other studies. According to their analysis, the increase in China's Gini index is due largely to an expansion of the inequality between urban and rural areas. Khan and Riskin's figures show that the overall Gini index is higher than the Gini indexes for rural and urban areas taken separately (Khan and Riskin, 2005). Although there is a more equal income distribution in rural areas than in urban, inequality has also increased in the former. Specifically, according to Khan and Riskin's study, this increase is explained by a change in the composition of total income that has favoured more "disequalizing" components of household's incomes (especially wages). By contrast, they maintain that urban inequality has increased because of a worsening distribution of most income components. In addition, the concentration of

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[4] Khan, Griffin, Riskin and Zhao analyze the data from 1988's survey; Khan and Riskin the 1995 and 2002 survey's data; meanwhile Gustafson, Li, Luo and Sicular analyze the data from 2007's survey in comparison with 2002 data.
[5] According to Wang (2008: 6) during the Maoist period "[w]elfare allocation was thus an important feature of the redistributive economy, and income was not the most important measure of economic well-being".

investment in certain areas has also aggravated imbalances between interior and coastal provinces[6].

However, Khan and Riskin draw attention to an important issue that points to unresolved questions about China's inequality: another existing gap between the annual growth rates of GDP and personal income. They state this divergence "is due mainly to macroeconomic policies affecting the distribution of incremental GDP among households, government, and enterprises, and between consumption and accumulation", related to the "rise in the ratio of investment to GDP", which would need "a redistribution of resources away from households an in favour of non-household entities" (Khan and Riskin, 2001:105) to enable the Chinese economy's high growth rates.

In fact, the dramatic accumulation of capital during the reform period has been financed primarily by *savings from corporate profits* (He and Cao, 2007, Li and Yin, 2009; Yang, 2012). The increase in these profits may have been achieved at the expense of the workers' incomes. The consequent decline of labour share in national income would have engendered a parallel loss in households' share of institutional income distribution (Bai and Qian, 2009). According to a 2010 OECD study (2010), two thirds of Chinese urban household incomes in 2008 were explained by wage share. The larger share of national income accumulated by companies, along with lower labour costs, would have enabled China's high rates of investment, exports and growth. Nonetheless, it has also provoked an increase in the percentage of income hoarded by the richest segments of the Chinese population.

According to Li, Luo and Sicular's calculations the main contributors to total China's urban inequality would be wages and pensions. As Li, Luo and Sicular (2011: 118) admit, however, their "estimates likely understate the real trends in inequality because high-income urban households are increasingly underrepresented in the NBS urban survey sample and also because the income of high-income households is likely understated"[7]. Moreover, according to Piketty and Qian (2009: 62), "there are good reasons to believe that top business incomes and top wages are underreported in NSB household surveys". Thus, the analysis of contributions to inequality using the standard inequality decomposition by components on the basis of either NBSCh or CHIP surveys data underestimate the contribution of business incomes to the overall increase in China's inequality.

Indeed, recently Wang Xiao Lu conducted a new survey, which finds a severe underreporting of high-income households' incomes in the official surveys (see Wang and Woo, 2010)[8]. According to the survey's results, the large amount of hidden household income found would multiple the ratio of the income of the richest 10% of household relative to the poorest 10% until reaching a value of 65 times. This figure is closer to higher Gini index data released by several Chinese research institutes during the last years[9]. Wang and

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[6] When comparing 2002 and 2007 data Li, Luo and Sicular conclude that "[d]espite substantial growth in mean incomes between 2002 and 2007, and despite the various policies adopted to promote harmonious growth, during this period nationwide inequality continued its upward trend", a conclusion that "is robust to choice of income definition, weights, inequality index, and treatment of migrants" (Li, Luo and Sicular, 2010: 90).

[7] According to a preliminary study of their own "adjustments to correct for the undercounting of income of high-income urban households would increase the Gini coefficient by 8 percentage points in urban areas and by 5 percentage points nationwide" (Li, Luo and Sicular, 2011: 118).

[8] A critique of Wang and Woo's research can be found in Luo *et al.* (2012) and a respond to it in Wang (2012).

[9] According to the Institute of Social Science Surveys of Peking University, Gini index stood at 51.4 in 2009. The National Survey Research Center at Renmin University calculated a value of 55.5 for the same year (People's Daily: "NBS Reveals Gini Coefficient Methods", 4th February 2013: http://english.people.com.cn/90778/8119938.html). Meanwhile according to Research Center for China Household Finance Gini index reached 61 points in 2010 (China Daily: "Income Gap Remains High, Report Shows", 11th December 2012: http://www.chinadaily.com.cn/cndy/2012-12/11/content_16004398.htm).

Woo point to corruption as the main factor explaining the amount of China's grey income. Although the extent of corruption in China seems to be wide, in this paper we try to state a more structural relationship between Chinese economy growth pattern and increasing top incomes and inequality.

As we shall see, the meagre improvement of rural incomes since the mid-1980s, and its push effect on rural-urban migration would explain the restrained growth in industrial wages. The increase in Chinese workers' wages well below the growth in their productivity would allow the increase of profit share in national income, and the consequent in-depth enrichment of top income households. According to Wang (2008: 6), "income inequality among all residents also increased rapidly, nearly doubling within about a decade". In our view, this would be explained by a transfer of rent from wage earners to proprietary incomes. Thus, complementing the prevailing view, which explains inequality uniquely in terms of the evolution of the urban-rural gap, we try to establish a more thorough relationship between the regressive patterns followed by both primary and personal distributions of income.

To justify our perspective, the next section starts by presenting the main theoretical contributions explaining the general relationship between the primary (labour-capital), so-called functional, and personal (households) income distributions, as well as the relationship between growth and inequality, which, as we shall see, is mediated by primary distribution. Later, we review the main data sources available for China's distributional variables analyzed in this paper (functional distribution, top incomes and Gini Index), stating most important problems in data series and clarifying the differences in other studies' data with ours. In the third section, we show the principal relationships that have linked economic growth with income inequality in China's economy between 1978 and 2007. This paper's conclusion discusses Chinese government attempt to construct a "harmonious society" in order to prevent social instability, and possible transformation of that distributive mechanism in the context of world economic crisis.

## 1. The general relationship between primary distribution, households income shares and growth

In recent years a relevant line of research has been opened on the evolution of the share of the richest population groups in household distribution in various countries (Atkinson and Piketty, 2007 and 2010; Atkinson, Piketty and Saez, 2011)[10]. Empirically, the main finding of that research is a U-shaped pattern in the evolution of top income shares during the twentieth century, dropping in the first half before increasing during the second, and concentrating gains within the top percentile of disposable income of most countries under study. Theoretically, these authors have reviewed several possible explanations for this tendency: political economy, financial crises, "globalization", and progressive taxation. Previoulsy, Leigh (2007: 628) found a statistically significant relationship between top income shares and other inequality measures, such as the Gini Index.

To explain the evolution of general income inequality, however, other authors have considered variables other than those used in usual "empirical work on cross-country differences in personal income inequality" which for decades has "consisted of tests of the Kuznets hypothesis" (Daude and García-Peñalosa, 2007: 825). They have argued in recent years in favour of a central relationship between primary and personal distribution. These authors have stated that relationship both theoretically (Atkinson, 2009; Glyn, 2009) and empirically (Daude and García-Peñalosa, 2007; and Adler and Schmid, 2012).

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[10] A precedent for these studies can be found in the work of Kuznets (1950).

Atkinson (2009) call attention to a neglected topic in applied economics analysis: the evolution of functional distribution of income, i.e. the distribution of national income between profits and wages. According to him there are three reasons for studying factor share evolution: "to make a link between incomes at the macroeconomic level (national accounts) and incomes at the level of the household; to help understand inequality in the personal distribution of income; to address the concern of social justice with the fairness of different sources of income" (Atkinson, 2009: 3).

As Atkinson himself explains, today "people have multiple sources of income (…) and there is considerable inequality within categories of income" (*op.cit.*: 8). In fact, some categories of workers not only receive wage but capital incomes; and some of the capitalists not only receive proprietor income but also payments as CEOs or company directors. Thus, to understand the changes in the overall inequality, it is also necessary to consider the distribution of capital incomes within different households' income quantiles, as well as wage dispersion, and redistributional policies[11]. According to Andrew Glyn (2009: 102), this would diminish the "profits/wages split's (…) importance as a direct determinant of personal income distribution". Nevertheless, Glyn's conclusion is that "functional distribution is still important in discussions of economic inequality" (*op.cit.* : 103).

In fact, as noted above, there are empirical studies which found relevant relationships between primary distribution of income and overall inequality. Daude and García-Peñalosa have studied that relationship in a panel of observations from 39 different countries. Adler and Schmid have used German micro data. According to them, in any economy a lower (higher) share of wages in national income tends to generate a lower (higher) share of middle and lower income households in the distribution of disposable income, thus raising (lowering) the Gini coefficient of personal income distribution. At the same time, a higher (lower) share of profits results in a higher (lower) share of the disposable incomes of the richest households, thus raising (lowering) that coefficient.

Overall, the extent that redistribution of national income between wages and profits affects personal income distribution depends on the distribution of those factors' income among different household quintiles. Nowadays, capital share is linked to proprietor income, which accounts for a higher proportion in the top 1% and 10% incomes than in the incomes of lower household percentiles and deciles. If income structure were the same in all quintiles, however, a change in primary distribution would not alter personal income distribution (Alder and Schmid, 2012: 10). If, on the contrary, households only received income from one source (wages or profits), a change would severely modify personal distribution. So, the effect of primary distribution evolution on overall inequality depends on the respective concentration of capital or labor incomes among different households' income quantiles.

Daude and García-Peñalosa (2007: 814) assert that to "assess the contribution of each of these variables to inequality" it is necessary to have data, not only of functional distribution, but also on the distribution of labor and capital endowments. This set of data is rare, making it necessary to find proxies. It would possible to use the distribution among quantiles of the two factors, capital and labor, incomes, i.e. business and properties' income, on the one side, and wages and salaries, on the other, to determine the extent that redistribution between labour and capital shares will have on overall inequality. When those data are not available (as is the case for China's urban households) the relationship between functional and personal distributions should be approximated using total incomes of highest income quantiles and analyzing the relation between capital and top incomes shares.

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[11] Instead, if it is assumed that "all workers received identical wages and all receivers of property income received identical incomes then the Gini coefficient for personal income inequality would be equal to the difference between the percentages of total income received by workers and their proportion of the population" (Glyn, 2009: 102, quoting Atkinson and Bourguignon, 2000: 7).

Analysis could be expanded to examine the growth-inequality relationship. To the date most analysis have explained the relationship between economic growth and income inequality in developing economies by using the Kuznets curve, positing that the Gini index would move at the pace of economic development, increasing during the first stages of industrialization and decreasing afterwards. This claim is also based on the widespread idea, originated by Arthur Lewis, that the unlimited supply of rural labour plays a role in limiting the growth of industrial wages during the first stages of the development process.

However, this narrative, typically claimed to be a process led by demographic trends, forgets, first, that the evolution of rural-urban migration is in fact determined by various factors affecting both rural incomes and migration decisions (including in China's case, as we shall see, government policies concerning grain prices and migration controls); second, that even when that transfer of workers from the agricultural to the industrial sector is finished, i.e. when the "Lewis Turning Point" is reached (like some authors claim that China already did), personal income distribution is also determined by sociological and political factors affecting the general distributive conflict between businesses and workers.

Authors who tried to validate Kuznets' hypothesis (Paukert, 1973) found alleged "substantial confirmation of a statistically significant relationship between the income shares of various percentile groups and the logarithm of per capita GNP" (Ahluwalia, 1976: 129). New measurements, however, question those results (Deininguer and Squire, 1996; Bourguignon and Morrisson, 1998). A branch of the literature has since studied the effect of inequality on growth, shifting focus to inequality as the explanatory variable (see, for example, Alesina and Rodrik, 1994; Forbes, 2000; or Herzer and Vollmer, 2012).

However, these works are inconclusive as their answers differ concerning the main question: whether inequality benefits or damages growth. Thus, during the last years other authors (Banerjee and Duflo, 2003) have found more complex relationships between those variables. According to García-Peñalosa and Turnovsky (2006: 26), "[a]n economy's growth rate and its income distribution are both endogenous outcomes of the economic system. (…) They are therefore subject to common influences, both with respect to structural changes as well as macroeconomic policies. Likewise, policies aimed at achieving distributional objectives are likely to impact the aggregate economy's productive performance". Nonetheless, to analyze these relationships properly it is imperative to reestablish the central role of national income distribution in explaining capital accumulation and economic growth.

For that purpose, the theoretical framework developed by Bhaduri and Marglin (1990), which links national income distribution between wages and profits with growth rates through aggregate demand, can be used. These authors state the possibility of both profit-led and wage-led growth regimes, depending on redistribution in favour of which factor share promotes growth. If the negative effect of decreasing wages on consumption due to redistribution of national income in favour of capital share is lower than the positive effect that lesser labour costs and increasing profits have on exports and investment, then profits drive growth, as we shall see they did in China. The regime of growth is called "exhilarationist". In a so-called "stagnationist" regime the negative effect that redistribution in favour of profits has on consumption can not be overcome by the positive it has on investment and exports. Growth is driven by wages, so redistribution in favour of profits will undermine it.

Bhaduri-Marglin's framework can be used to explain the evolution of households quantiles' incomes and, so, inequality. In the exhilarationist regime, national income redistribution in favour of profits increases top income share. Nevertheless, it is likely that the absolute income of medium and low income households will also increase as an effect of falling unemployment, made possible by growth, and real wages rise. The overall effect on inequality is indeterminate as it depends on the degree of capital gain concentration in top

incomes. If that degree is high, the Gini index will increase as an effect of pro-profit distributional policies. However, if total income rises for low income households, social stability will prevail, at least until overaccumulation problems appear.

Conversely, in the stagnationist regime, redistribution of national income in favor of profits undermines both inequality and growth. Due to falling real wages and growing unemployment, labour share drops, so the absolute income of medium and low income households decreases, as do their share in disposable income. The consequent increase in top income share fosters inequality. Economic growth eventually confronts an underconsumption crisis. Social instability rises along with economic inequality.

In an exhilarationist regime, policies that foster inequality still promote growth. Meanwhile, in a stagnationist regime, however, egalitarian policies promote growth. In both cases, economic and social paths are stable. Alternative policies have opposite effects in each of the regimes. As a result, it can be stated that the interrelationship between growth and inequality is complex. The multiple engines of economic growth can lead to greater social inequality and equality. Likewise, different distributional policies can lead to higher or lower growth rates, as well to greater or less stability.

If we link these and earlier findings, it is possible to relate the evolution of the Gini index to economic growth, through the pattern of primary income distribution, understanding top income progression. In China the relationship between those variables is linked to a specific control mechanism of the rural-urban migration. However, a general relationship between profit share and top incomes, as well as between wage share and the Gini index can also be found, at least for the reform period under study.

## 2. Statistical Series Compilation and Comparison

This analysis uses several data sources. First, for the series of the primary, so-called functional, distribution of income it uses the Hsueh and Li data (1999) as well as GDP by Region Table provided by the NBSCh. Second, for top incomes, the study uses NBS data: China's Households Income Survey yearbooks. Third, for Gini index, it uses Ravallion and Chen (2007) and the last release of data from NBSCh. Nevertheless, there are problems with some of the data series.

First, there are up to three different series on functional distribution of income in NBSCh's statistical series (Bai and Qian, 2010). Most widely used is that of the GDP by Income Approach by Region. However, NBSCh changed the accounting methodology of compensation of employees and operating surplus series for the years 2004 to 2007. Different recalculation methodologies can be used (Bai and Qian, 2010; Zhou, Xiao and Yao, 2010), but problems arise (Molero Simarro, 2011).

Second, concerning NBSCh Households Income Survey yearbooks, it is important to note that, after scrutinizing the survey's quality, Bramall (2001) concluded that it "still provides too fragile a basis for firm policy conclusions. (…) Both the extent of the increase and its underlying causes are still very far from clear" (Bramall, 2011: 698), even after taking into account the adjustments made by the Khan and Riskin's research.

Third, in order to corroborate the link between profits share and top income shares would be useful to have business and propietors' income data by quantil available. However, NBSCh's household income surveys only provide them for rural households. For urban ones NBSCh provides aggregate data of income sources, but does not for income quantiles. Moreover, both NBSCh's and CHIP's data show an apparently extremely low figure for the share of business and property incomes in total urban households' income. In NBSCh's series net business income represents just 6.3% of urban per capital annual income; meanwhile

income from properties is 2.3%[12]. In CHIP's series the share of net income from individual businesses is just 5.4%; meanwhile the share of income from assets is 1.1%[13]. Indeed, according to Piketty and Qian (2009: 62), "there are good reasons to believe that top business incomes and top wages are underreported in NSB household surveys". Thus, to rely on the evolution of business and proprietor's income in each of household income deciles seems not to be trustworthy. Instead, series of total income of each decile group are used.

Fourth, China's estimates of deciles income shares are based on survey, not tax data, which usually are the main source for calculating these shares. According to Leigh (2009: 7), "[s]eries derived from taxation data are more likely preferable to survey data, since surveys are known to undersample high earners (…) and because taxation data allow one to study the income share of very small groups (…) which would be represented only [by] a handful of individuals in a typical survey". In fact, according to Li, Luo and Sicular (2010: 18), "high income urban households are increasingly under-represented in the NBS urban survey sample" and "the income of high-income households is likely understated". It is possible to obtain levels and income distribution by quintiles for the period 2005 to 2008 from the survey conducted by Wang and Woo (2010). It is not possible, however, to construct an accurate series for the whole period under research. Consequently, we are compelled to use official data, subject to the above reservations.

Fifth, it is necessary to note that our compilation of urban household income deciles differs from the World Top Incomes Database developed by Alvarado, Atkinson, Piketty and Saez[14]. This difference could be explained by Piketty and Qian's computations with the NBSCh's Urban Households Income Survey, which here we use in gross terms[15]. As long as the gap between both series widens during most of the period under research (Figure 3), it is important to be aware that both absolute levels and the speed of the increase in top incomes shares may be underestimated in this work. However, the shared general rising trend points to similar conclusions. Indeed, it would reinforce our claims, though their series ranges just from 1986 to 2003, while ours does between 1985 and 2007[16].

<u>Figure 3: Comparison of China's Top 10% Urban Households Income Share Data Compilation</u>

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[12] Own calculations.

[13] Li, Luo and Sicular (2010: Table 2).

[14] For China, this database relies on Piketty and Qian (2010), whose data are available in the data appendix of Atkinson, Piketty and Saez (2009): the same data set available in the World Top Incomes Database.

[15] In an earlier version of their paper, Piketty and Qian explain that "[t]he individual level data from these surveys are not available for all years, and we asked the NSBS to provide us with annual tabulations (for the period of 1986–2003) based on the micro-files. We asked for two series of tabulations: household tabulations and individual tabulations" (PIketty and Qian, 2009: 54). In a footnote they also clarify that those "tabulations were designed explicitly to focus on top income brackets and to facilitate tax simulations".

[16] Here we use the evolution of top 10% incomes share as reference. However, it is important to notice that the share of the top 1% incomes would have grown at a rate of over 120% (Piketty and Qian, 2009).
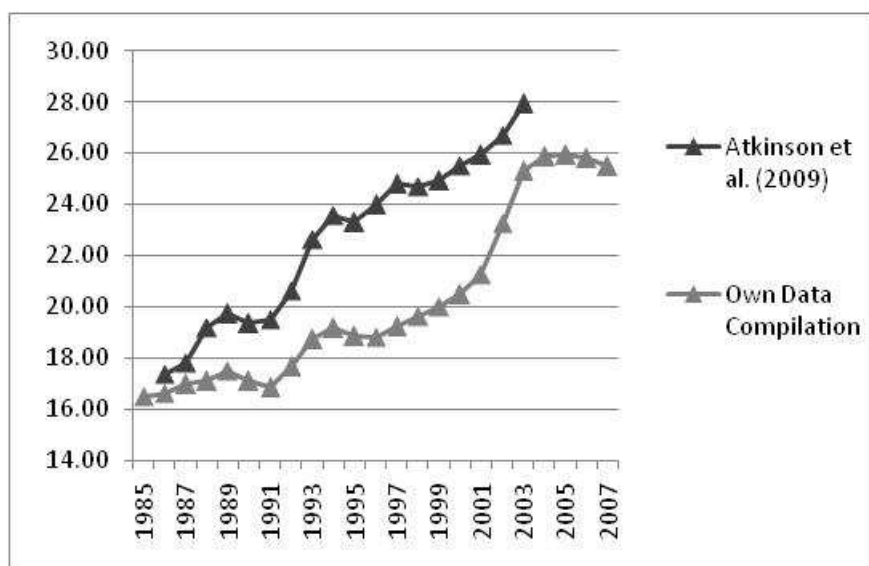
Sixth, as OECD (2010: 138) explains "[t]he published data on the distribution of household incomes in China is sparse. For urban areas, it is limited to showing average incomes in the bottom 5 and 10% of the income distribution and in the five quintile levels for urban households. For rural households, the data is presented differently, as the proportion of people with nominal incomes between different levels. The latter intervals are changed only infrequently despite a generally-increasing price level. In addition, these presentational differences make it difficult to add the rural and urban income distributions to obtain a national income distribution. In fact, the National Bureau of Statistics never presents data for the national distribution of income". To overcome these problems, the OECD adopts the method developed by Chotikapanich, Rao and Tang (2007) to transform urban and rural separated data into a continuous national household income distribution series. Unfortunately, it has been impossible to access that work, so we present urban household income separately. Although this situation limits analytical coverage, it may be justifiable *a posteriori* by the finding that the rise in the share of urban top 10% incomes' households is a principal factor in the overall increase in China's inequality.

Finally, it is necessary to be aware of the disparities between the different accountings of the Gini index published to date. These are partly attributable to the fact that the NBSCh had not published new official data for this variable since 2001, until it did again in January 2013, when it released a data series for the period 2003 to 2012. Before doing it, NBSCh had reported a value of 41.2 for 2001. Nevertheless, when it released new data in 2013, the value for 2003 was 47.9. In the series compilation available in the World Income Inequality Database of UNU-WIDER, the Gini index ranges from 16.0 to 29.5 for 1977-1980, and from 37.2 to 46.9 for 2002-2004. Compared to the original sources of the UNU-WIDER database's series, the data series presented by Ravallion and Chen (2007) is longer and more comprehensive. Based on NBS' both Rural and Urban Households Income surveys, this World Bank's research reports an increase in national inequality from 31.0 to 44.7 between 1981 and 2001, or from 28.0 to 39.6 if their adjustment for the differences in urban and rural costs of living is taken into account (*op.cit.*: 20)[17]. The surveys do not revise these latest

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[17] Comparing their own with other measurements, the OECD (2010: 139) states that its Gini estimates (obtained using the Chotikapanich, Rao and Tang (2007) method, already cited) "are substantially lower than previous estimates of inequality in China. In particular, they are about one fifth below those produced by Ravallion and Chen (2007). These authors had access to unpublished tabulation from the National Bureau of Statistics which may or may not explain part of the difference. Another difference pertains to use of different spatial price

figures when they adjust poverty figures to new purchasing power parity calculations (Ravallion and Chen, 2008); moreover, other sources available provide both lower and higher figures[18]. Accordingly, this study uses the original Ravallion and Chen data for 1981-2001 period and last data released by NBSCh for the period 2003 to 2007 (Table 1).

Tabla 1. China's Gini Index, 1978-2007

| Year | Gini index | Year | Gini index |
|------|-----------|------|-----------|
| 1978 | n.a. | 1979 | n.a. |
| 1980 | n.a. | 1981 | 31.0 |
| 1982 | 28.5 | 1983 | 28.3 |
| 1984 | 29.1 | 1985 | 29.0 |
| 1986 | 32.4 | 1987 | 32.4 |
| 1988 | 33.0 | 1989 | 35.2 |
| 1990 | 34.9 | 1991 | 37.1 |
| 1992 | 39.0 | 1993 | 42.0 |
| 1994 | 43.3 | 1995 | 41.5 |
| 1996 | 39.8 | 1997 | 39.8 |
| 1998 | 40.3 | 1999 | 41.6 |
| 2000 | 43.8 | 2001 | 44.7 |
| 2002 | n.a. | 2003 | 47.9 |
| 2004 | 47.3 | 2005 | 48.5 |
| 2006 | 48.7 | 2007 | 48.4 |

Source: From 1981 to 2001: Ravallion and Chen (2007); from 2003 to 2007: NBSCh (2013)

## 3. Agricultural Prices, Primary Distribution and Top Incomes Evolution in China, 1978-2007

As shown in Figure 1, China's high rates of economic growth have been accompanied by a continuing increase in income inequality during most of the period of economic reform. Only at the beginning of the period, between 1981 and 1985, did growth allow inequality to decrease. This decline was due to the favourable impact of rural reforms which introduced

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deflators. Ravallion and Chen calculate the cost of purchasing a basket of food typically consumed by households with incomes between the 15th and 25th percentile by province. This expenditure is then scaled to allow for non-food consumption. The resulting poverty line is turned into a price deflator by using the provincial rural and urban price indices. As the authors state, this is not an ideal procedure for measuring provincial cost of living indices for the average household. In contrast, the estimates presented here use provincial urban and rural price indices based on the consumption pattern of the average consumer".

Authors conclude that "[a]lthough inequality has increased markedly during the past two decades, especially in urban areas, the Gini coefficient does not appear that high by international standards (Figure 5.1 above). Overall, China's national Gini coefficient is below that of most major emerging market countries. The urban coefficient is lower than that in a number of OECD countries, especially once allowance is made for the fact that the Chinese data is measured on a per capita basis and the OECD data on an equivalence basis" (OECD, 2010: 141).

It can be noted, however, that the values obtained through Khan, Riskin *et al.* research on China's inequality, present figures that are even higher than those of Ravallion and Chen: 38.2 for 1988; 45.2 for 1995; 45.0 for 2002.

Meanwhile, the research of Li, Luo and Sicular (2011) gives a value for 2007 that ranges between 48.3 and 49.1 (including rural migrants living in cities, in the first case, or not doing it in the second), which approximate to that released by the NBSCh for that same year: 48.4.

Finally, all those calculations give a Gini index value lower than that obtained by the Chinese research institutes which studies' results are quoted in footnote 9.

[18] See previous footnote.

"household responsibility systems", enabling an increase of farmers' income and a corresponding decrease in the urban-rural gap. Thus, the Gini index, which at the beginning of the reform period was already at a comparatively low level, fell to a record low value of 28.3 points in 1983.

Since then, however, the reform measures restimulated urban industrial development, widening the gap once again and putting growth and inequality on a relatively parallel trajectory. The latter decreased markedly when growth fell between 1994 and 1997. During 1997-2001 growth rates were still at low levels, as an effect of the Asian Crisis. However, inequality continued to growth until 2006, when it reached its peak value of 48.7, because, among other factors, the disequalizing effect of both agricultural prices evolution, and the privatization of state enterprises.

As will be demonstrated, behind China's economic growth stand very high and sustained rates of investment. The investment itself has been financed by firtms' profits. At the same time, the profits have been realized through a distributive mechanism that has decreased wages. The distributive mechanism is based on government's control of agricultural prices, which has enlarged the urban-rural gap. It has generated a rural-urban migration flow that has pressed down industrial wages. This has made possible the enrichment of the richest Chinese urban families, through increasing profits. Finally, growth has been achieved on the basis of income inequality.

The Chinese government has intervened in grain markets throughout the whole reform period. During the first years of the reform, the household responsibility systems replaced the organization of agricultural production by the rural communes. Consequent productivity improvements were accompanied by increasing prices of agricultural products purchased by the state. Families were allowed to sell on the open market all production that exceeded the compulsory quotas sold to the state, with state-planned and market prices coexisting. The latter tended to remain above the former, so rural families began to increase sales on the market. At least until 1985, farmers' living standards improved, reducing urban-rural gap to a value of 1.86[19], lower than during Maoist era.

Step by step the share of commodities sold at market prices increased, until market became the main regulator of agricultural exchange since early 1990s. However, government still intervened in it by setting minimum prices for buying. At the end of the 1980s government was forced to take policies in order to contain inflation, so agricultural prices were cut. Since then, the terms of trade between agricultural and industrial products turned again to favour the latter. This affected negatively peasants' income, increasing urban-rural gap to 2.20 points in 1990 and to 2.86 in 1994.

In the meantime, communes' disappearance provoked the loss of access to basic services for rural households, principally, to health and education. Township and Village Enterprises had generated job opportunities in rural areas during the 1980s. The concentration of FDI in coastal cities, however, caused industrial development to be increasingly located in those cities. All that pushed rural dwellers out of the countryside. Following the evolution of agricultural prices, an intense migration flow from the countryside to urban areas was created since late 1980s (Figure 4). Thus, contrary to the view that the supply of excess rural labour has been led just by demographic trends and differences in sectoral productivities, it can be stated that "China's unlimited supply of labour was more a consequence of policy than a natural precondition of its development" (Hung, 2009: 21).

Figure 4: Agricultural Prices and Rural Migration

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[19] Own calculations based on data from NBSCh (various years (a)).
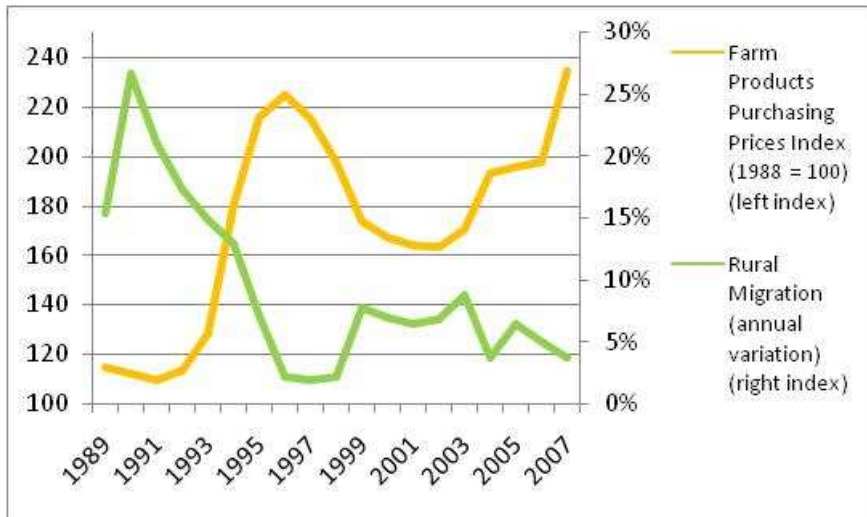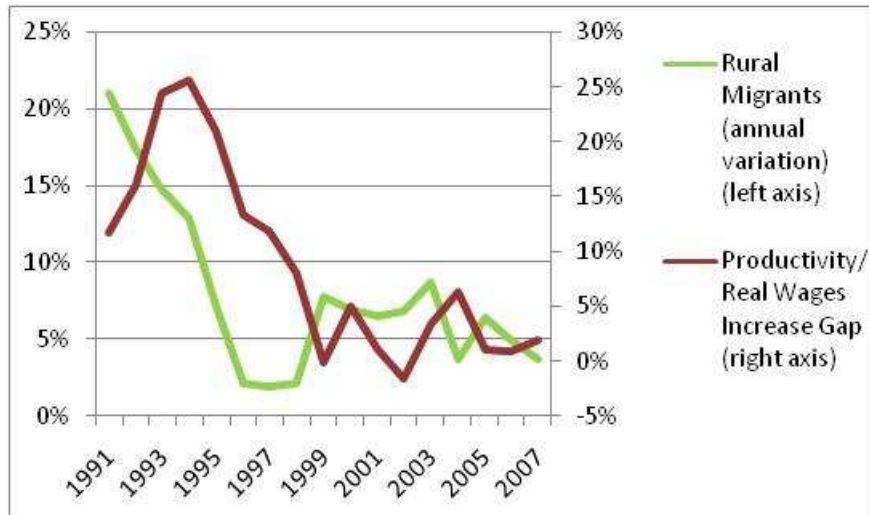
Sources: NBSCh (various years (a)) and own calculation based on Chan (n.d.)

Since early 1990s, the flow of rural migrant workers, controlled by means of the intervention in the grain markets, has become the key to press down industrial wages. The *hukou*, or household registration system, used during the Maoist era for controlling internal population movements, still made it practically impossible for a rural migrant to obtain an urban residence permit. Thus "undocumented" rural migrants to the cities, the labour force that enabled the expansion of urban industry during the 2000s (Wen, 2008), were deprived of public services and legal protection. Labour conditions for migrants worsened: higher informality rates, more number of working hours and lower salaries than the rest of urban workers (Cai, Du and Wang, n.d.; ILO, 2008).

Nevertheless, this has also affected negatively overall labour conditions in Chinese secondary and tertiary sectors. Privatization process of State-Owned Enterprises (SOEs) during later 1990s caused the gradual disappearance of the *danwei* system of employment protection. This allowed internal migration impact on labour market to press wages directly. Specifically, although real wages grew steadily in both industry and services, they did well below the rate of increase in productivity. While the latter increased 14.3% annually between 1991 and 2007, real wages grew by just 5.5% on average, creating a gap between their progresses (Figure 5)[20].

Figure 5: Rural Migration and Productivity-Wages Gap

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[20] Own calculations based on NBSCh (various years) data.

Thus, Chinese government's intervention in grain markets pushed migration from rural to urban areas up to 137 million in 2007[21]. This way it has held industrial wages to a lower rate of increase than productivity growth. Employment grew by 6.9% annually in the whole 1978-2007, while real wages in secondary and tertiary sectors did by an average of 5.5% between 1991 and 2007. However, since mid-1980s, wage share in national income has declined continuously due to the excess of productivity growth over wages increase, dropping to 42.5% in 2007. Consequently, government has been able to restrain that share and, so, the labour costs, by controlling agricultural prices. Finally, urban-rural gap has led to a falling share of wages in national income (Figure 6).

Figure 6: Urban-Rural Inequality and Labour Share
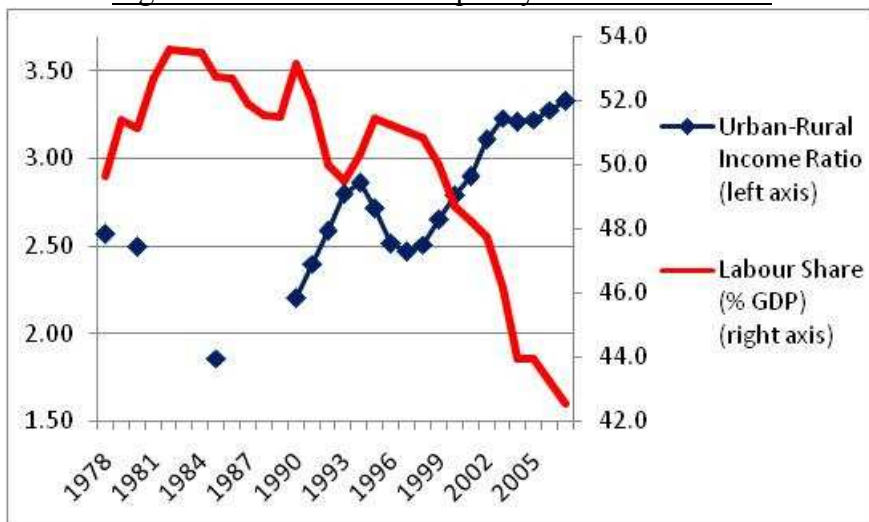
That level of the wage share is lower than that found in other developing economies. This fact could explain the huge inward flow of foreign direct investment (FDI) into the Chinese economy. However, it is worth bearing in mind that from 1996 to 2004, FDI accounted on average for only 10.6% of the Chinese economy's total gross capital

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[21] Data from Chan (n.d.).

formation[22]. Actually, the investment rate has achieved a thirty year average of 37.5% on GDP, a very high figure by international standards, thanks to China's high savings rate. Contrary to most analysts' claims, profits from Chinese businesses are the main source of these savings. Thus, productive investment in China is largely driven by reinvestment of those profits. Indeed, the main function of the distributive mechanism explained above has been to ensure profits are sufficiently high to sustain the intense accumulation process.

The wage restraint allowed by China's economy distribution scheme is also behind the high international competitiveness of Chinese exports. Net exports maintain a low level during most of the period studied here, exceeding 5% of GDP only since 2005. Total exports, however, have been an important demand side component for explaining growth at least since the early 1990s. Household consumption has gradually lost its relevance because of the worker's falling participation in national income. Thus, exports have become the main source of final consumption demand. Investment can be considered the main engine of growth. Nevertheless, the Chinese economy has become deeply dependent on external markets during recent decades. Finally, it is the interaction between those components, investment and export demand, which best explains the economy's expansion (Zhu and Kotz, 2010).

Therefore, to make the Chinese economy's fast-paced expansion possible, it has been essential that wages grow more slowly than productivity, allowing labour costs to drop. This has been achieved through the downward pressure on urban wages exerted by undocumented rural migrants. That phenomenon has generated: first, profits sufficient to ensure an average 37.5% rate of investment; and second, competitive price levels to allow Chinese export companies to conquer the world market. Finally, a pattern of "profit-led" growth has been set according to which the Chinese economy's expansion has followed the evolution of profits share in national income. When this share has increased, growth rates have done the same. When profits have lost share, growth rates have slowed down[23].

Following this growth pattern, China became the world's third largest economy in 2007 (second since 2011). At the same time, however, conditions have been also created to fuel overall inequality. As stated above, limited improvement in rural living conditions has pushed out rural workers, thereby holding down urban industrial wage increases. The share of wages in national income has clearly fallen; that of profits has risen. According to the theoretical contributions presented here, higher share of profit in primary distribution results in higher share of the incomes of the richest households in household distribution of income. In China the higher amount of income appropriated by both state and private enterprise has caused an increase of the richest 10% of the Chinese population share in disposable income. Effectively, the increase in capital share has driven the increase in top 10% incomes share (Figure 7).

<u>Figure 7: Capital Share and Top incomes</u>

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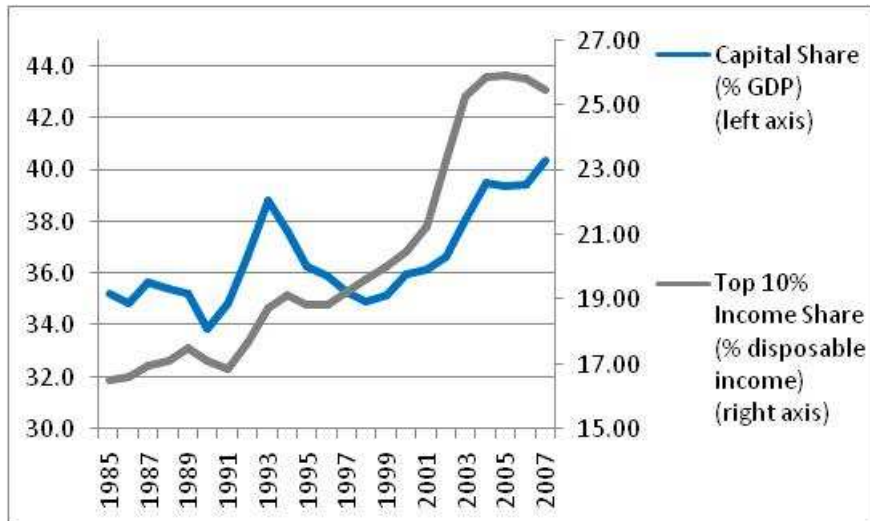
Source: Own calculations based on Hsueh and Li (1999), NBSCh (various years (a))
and NBSCh (various years (b)).

Rents have been channelled from firms' profits to top incomes shares. However, the mechanism through which those funds have been conducted is not completely clear. On one hand, benefits distributed as dividends are not the norm in large Chinese enterprises. On the other hand, according to what Wang and Woo (2010) deduct from their figures, corruption would be spread throughout the country. Nevertheless, *a priori*, corruption is not likely able to mobilize sufficient resources to explain such an increase in top incomes. The understatement of business and proprietors' incomes in China's household income survey makes difficult to determine the exact contribution of those components as a factor explaining the increase of top income share. However, the noticeable relationship between capital share and top incomes evolutions points to business profits as the main source of the enrichment of the richest families of the urban China, which have increasingly benefited by existing growth pattern (Figure 8).

Figure 8: Growth and Top Incomes
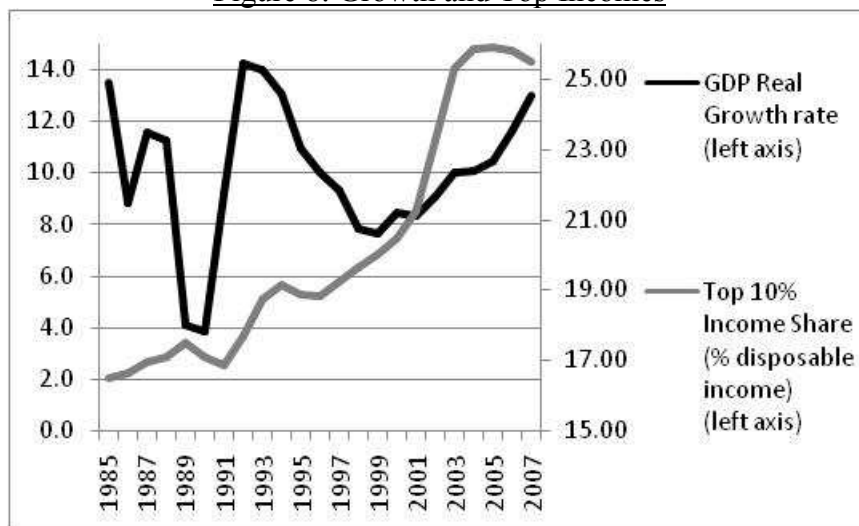


Source: Own calculations based on NBSCh (various years (a) and (b)).

As we have seen, that pattern of growth has been based on a distributive mechanism that links industrial wages to agricultural prices, through the down pressure exerted on the former by rural-urban migration. Top incomes urban families have hoarded the surplus

thereby created, driving the enlargement of urban-rural gap (Figure 9). Historically, the relationship of uneven development between rural and urban areas arises among economies at different levels of development. The stagnation of living standards in primary economies allows a process of growth that benefits their industrialized trading partners. In China this relationship has been established within the borders of a single country; the countryside works to enrich the city. Nevertheless, since urban industrial workers also pay for the enrichment of business proprietors, urban inequalities have also grown. Indeed, the evolution of labour share may ultimately account for the overall rise in China's inequality (Figure 10). Finally, this inequality has become a distributive conflict between the richest urban households against peasants and urban workers.

Figure 9: Top Incomes and Urban-Rural Inequality
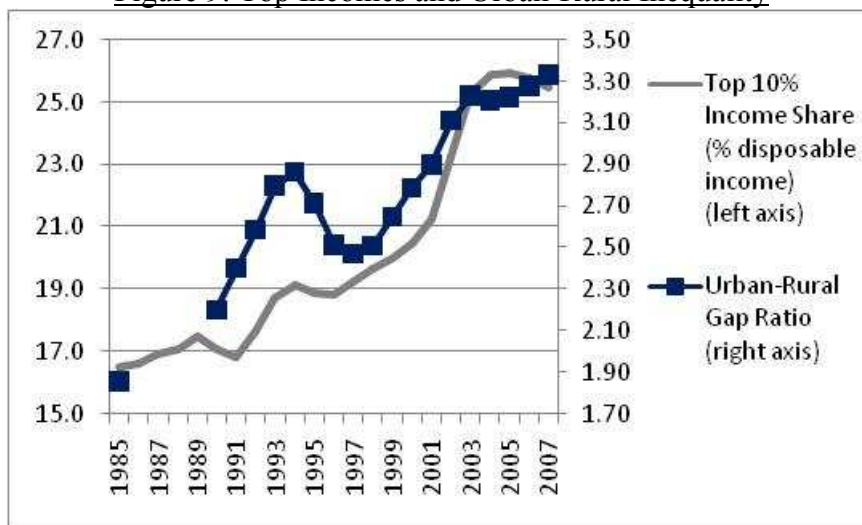


Source: Own calculations based on NBSCh (various years (a) and (b)).

Figure 10: China's Primary and Personal Distributions of Income (1978-2007)
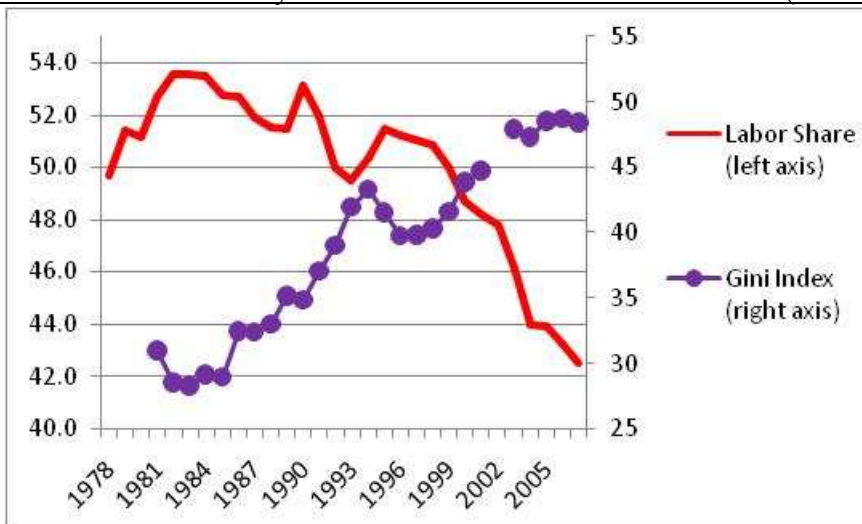


Source: Own calculations based on Hsueh and Li (1999) and NBSCh (various years (a)),
Ravallion and Chen (2007) and NBSCh (2013)

**Conclusions**

In summary, the success of China's economic reform has been based on a disequalizing mechanism, made possible by government's limitation of agricultural prices,

which has pushed out rural-urban migration. This mechanism has allowed companies (SOEs and private, Chinese and foreign) to increase surplus appropriations in order to maintain high investment rates. The mechanism has also allowed the richest population to hoard a higher proportion of disposable income. The increase in urban top income shares ultimately explains the increase in urban-rural inequality, meanwhile the loss of wages' share explains the general increase in the Gini coefficient.

It is often claimed that the trend to greater inequality could be palliated by a mix of redistributive policies, which would then inflect the Chinese Kuznets Curve upward. This is not only the view of some academicians (Riskin, 2007; Wong, 2007), but also of leading international institutions working in China (World Bank, 2003; UNDP, 2005 and 2008). Following their advice, the Chinese government has implemented the Western Development Strategy since 2000. At the same time it has widened the scope of welfare assistance in both rural and urban areas in recent years (Herd, 2010: 10-12). The regressive taxation system was modified by the 2006 abolition of the agricultural tax. A new Labour Contract Law was adopted in 2008. A health care reform was approved in 2009. A Social Security Law was sanctioned in 2011, while the individual income tax threshold has been raised. In addition, the 12th Five Year Plan (2011-2015) has called on provincial governments to increase the minimum wages to 40% of the average wage.

In addition, in January 2013 the government unveiled the guidelines of a reform of income distribution mechanisms including: proceeds guarantee for farmers which lands contracts are confiscated; help for migrant workers to get registered as urban residents; increase of minimum purchase prices of agricultural products; increase of civil servants salaries; tax burden cut for small firms; promotion of dividends payments by listed companies; increasing liberalization of interest rates; expansion of social security expenditure; increasing control over officials incomes and assets; limits to SOEs staff's wages growth; rising SOEs percentage of profits to be paid to state by 5% since 2015 in order to finance social security; and a gradual expansion of experimental property tax, as well as taxes on entertainment activities and luxury product consumption, and inheritance. Finally, the exemption from personal income taxes, on dividends and bonuses obtained in China by for foreigners will be finished[24].

All those measures seek ultimately to prevent social instability, by constructing a "harmonious society", and, at the same time, to develop "a structural reform to rebalance the sources of growth" (ADB, 2012: 133). In the meantime, however, domestic demand has been stimulated by means of a 4 trillion renminbi stimulus package approved in 2008. Thanks to these measures, Chinese economy has been able, in the short term, to maintain high, if declining, growth rates. Paired with government's intervention in market to raise grain prices, which has increased steadily every year between 2007 and 2011, except in 2009, the effect has been to increase rural relative to urban incomes, narrowing urban-rural gap from 3.31 points in 2007 to 3.13 in 2011, and to reduce Gini index from its peak of 49.1 points in 2009 to 47.4 in 2012.

The resulting decrease in rural-urban migration flows (which, however, still increased to 145 million people in 2009) has caused coastal businesses to complain of labour shortages. Indeed, according to some accounts the wages of migrant urban workers may have risen at high rates from 2008 through 2010 (Cai, 2011). However, this has not been enough neither for increase labour share (which still felt between 2009 and 2011) in order to rebalance the sources of growth (which dependence on investment rates increased), nor for ensuring social instability. Worker and peasant struggles have surfaced during the last five years. These

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[24] See China Daily, 6th February 2013: "China to Reform Income Distribution": http://www.chinadaily.com.cn/china/2013-02/06/content_16204722.htm.

range from coastal factory strikes demanding improved conditions and remuneration to village protests against land expropriations by corrupt local governments. New methods of organization have succeeded in achieving these objectives, at least in part (Au and Bai, 2012). Meanwhile spreading business resistance to the implementation of the new Labour Law is pressuring the Chinese government to weaken its provisions

According to Chen *et al.* (2010: 25), "[t]here are two ways to reduce income equality between urban and rural areas. The first is to increase farmers' income and thus reduce the urban-rural income gap. (…)The second way is to enhance urbanisation", but "speeding up urbanisation" would be "the key factor in reducing urban-rural income inequality" (*ibid.*)[25]. Thus, according to them, the solution to China's high inequality rests on the speeding up of the process leading to Lewis turning point and Kuznets curve inflection, a process that is already in progress, as claimed by other authors (Das and N'Diaye, 2013). Those claims are based on the assertion than "rural income cannot be increased significantly" (*Chen et al.*, 2010: 25). However, according to this paper's analysis, if Chinese growth model is wanted to be reoriented, it would be necessary to further the measures already taken, by still pushing up agricultural prices and by using additional policy tools to increase real wage over productivity improvements. If growth pattern is to be rebalanced and a harmonious society is to be created, those are necessary measures.

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[25] Similarly, Gong and Yang (2010) conclude that "the fundamental solution to the worsening situation of income distribution in China lies in the maintenance of high-speed economic growth and a quicker shift of the dual economy to urbanization and industrialization so as to absorb surplus rural labour as quickly as possible". Likewise, Zhu and Wan (2012) also assert that: "[w]hat is required is that government initiatives, including fiscal policy and other social–economic policies, must be geared towards facilitating urban settlement of rural residents".

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