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# How to Generate and Sustain the Highest Income Inequality in Latin America – the Case of Colombia 2000-2010

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#### **Abstract**

The main purpose of this paper was to identify the economic factors keeping income inequality high in Colombia, with a focus on the decade between 2000 and 2010. To this end, three determinants were analysed; two of them contributing primarily to income inequality (land concentration and functional income distribution) and one contributing secondarily (the fiscal system). Since income inequality is a measure of the degree of disparity or the gap between high and low income households in a country, the previous factors were evaluated from the perspective of how they affected the highest and lowest quintiles in the income distribution. The results of the analysis revealed that current income inequality is strongly rooted in land inequality, as it has perpetuated poverty, affected human capital accumulation and has led to an increased proportion of people in poverty and extreme poverty conditions. The functional income distribution shows a very unbalanced distribution among profit and wage shares in favour of profits, thus impacting the highest income quintile. The analysis also shows that fiscal policies led to a slight reduction of the Gini coefficient in the last decade with public expenditure benefiting the highest income quintile in Colombia. Together, the three elements discussed in this paper are determining factors when explaining the pattern of income inequality in Colombia in the last decade.

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#### 1. Introduction

During the last decade the top income quintile of Colombia received, on average, more than 60% of the country's gross domestic product - GDP. The share received by the richest 10% of the country was 50 times the income received by the poorest 10% (World Development Indicators, 2012). These statistics might be considered unjust: the top 10% is not necessarily contributing 50 times more than the bottom 10% to the GDP, nor are they working 50 times harder.

Colombia is a higher middle income country with a GDP of 3,218 US-\$ per capita in 2010. The average annual growth of GDP from 2000-2010 was fairly strong (4.12%). In 2010, the official national poverty rate was 37.2%% of the population. Absolute poverty, according to the World Bank threshold of 1.25 US-\$ per day (PPP), was 11.46% in 2000 and 3.78% in 2010. Colombia's high Gini coefficient has to be seen in this context.

Recent research indicates that income inequality can be a fundamental obstacle towards development and growth. Not only is it unacceptable from an ethical point of view, but it is also inefficient in macroeconomic terms as it reduces domestic demand, constrains national saving, affects human capital formation and productivity, and influences poverty levels. Unfortunately, income inequality has historically been a trait of Colombia's development. Already in the sixties, inequality, as measured by the Gini coefficient, was 0.56. (Bonilla Mejía, 2008:4) Five decades later income equality has not improved. By the end of 2010 the Gini index was still 0.56. This situation is a main concern for the country; hence, development plans and strategies aimed at fighting inequality and poverty have been pushed to the top of the agenda, but without major success so far. Strikingly, Colombia is currently the most unequal country in Latin America in terms of the Gini coefficient.

A problem cannot be solved if the deeper fundamental causes are not addressed. The lack of success in the fight against inequality seems to indicate that these causes are still misunderstood. Most studies about income inequality in the country focus on isolated variables without offering a comprehensive perspective of all the relevant contributing factors. Furthermore, they exclude the analysis of the functional income distribution, thus detaching income from when it is originated. However, revenues are primarily based on

productive activities, and it is also in this part of the process where the core determinants of inequality should be found. This thesis examines the following question: what are the main economic factors that have contributed to a high level of income inequality in Colombia (2000-2010)? The research argues that the extreme concentration of land, the functional income distribution and the fiscal system are the main reasons keeping inequality levels high in Colombia, as they strongly affect the lowest and the highest quintiles in the income distribution. Other potential explanations for the stubbornly high inequality, such as the wage bargaining system or the military internal conflict, will not be the main focus of this work.

The remainder of this paper is structured as follows: chapter 2 introduces income inequality theories, followed by a presentation of the main inequality and poverty indicators in the country and their behavior in the last decade (chapter 3). With this foundation, chapter 4 is divided in four sections: the first two present two factors contributing primarily to inequality (land concentration and functional income distribution); the third section introduces the fiscal system and how it also contributes to inequality. The last section will put forward the role of each of these determinants in keeping income inequality high. Chapter 5 concludes.

#### 2. Theoretical Background

Economic development literature on inequality is divided among a) those supporting a positive relationship between inequality and growth and b) those predicting an inverse relationship, that is, that higher levels of inequality result in lower levels of growth and development.

The standard theory of inequality as a positive condition for growth is related to the Kuznets curve. Kuznets's main hypothesis was that income and inequality are inversely related ("inverted U shape"), thus, income inequality should grow at the beginning of development but lessen as countries grow and pass a certain threshold. (Kuznets, 1955) In this case, high inequality, even if increasing, signals positive development as it reflects skill premiums, higher wages and more income being directed to high-saving capitalists (higher profits) that will end up in higher investments for the economy. Lewis previously presented this positive view of inequality in 1954. He argued that capital accumulation in

the industrial sector was essential for modernisation and growth. Capital accumulation would result in an increase in incomes and inequality, but those were only indicators of development and growth. Some recent studies also support this line of thought. Galor and Tsiddon (1996) indicate that periods of technological inventions are characterised by rising inequality, since there will be a concentration of high skilled workers in the advanced sectors. In time, this would lead to technological progress and economic growth. Forbes (2000) also shows that an increase in inequality is positively linked to economic growth in the short and medium term.

In opposition to these studies new empirical and theoretical research suggests an inverse relationship between inequality and growth, where industrialisation is not the reason behind higher or lower levels of inequality. Deininger and Squire (1998) argue that long-term growth can be hampered by an unequal distribution of income. By analysing cross-country data, they reached the conclusion that initial asset inequality, measured in terms of land distribution, strongly impacts economic growth in developing countries. Moreover, that inequality negatively affects the income growth of poorer populations but not of the richer. Solokoff and Engerman (2000) indicate that initial endowments predict inequality, and that inequality affects the quality of institutions, reduces human capital investment and leads to lack of growth and underdevelopment. Carter (2000) concludes that inequality hampers growth by lowering human capital formation, the link being the existence of credit market imperfections. In line with Carter, Easterly (2007) finds that inequality not only affects growth, but also other important elements for development such as education and institutions. He argues that these are mechanisms that, in the presence of high inequality levels, can reduce income per capita. Goñi, López and Servén (2008) indicate that high inequality can strongly pull down development and prosperity. They evaluate inequality as a reflection of fiscal policies that have failed in the execution of its redistribution function. Luebker (2011) agrees and argues that governments can shape the way income is distributed through fiscal tools such as taxes and transfers. He also indicates that the increase in the participation of profits and the decrease of the wage share in national incomes impact the market income distribution, resulting in a higher income inequality. Checchi and García-Peñaloza (2008) also refer to the labor share in the functional distribution of income, but by examining the impact of labor market institutions on inequality.

From these approaches, some important issues derive for the research. Firstly, have growth and inequality in the country in the last decade followed the standard theory, as depicted by the Kuznets curve? Secondly, are there factors other than industrialisation keeping inequality so high in Colombia?

Londoño (1995) showed that the Kuznets's curve applied in some way to Colombia between 1938 and 1988 (the Gini Index grew from 0.45 to 0.55 in 1964, and fell to a level of 0.47 in 1988). He argues that the reason behind this was not the inter-sectoral migration model presented by Kuznets, but the changes in the returns to education. Nevertheless, if the inverted U of Kuznets continued to be followed, and the country reached "development" around 1988, there would be no arguments to justify the further increase in inequality levels after that year. Furthermore, the Kuznets model suggests that as countries industrialise, inequality grows. However, industrialisation, measured by the gross capital formation as percentage of the GDP, is not high in the country (23% in 2010) and has remained low in the last decade (19% on average) (World Development Indicators-WDI, 2012). Hence, the recent levels of inequality in the country cannot be explained through the lenses of Kuznets.

This research will follow the more recent economic development theories and empirical studies that demonstrate inequality can hamper growth, as well as their arguments towards developing an understanding of the economic factors making Colombia the most unequal country in the region.

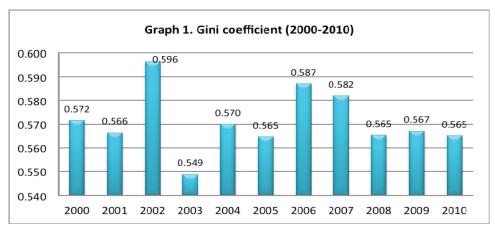
#### 3. Empirical Indicators

## 3.1. Income Inequality

Overall, inequality as measured by the Gini index decreased between 2000 and 2010, from 0.57 to 0.56. However this has been a mild reduction as the average is 0.57 for the analysed period. In 2002, it reached the highest value of the series, most surely as a lagged effect of the poor economic growth experienced by the country in the previous years<sup>1</sup>.

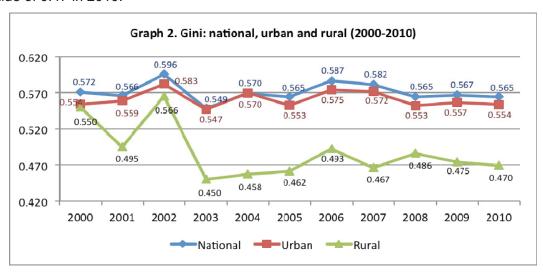
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<sup>&</sup>lt;sup>1</sup> By the end of the nineties, economic growth strongly deteriorated in the country. Oil findings at the beginning of the decade and a massive inflow of capital led to an appreciation of the exchange rate. This, united to high public spending levels, developed into a series of macroeconomic disequilibria. The



Source: SEDLAC (CEDLAS and The World Bank), 2012.

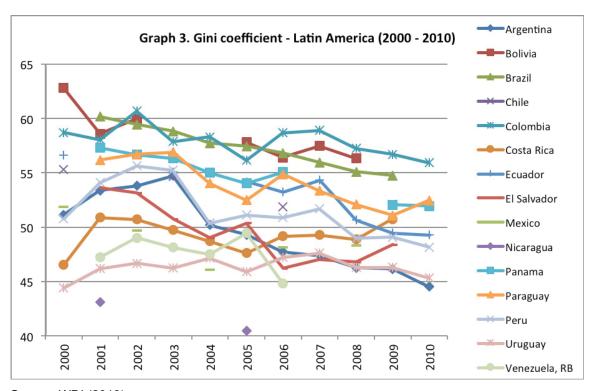
The concentration of income is more pronounced in urban than in rural areas. In urban areas, the Gini decreased between 2002 and 2005, from 0.58 to 0.55. Between 2005 and 2007 it increased again, up to 0.57, to then recover its decreasing trend and reach a value of 0.55. In rural areas, an important reduction of the index can be observed between the years 2002 to 2005 (from 0.56 to 0.46). From this year onwards the tendency reverts, and the coefficient reaches a value of 0.49. After this, the coefficient decreases and reaches a value of 0.47 in 2010.



Source: SEDLAC (2012).

international crisis that unleashed after the Russian moratorium in August 1998, found a vulnerable country in its fiscal accounts, and with a private sector deeply indebted both domestically and abroad. Hence, an unexpected suspension of the external financing led to a contraction of the GDP of 4.3 percentage points in 1999. The economic recovery after this was slow: in 2000 the economy grew 2.9%, only 1.4% in 2001 and 1.7% in 2002 (Kalmanovitz, 2010).

Colombia ranks as the most unequal country in Latin America since 2006 (Graph 3). That position used to be occupied by Bolivia, but they have managed to continuously reduce their Gini coefficient from more than 0.60 in 2001 to 0.563 in 2008.



Source: WDI (2013).

#### 3.2. Income Shares per Quintiles

Another way of measuring inequality is by identifying the percentage share of income or consumption that accrues to subgroups of a population. This can be indicated by deciles or quintiles (WDI, 2012). The analysis of the income distribution per quintiles in Colombia shows that the richest 20% of the population kept more than 60% of the country's GDP in 2010, while the poorest quintile received 3%. The highest quintile received the maximum share in 2002 (64.11%). Even more striking is the share acquired by the richest 10%. During this period they appropriated about 45% of the national income. This, compared to the share received by the bottom 40% of the population (10% or less during this period), is a strong indicator that the real concentration of income is found in these first ten percentiles of recipients.

The gap between the richest and the poorest deciles is very wide: the average income ratio between the first and tenth deciles (Q10/Q1) was 93.5 in the period. The trend is positive as this ratio has been decreasing since 2002; however, the gap in itself is still too wide.

An analysis of the intermediate quintiles (Q2, Q3, Q4) shows that there is strong homogeneity among them. Throughout the last decade, they managed to appropriate about 36% of the national income in a very uniform way (their minimum share was 34.04% and their maximum 36.89%). Also interesting is that the gaps amid these quintiles were not so pronounced, but between the richest quintile and the following one (Q4), the difference is considerable: Q5 exceeds Q4 by more than 220% every year.

Table 1. Income Distribution per quintiles and deciles (2002 – 2010)

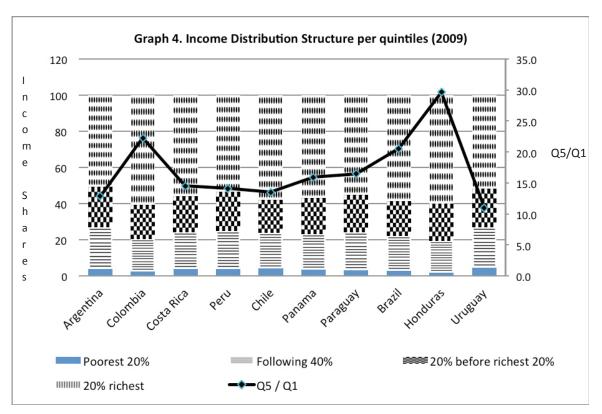
Income share / Year	2002	2003	2004	2005	2008	2009	2010
Income share held by lowest 10%	0.26	0.34	0.43	0.72	0.65	0.76	0.87
Income share held by lowest 20%	1.85	2.07	2.16	2.79	2.52	2.73	3
Income share held by second 20%	6.1	6.75	6.62	7.11	6.53	6.71	6.83
Income share held by third 20%	10.34	11.23	10.97	11.24	11.11	11.1	11.23
Income share held by fourth 20%	17.6	18.41	18.21	18.54	18.79	18.75	18.79
Income share held by highest 20%	64.11	61.54	62.04	60.32	61.05	60.71	60.15
Income share held by highest 10%	48.93	45.92	46.49	44.97	45.24	44.98	44.43
Q5 / Q1	34.7	29.7	28.7	21.6	24.2	22.2	20.1
Q10 / Q1	168.7	135.1	108.1	62.5	69.6	59.2	51.1

Source: WDI (2012)2.

Income distribution per quintiles in Colombia is also unequal when compared to other Latin American countries (Graph 4). One important characteristic of the region is the high share of income captured by the richest 20% of the population. On average, this group received 56% of the income in 2009. On the other extreme, the poorest 20% captured around 3.5%. This implies that, in the region, Q5 received about 16 times the income received by Q1. However, this ratio is lower than the Colombian ratio for that year (22.2).

<sup>2</sup> No information available for 2006-2007. Data jumps from 2005 to 2008 as there was a change in the methodology to measure inequality and poverty in the country in 2007. The experts doing the research could not fill the information voids for 2006 and 2007.

Compared to individual countries, this ratio is also higher: the income ratio between Q5 and Q1 was 12.8 for Argentina, 10.9 for Uruguay, 13.5 for Chile, 14.5 for Costa Rica, 14.1 for Peru and 16.4 for Paraguay. The only countries with a ratio almost as high or higher were Brazil (20.5) and Honduras (29.6).



Source: own creation with data from WDI (2012)

# 4. Main Determinants for Income Inequality 4.1. Land Distribution

Historically, land ownership inequality has been considered one of the underlying reasons behind high levels of income inequality, particularly in the lower income countries of the fifties and sixties where agriculture was the prevailing sector (Carter, 2000). Easterly (2007:1) stated that "agricultural endowments predict inequality and that structural inequality predicts development". Whereas land concentration is the traditional explanation for high income inequality levels, Carter (2000) has found that current inequality tendencies can also be rooted in the agricultural structure.

In order to understand the role of Colombia's land distribution in maintaining income inequality, two elements will be considered: first, the relation between land tenancy, the internal conflict and the displaced population, which constitutes a large share of the poorest quintile in the income distribution; second, the effect of initial land inequality on human capital accumulation and income inequality. For the latter, this chapter will draw heavily on Carter (2000). He proposes that disparities in land ownership can have long-lasting and possibly increasing effects on income inequality, as they can develop exclusive growth patterns that deepen inequality over time.

#### 4.1.1. Some facts about land inequality in Colombia

As mentioned in the previous chapter, various economic and social indicators show the country's strong inequality in the distribution of wealth. Nonetheless, the most impressive reflection of this inequality is in the land concentration: 52.2% of large properties are owned by 1.15% of the population, while the rest only have small and medium possessions<sup>3</sup>. Micro and small landholders, which represent 93.03% of the owners, have access to only 29.6% of the land, while medium farmers (5.83% of all landholders) own 18.2% (United Nations Development Programme-UNDP, 2011).

These extreme levels of concentration are reflected in the Gini coefficient of land distribution. In the last twenty years, land ownership inequality has increased: the land Gini went from 0.79 in 1988 to 0.80 in 2001 and 0.86 in 2010 (Perry, 2010). The last increase is especially alarming: 0.06 points in just one decade.

But why would land concentration represent a big problem for Colombia, an upper middle income country, where the contribution of agriculture to GDP has decreased from 29.3% in 1965 to 7.03% in 2010 (WDI, 2012)? Carter (2000:2) proposes that "the direct

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<sup>&</sup>lt;sup>3</sup> The Government has defined small properties as a Family Farm Unit (UAF). A UAF is defined as the basic business of agricultural production, livestock, aquaculture or forestry, with a size that allows the household to obtain remuneration for their work and have a surplus that contributes to their wealth formation. It is assumed that the amount of income required to satisfy these conditions is two legal minimum wages (US\$ 632 in 2012). Under this definition, a micro property is a property of half a UAF or less, small properties are between half and two UAF, medium properties are between two and 10 UAF and large properties are bigger than 10 UAF (UNDP, 2011).

explanatory power of land ownership inequality should diminish with the reduction in the share of national income generated in the agricultural sector". Thus, in countries where the participation of the agrarian sector in the economy has strongly diminished, the direct consequences of land inequality should lose power and reduce overall inequality in time. However, this is clearly not the situation for what is at present the most unequal country in Latin America.

#### 4.1.2. What we need to understand about land in Colombia

Land ownership concentration has been a historical feature of the Colombian agricultural sector. After the country's independence in 1820, a dual landholding structure had developed which consisted of latifundios (large landholdings) dependent on agricultural labourers and minifundios (smallholdings) that constituted the rural subsistence economy. In time, large landholdings grew, as well as land concentration (United States Agency for International Development, 2010).

There have been several attempts to conduct an agrarian reform in the country, the first one of them in the 1930s, but all have encountered a strong resistance from the large landholders. "All the agrarian reforms that have been initiated in the country have failed because landowners opposed them". (León, 2010) Some progress was achieved in the 1960s, in terms of allocating land to peasants, but this attempt was also frustrated in 1971 when the Government gave in to the pressure from landowners and signed the "Pacto de Chicoral". It allowed landholders to keep their lands in exchange for the payment of an additional tax on their properties (Camacho, 2010).

Not only have the agrarian reforms failed, but also the model of agrarian development has been deeply unequal. The benefits coming from the modernisation of the rural sector have mainly been accrued by the large landholders, to the detriment of small landholders. In the last decade, Colombian public policy focused on providing subsidies to large landowners. The result has been the concentration of public resources in the hands of a few, increasing the disparities in the rural society and diminishing the chances for the greater share of the population to partake of the benefits of development. The possibility of obtaining productivity gains via the use of technological innovations has allowed the agrarian businessmen to accumulate more capital, but those gains did not improve the

living standards of rural households. The economic power of the elite reinforced their political power: agrarian elites have historically been overrepresented in the public political election bodies while the peasantry has been underrepresented. This traditional political hegemony restricts the access to free and competitive elections, and impedes the political recognition of the peasantry, as the economic interests are defined by the land oligarchy (UNDP, 2011).

#### 4.1.3. Land, conflict, displacement and inequality

As a result of the public policies and the economic processes that have taken place in the agrarian sector, high land concentration has become the main characteristic of the country's agriculture. But why the strong deterioration in land inequality levels in the last two decades? In the case of Colombia, the internal conflict that the country has experienced in the last six decades plays an important role.

The boom of drug trafficking, the strengthening of the guerrilla and the emergence of the paramilitary that took place in the 1980s has led to a massive internal migration. These groups force people out of their lands and then use the possessions to strengthen their own local power, increase their personal patrimony and control areas that are strategic for the war or for drug trafficking (García Gutiérrez, n.d.). In this sense, the term "accumulation by dispossession" used by the Marxist geographer David Harvey fully applies to the Colombian case. He used this term to refer to those policies that centralise the power and wealth of a few people. According to him, what permits this accumulation by dispossession is the release of a set of assets, including labour force, to a very low cost or no cost at all (Mantilla Quijano, 2010:2).

Until May 2011, more than 3.7 million people were registered as having been forced to abandon their homes (UNDP, 2011). According to the Attorney General's Office, about 76% of the displaced people were related to land as owners, occupants or holders. This implies that approximately 2 million hectares have been taken away from their legitimate owners, worsening land concentration (León, 2010). On a study about the agrarian policy in Colombia, Deininger and Lavadenz (2004:2) argue that "the high inequality in land tenancy is a factor that significantly increases the number of displaced people". This

argument is supported by the high percentage of affected households that had access to land before being obliged to abandon their places of origin.

But how does displacement affect the current income inequality levels? As previously mentioned, around 3.7 million people have been forced to abandon their lands and homes. According to the UNDP report (2011), 84% of them come from rural areas and 16% from urban areas. From the rural displaced, about 90% had no formal land titles, and with no assets at all, this equates to about 2.79 million people being added to the rows of urban poor in the country. This landlessness of the poor affects the lowest quintile in the income distribution: the total population of Colombia is about 46 million people, thus, the displaced without assets represent 6.08% of the total. This implies that 30.4% of the population in the poorest quintile is constituted by rural displaced people. The situation gets worse if we consider that forced displacement is growing by 150.000 people per year (Caracol Radio, 2010).

A study about the effects of displacement developed by Ibáñez and Moya in 2006 reveals that forced migration has strongly impacted the income and consumption of the affected families: in terms of income, they are barely over the national extreme poverty line of 3.29 dollars per day (PPP). Different elements are related to this situation. For instance, the study indicates that the school attendance rate of the displaced population is even lower than that of the urban poor and extreme poor<sup>4</sup>. This leads to a lower human capital accumulation, which together with their agricultural vocation limits their formal insertion in the labour market <sup>5</sup>. Furthermore, displaced households are forced to sacrifice their children's education by pressuring them to work, compromising their chances of overcoming their vulnerability, and becoming another mechanism for the intergenerational transmission of poverty.

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<sup>&</sup>lt;sup>4</sup> For example, in 2003, there was a higher proportion of illiterate Heads of household among the displaced population than in the urban poor. In the places of origin, their literacy rates were higher than rural poor and extreme poor, but the situation changes in the cities they arrive to: 24% of the displaced Heads of household are illiterate, in comparison to the rate of 10% held by of poor urban Heads of household and 16% of the urban extreme poor (Ibañez and Moya, 2006:15).

<sup>&</sup>lt;sup>5</sup> Urban labour markets have a very low demand for agricultural skills, thus forcing the displaced population to change their occupation and work in informal jobs under precarious conditions.

Some could counter-argue that the strong internal migration is a consequence of increased productivity in agriculture and that it would have occurred with any kind of land distribution: when agriculture is very efficient, it allows a small number of agricultural workers to feed whole countries. If this were the case for Colombia, the excess of rural population would have needed to migrate to the cities in search of job opportunities. However, agriculture is not particularly efficient in the country. Agricultural labour productivity, for instance, is lower in Colombia than in developed countries and other countries in the region. Table 2 shows the value added per agricultural worker in different countries. In 2009, this value was US\$2,862 in Colombia, while in the United States it was US\$49,661 and US\$10,064 in Argentina. This represents a productivity gap of 17 and 3.5 times, respectively.

**Table 2. Agricultural Productivity (2009)** 

Country	Agriculture value added per worker (constant 2000 US\$)
United States	49,661
United Kingdom	26,330
Japan	48,794
Colombia	2,862
Argentina	10,064
Brazil	3,770
Chile	6,408
Latin America &	2.410
Caribbean	3,418
OECD	15,305

Source: WDI (2012)

Moreover, the rural productive structure is characterised by a high underutilisation of the land. In 2009, 21.5 million hectares were suitable for agriculture, but only 22.7% (4.9 million hectares) were used for this end. Instead, there is a constant expansion of unproductive animal husbandry: 39.2 million hectares are used for pasture, from which 31.6 million are used for cattle. This territory is 10.6 million hectares bigger than the land suitable for agriculture but the amount of milk and meat currently produced could be obtained with half the territory they occupy (UNDP, 2011).

Cattle husbandry utilises large areas of land, which would otherwise be suitable for agriculture, reducing the opportunities for small and medium landowners. Furthermore,

according to Todaro and Smith (2003:433), the yield per unit of land cultivated in latifundios is below the yield of minifundios and medium-size farms in Colombia.

The idea of latifundios being less productive than minifundios has been studied by Todaro and Smith (2003). They indicate that "the economic and social ramifications of heavy land concentration in the hands of a few large landowners are compounded by the relative inefficiency of latifundios in comparison with other Latin American farm organisations" and that family farms and medium-sized farms "use a more efficient balance between labour and land" (Todaro and Smith, 2003:433)<sup>6</sup>. This statement could be weakened if highly concentrated agriculture, that is, latifundia, had increased productivity in the sector. Unfortunately, it is not the case. Table 3 shows the evolution of the value added per agricultural worker in Colombia and other Latin American countries during the last decade. On average, agricultural productivity has increased in the country only 2.16% p.a., locating the country under the Latin American average of 3.51% for the same period and way below the average of countries like Brazil (5.99%) and Argentina (4.13%).

Table 3. Changes in agricultural productivity (2000-2010)

Country	Growth Rate - Agricultural value added per worker (%)											
Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Argentina	-	1.19	-2.08	7.09	-1.26	11.42	2.90	10.49	-1.99	-15.2	28.75	4.13
Brazil	-	7.58	7.48	7.73	3.42	2.18	6.96	7.23	8.89	-0.67	9.08	5.99
Chile	-	7.09	7.38	2.41	9.09	3.38	4.05	5.79	3.87	-5.43	2.62	4.03
Colombia	-	1.72	4.53	3.24	3.25	2.39	3	3.35	-0.31	0.00	0.42	2.16
Latin America & Caribbean	-	3.36	3.14	4.87	2.22	2.97	4.28	5.79	3.68	-2.58	7.31	3.51
Venezuela	-	2.92	-0.43	-0.69	6.12	11.39	2.50	3.40	6.70	-1.05	0.25	3.11

Source: WDI (2012).

The lower level of agricultural productivity and the fact that latifundistas possess the majority of the land, without a positive effective on the sector's productivity, indicate that productivity growth is not the underlying reason behind the high number of displaced people in Colombia.

<sup>6</sup> They indicate that these differences in productivity can be explained by the fact that large landholders value their lands for the "power and prestige they bring" and not for their capacity to produce. Besides, the transaction costs are higher in latifundios (the cost of hiring somebody to supervise the hired labour is higher than the cost of "using family labour on peasant farms" (Todaro and Smith, 2003:434).

#### 4.1.4. The latifundia rationale

Empirical evidence shows that in Colombia cattle husbandry is extremely less profitable than food production. On average, "one hectare of extensive cattle husbandry produces around US\$150 of annual net income, whilst an hectare of cultivated land produces between US\$1,000 and US\$2,500 in the same year". (PNUD, 2008: 5) Why would large landowners choose to invest in cattle instead of food crops, despite the former's low economic returns? Why would they care so little about maximising profits? The answer lies both in the rationale of latifundistas and in the laws and policies that eased the way for cattle ranchers to amalgamate land as a way to accumulate capital (Richani, 2012).

In Colombia, having large extensions of land is a sign of power and social status, and cattle husbandry is a way to acquire more and more land, which in time results in increased prestige and political influence. But political power, prestige and control are goals that require the existence of certain policies and regulations to make them possible. As previously mentioned, governmental policies have been biased towards large landowners in the country, For example, credit allocation policies have been discriminative of small farmers and "tax policies converted agricultural land into a tax shelter for both income and capital-gains taxation, thus providing incentives to hold land as a tax shelter rather than for agricultural production". (Richani, 2012: 60) An incentive of this type promoted the use of land as a commodity for capital accumulation amongst capital owners and high-income groups. Moreover, these tax incentives reduced the cost of opportunity of investing in land and in cattle husbandry. For them, "the opportunity cost of using their land today is the higher rent price or profit that they can gain tomorrow. Consequently, more land is kept for speculation and is either underused or not used for food production". (Richani, 2012: 73)

The fact that both productivity and economic returns are higher in minifundios than in latifundios strengthens the point that extensive cattle husbandry by large landowners is mainly motivated by the expected rent from land (speculation). This argument, together with the possibility of gaining political power and protecting their income from being taxed, are some of the strongest underlying explanations for the way latifundistas manage their wealth.

#### 4.1.5. Agrarian structure and human capital accumulation

The link between land inequality and human capital accumulation is not new in the literature. Deininger and Squire (1998) concluded that it is the initial inequality in land distribution and not so much of income that is related with poorer growth, as it limits investment in education.

Various authors argue that intertemporal borrowing limitations created by credit market failures, as well as other financial market imperfections can create a link between wealth distribution (initial endowments) and the level of human capital that is accumulated (Deininger and Squire, 1998; Carter, 2000). The general explanation is that rural households are endowed with different amounts of financial wealth and land and they must decide how to better allocate the income generated by these endowments, for example, by investing in agricultural capital or in education. In contrast to agricultural capital, the returns to education do not occur in the same period the investment is made and they can even be uncertain. Additionally, farmers face the possibility of future external shocks, for which they must be prepared. In a completely functioning capital market, farmers could borrow and repay later. However, where there is a credit market failure<sup>7</sup>, this mechanism ceases to work, and households facing intertemporal borrowing constraints will most certainly invest in what they consider to be less risky. The access to financial services is thus considered crucial to the reduction of income inequality, as it permits disadvantaged groups to save and borrow. Through this, they can acquire new productive assets, invest in education, smooth their consumption and obtain insurance against negative external shocks (World Bank, 2012).

It is true that a farmer with a loan could certainly feel safer about sending his children to school. But, does more credit result in more years of schooling? Is credit the ultimate link between land concentration, human capital accumulation and income inequality?

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<sup>&</sup>lt;sup>7</sup> Lenders are generally keener to accepting physical capital as collateral for a loan than being ready to lend against a future stream of earnings associated with the acquisition of human capital (Li, Squire and Zou, 1998).

In Colombia, one could argue in favour of this proposition, as the lack of formal access to credit has been a major market failure in the country's agricultural sector. One of the major difficulties to access credit from the financial system is associated with the guarantees and multiple requirements from the system in order to reduce the asymmetric information problem: the lack of collateral or sufficient income is an important cause for rejecting a credit application. Moreover, the existence of these barriers to credit makes producers engage in self-selection processes before accessing a financial institution (Lozano, 2009:103).

Past governments have attempted to solve this issue, through credit increases and land reforms. The last government<sup>8</sup> initiated a rural development strategy, which consisted of subsidies for improving agricultural competitiveness and transfers to guarantee peasants with access to land (López, 2010). Despite this effort, the market failure persisted: the amount borrowed depended on the amount of assets the farmer held, so those farmers without a formal ownership of land were marginalised for not having collateral. The result was that the bulk of resources went to large and medium-size producers, as they owned the assets.

This situation seems to highlight that the missing connection between land distribution inequality and human capital accumulation is not necessarily credit, but the income linked to the land they own. "Inequality in land or income may be sufficient to prevent those at the bottom end of the scale from affording education, lowering overall education attainment in an economy". (Erickson and Vollrath, 2004:5)

An analysis of the years of education attained by the population in the different shares of income shows the worrying gap in education in terms of income level. At higher levels of income, more years of education are achieved (Table 4). In 2007, adults between 25 and 65 years in the poorest quintile had only attained 5 years of education. This is in strong contrast with the higher quintile, where the average years were 12.1, a difference of more than 7 years. The years of education in Q5 have increased from the year 2000 until 2007 (from 10.9 to 12.1). In the same period, the years of education in the Q1 increased but then returned to their initial level in 2000.

<sup>&</sup>lt;sup>8</sup> Álvaro Uribe Vélez. President of Colombia between 2002 and 2010.

Table 4. Years of education by income quintiles – Adults aged 25 to 65

Year	Q1	Q2	Q3	Q4	Q5
2000	5	5.2	6.1	7.5	10.9
2001	5.4	5.3	6.2	7.2	10.8
2003	5.8	5.3	6	7.1	11
2004	5.6	5.5	6.4	7.6	11.4
2006	5.2	5.7	6.7	8.2	11.8
2007	5	5.9	7	8.4	12.1

Source: SEDLAC (2012).

In the rural areas, other indicators support the relation between high land concentration and low human capital accumulation. The illiteracy rate is one of the most significant indicators when looking at the situation in the educational sector. It measures the lack of elementary instruction, especially in relation to those who cannot read nor write (DNP, 2007). Table 5 compares the illiteracy rate by area and gender between 2000 and 2005. In every year, the rate is much higher in the rural areas. On average, the illiteracy rate has been 10.9 percentage points higher in the rural areas (15.7% rural vs. 4.8% urban).

Table 5. Illiteracy rate by area for the population 15 years and over

Year	Urban %	Rural %
2000	4.9	18
2001	4.5	16.6
2002	5.2	16.2
2003	5.1	15.4
2004	4.8	14.2
2005	4.3	13.8

Source: DNP (2007).

The low levels of human capital accumulation in the rural areas of the country seem to indicate that Colombian rural households, when contemplating investment in agriculture or other options, choose to go for less risky options than education. This could have an impact on income inequality as education increases the probabilities of being employed and receiving a wage, whilst "a higher rate of unemployment will increase the fraction of individuals with low incomes and hence raise inequality". (Checchi and Garcia-Peñaloza

2008:7) However, as Palma (2011) mentions, it is important to highlight that the relationship between more opportunities coming from education and a better distributional equality is many-sided, especially because education as a variable affecting the income distribution can only be effective within a wider institutional structure.

#### 4.2. Functional Income Distribution

Most studies about income inequality in the country and in the region focus on the personal distribution of income. The analysis of income per quintiles and the Gini coefficient as a case in question, quantifies inequality in the distribution considering households or people as individuals, beyond the place they occupy in the production process. This focus is clearly on the moment when revenue is collected, regardless of where it originated. However, revenues come primarily from productive activities and it is in this part of the process where the core determinants of inequality should be found (Lindenboim et al., 2006).

The functional distribution of income is the division of income among the different factors of production that intervene in its generation, according to the function they play. "Although several other decompositions may be interesting, the most common distinction is between the labour share (wages) and the capital share (profits)" (Giovannoni 2010:2).

According to Luebker (2011:1), "both greater wage inequality and a rising share of profits in national income (matched by a fall in the wage share)" have had an effect on the market income distribution of many regions in the last years, resulting in a higher income inequality. Nonetheless, in spite of the importance of the functional distribution of income, this approach towards the study of distributional issues has been progressively abandoned and replaced by the personal distribution of income (Lindenboim et al., 2006). A comprehensive study of inequality should include the functional distribution of income as a starting point: both approaches are not mutually exclusive but complementary.

Some definitions are important before analysing the functional income distribution in Colombia. In the National Accounts, the "Operating Surplus" is the share that accrues to capitalists, and the share that workers receive is the "Compensation of Employees" (National Bureau of Statistics-DANE, 2007):

- Operating Surplus <sup>9</sup>: is the balance of the income generation account and represents the surplus derived by the economic agents in the production processes.
- Compensation of Employees: relates to the payments in cash or in kind and the contributions to social security that the productive units make to their employees in return for their work. It is divided into wages and salaries, and social contributions.

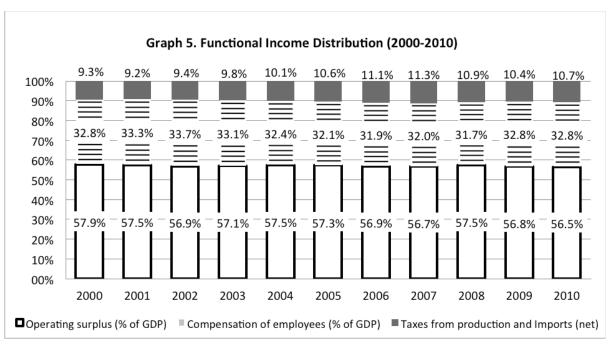
Graph 5 shows the evolution of the participation of employee's wages and salaries, of capital gains and of net taxes from production and imports (indirect business taxes) in the GDP<sup>10</sup> between 2000 and 2010. On average, the operating surplus as a percentage of GDP was about 1.75 times the compensation of employees (57.1% vs. 32.6%). This is an average gap of more than 24 percentage points, with no clear downward trend in 10 years!

The literature indicates that profit and wage shares fluctuate with economic cycles, however, during economic shocks, profits tend to be more volatile than wages. Thus, the proportion of the GDP accruing to wages will tend to deteriorate in economic booms and rise in recession times (Russell and Dufour, 2007). When comparing the functional distribution with the performance of the GDP, the data show that the workers' share shrnk as the economy was expanding. During 2002-2008, the country grew 4.8% on average; however, the compensation of employees fell from 33.7% to 31.7%, which represents a loss of 2 percentage points of participation in the GDP.

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<sup>&</sup>lt;sup>9</sup> The Gross Operating Surplus is not the most appropriate indicator for profits, as it includes depreciation, which is a cost for companies.

 $<sup>^{10}</sup>$  The GDP calculation from the income approach is equal to the sum of primary income distributed among the national production units. From this approach, GDP = employee's wages and salaries + capital gains + taxes from production and imports – subventions (DANE, 2012).



Source: own construction with data from DANE (2012).

A low participation of the workers' share in the GDP is also a common factor for Latin American countries. Table 6 shows the participation of the Compensation of Employees and the Operating Surplus in the GDP for some countries of the region between 2006 and 2010. It is remarkable that the proportion of the wages and salaries in none of these countries exceeds the 50% threshold. The table also shows that this proportion does not present any important changes inside the considered countries during the period.

Table 6. Functional Income Distribution – Latin America

Country	Com	pensation	of Employ	ees (% of	Operating Surplus (% of GDP)					
Country	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Argentina	34.5%	35.5%				48.8%	47.1%			
Brasil	48.3%	48.8%	49.9%			51.7%	51.3%	50.1%		
Colombia	31.9%	32.0%	31.7%	32.8%	32.8%	56.9%	56.7%	57.5%	56.8%	56.5%
Chile			36.4%	37.7%	35.8%			52.6%	52.0%	54.2%
Peru	21.9%	21.7%	20.9%	21.8%	21.0%	61.9%	62.4%	63.0%	62.8%	63.3%
Venezuela	30.6%	32.3%				60.3%	58.6%			

Source: own construction with data from the National Accounts of the countries considered (2012).

What explains the persistent high gap in favour of profit shares? An analysis of the social structure of the labour force can shed light on this. Table 7 presents the participation of wage workers and self-employed workers in the last decade. Strikingly, the participation

of wage labour declined in the analysed period, going from 52.2% in 2000 to 46.5% in 2010, a total decrease of 5.7 percentage points.

Besides presenting a downward trend, the share of wage and salaried workers in Colombia is low when compared to other countries in the region (Table 8); it is even below the Latin American average (47.6% vs. 64.7%).

Table 7. Social structure of the Labour Force (2000 – 2010)

Concept	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Wage and salaried workers,	52.2	48.0	48.4	50.3	49.1	49.3	50.8	54.2	48.7	47.6	46.5
total (% of total employed)	52.2	46.0	40.4	30.3	49.1	49.3	30.8	34.2	40.7	47.0	40.5
Self-employed, total (% of total employed)	47.8	52.0	51.6	49.7	50.9	50.7	49.2	45.8	51.3	52.4	53.5

Source: WDI (2012).

Table 8. Wage and salaried workers and self – employed (2009)

Country	Wage and salaried workers, total (% of total employed)	Self-employed, total (% of total employed)
Argentina	76	24
Colombia	47.6	52.4
Chile	71.6	28.4
Mexico	66.1	33.9
Venezuela	58.7	41.3
Ecuador	53.4	46.6
Peru (2008)	54.5	45.2
Latin America & Caribbean	64.7	32.9

Source: WDI (2012).

The fact that the share of wage labour is low in the context of Latin America, and that its participation inside the country has declined in the last decade, shows the potential role of the social structure of the labour force in the determination of the current functional income distribution. However, a linear link between these two variables cannot be presumed. The empirical evidence presented in the previous tables does not support one: Argentina and Chile are countries with a high participation of the wage and salaried workers in the economy (76% and 71.6%, respectively), but with a low share of the GDP accruing to workers (around 35% and 36%, respectively). This shows that countries with a higher proportion of salaried workers do not always assign them a higher percentage of the disposable income.

It is comprehensible that the participation of the Compensation of Employees in the GDP has a relation with the weight of the wage and salaried workers in a country, however, more complex variables intervene in determining the participation of the wage share in an economy. The distribution between wages and profits might be skewed towards profits in a country due to the lack of minimum wages and due to distorted collective bargaining relations between unions and employers. The former does not apply to the Colombian case, as minimum wages do exist; however, trade unions are not very effective. This point is further developed later in the paper.

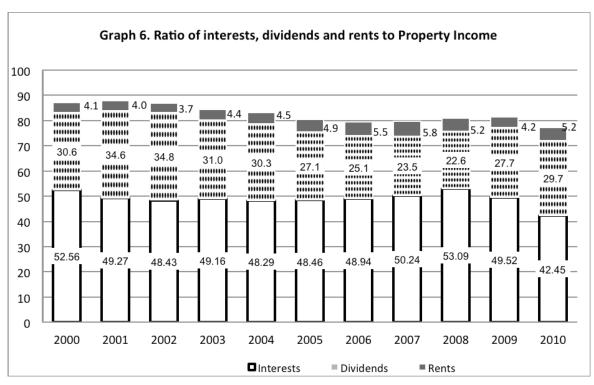
# 4.2.1 Profits<sup>11</sup> and property income

As mentioned in chapter 3 about Empirical Indicators, in the year 2010, the income ratio between the richest and poorest income quintiles was 20.05 (60.15% vs. 3%). The ratio is even sharper when comparing the highest and lowest deciles: the richest 10% received 51 times the income of the poorest 10% (44.43% vs. 0.87%). This certainly highlights that it is the income appropriated by the rich where the real distributional issues are to be found.

Who are then these people in the highest income decile in Colombia? The analysis of the National Accounts from the perspective of income generation could help in making this evaluation. One of the classifications included is the "Property Income", which is divided into interests, dividends, rents, reinvestment of properties from foreign companies and property income attributed to insurance policy holders (DANE, 2012).

The evolution of the first three items (interests, dividends and rents) over the analysed period is presented in Graph 6. Contrary to what might be expected, the amount of income accruing to landowners in the form of rents is not so high when compared to the income received in the form of dividends and interests: the latter are at least five times the rents. On average, the ratio of interest and of dividends to rents was 10.7 and 6.4; respectively.

<sup>&</sup>lt;sup>11</sup> In a broad understanding, the term "profits" refers to property income, including rents. The Gross Operating Surplus is not an appropriate indicator for profits because depreciation is the costs of enterprises.



Source: DANE (2012)

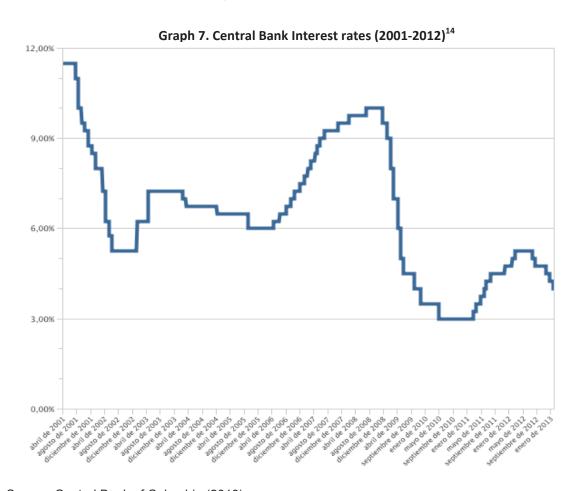
The analysis of this data shows that the rents which landowners receive are less important than other types of proprietary income<sup>12</sup>. Landlords are obviously not so rich in comparison to the "urban wealthy" population, showing that the top quintile is not really affected by latifundistas. This could indicate that the rich in Colombia are actually business owners that have accumulated wealth from their investments in different companies and receive high revenues in the form of dividends for instance. Some reports on the wealthiest people in Colombia support this thought. Forbes World's Billionaires list for example, includes three Colombians. All of them are business owners holding a net wealth between 1.7 and 12.4 billion dollars, which comes from their investments in Latin American companies (Forbes, 2012).

The high participation of interest income could also be an indicator of high interest rates in the country. Graph 7 shows the evolution of the interest rates established by the Colombian Central Bank between 2001 and 2012. The evolution of the interest income can

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<sup>&</sup>lt;sup>12</sup> Landowners might also receive income from the crops or the animal husbandry they produce and sell, but the data for this is not available.

be partially explained through the behaviour of the interest rates: fluctuations in the interest share during the period follow a similar trend to the movement of the interest rates. In 2001 and 2008, for example, years in which the average interest rates are the highest (12% and 9.75%, respectively)<sup>13</sup>, the share of interest income in the property income is also the highest (52.6% and 53.1%). In general, as interest rates decreased or increased, the share of interest income in property income also decreased or increased.



Source: Central Bank of Colombia (2013).

Nonetheless, the general level of the interest income share cannot be completely attributed to the interest rates: the stock of financial assets of the wealthier population of the country, as previously mentioned, could also play a role.

 $^{13}$  From December 1999 until March 2001, the interest rate was 12%

<sup>&</sup>lt;sup>14</sup> The data in the graph corresponds to the dates on which the Board of the Central Bank decided on monetary policy intervention rates.

The previous analysis supports the thought that the income rich in Colombia are mainly business owners and investors who have and continue to accumulate wealth from their fixed capital and financial investments. Nevertheless, there are no empirical studies about who precisely are the income-rich in the 5<sup>th</sup> quintile; thus, in the absence of further data, the upper quintile is empirically a black box.

### 4.3. Fiscal System

A high level of income inequality can be traced back to forces that cannot be controlled, such as an initially unequal land distribution. On the basis of the historical distribution of assets, the market economic forces lead to a primary income distribution that can be more or less unequal, requiring the intervention of fiscal policies "to correct socially-undesirable distributive outcomes arising from market forces" (Goñi et al., 2008: 2).

Two terms are key when talking about redistribution: market income and disposable income. The first one is the income before government taxes and transfers. The second term, disposable income, is the income the household has after paying direct taxes and receiving government transfers such as social assistance, education and health subsidies, and pensions. In this sense, this measurement is a better indicator of a household's purchasing capacity (Goñi et al., 2008).

"A standard analysis of the redistributive effect of taxes and income transfers is to compare pre-tax-transfer income inequality and post-tax-transfer income inequality" (OECD 2008 as quoted in Wang and Caminada 2011:6); the expectation being, that redistribution will lead to a decrease in overall inequality. However, the case of Colombia is very particular: during the period 1990-2008, public social expenditures more than doubled, from 6% of the GDP in 1990 to 12.6% in 2008 (Clavijo, 2011). Nevertheless, income inequality has remained stubbornly high. How can this be possible? A description of the Colombian fiscal system will shed some light on these areas.

#### 4.3.1. Taxes

Tax policy has a direct and indirect impact on disposable income. A progressive tax system can directly make the post-tax income distribution more equal, by achieving

vertical and horizontal equity<sup>15</sup>. At the same time, taxes raise the revenues from where transfers can be made to decrease inequality. This is their indirect role.

The Colombian tax system includes national and regional (sub-national) taxes. The primary national taxes are the Income and the Windfall tax (supplementary Capital Gains Tax), the Wealth Tax, the Value Added Tax, and the Financial Transactions Tax. At the regional level, the main taxes are the Industry and Commerce and the Property Taxes. A short description of these taxes and their different rates is contained in Table 9.

**Table 9. Taxes in Colombia** 

TAX	DEFINITION	TARIFF
Income and Windfall Tax	National tax and it is considered a single tax, although it has two components: income and windfall.	33%
Sales Tax (VAT)	National tax on supplied services and on sales and imports of physical goods.	The average tariff - 16% can range between 0% and 25%.
Wealth Tax	Yearly tax payable by individual and corporate taxpayers whose net wealth at 01.01.2011 was > than US\$ 1.5 million	<ul><li>2.4% if net wealth is between US\$ 1.5 – US\$ 2.5 million</li><li>4.8% if net wealth exceeds US\$ 2.5 million</li></ul>
Tax on Financial Transactions	Accrued on every transaction aimed at withdrawing resources from checking, deposit or savings accounts, and cashier checks.	Four per thousand (0.4%) of the financial operation value.
Industry and Commerce Tax (Regional)	Levied on industrial, commercial or service activities carried out within the jurisdiction of a municipality or district by a taxpayer with or without a business establishment, and it is collected and managed by the municipality or district where the activity is carried out.	Ranges between 2 per thousand (0.2%) and 10 per thousand (1%)
Property Tax (Regional)	Levied annually on the ownership, usufruct or possession of real estate property located in Colombia, and it is collected and managed by the municipality where the property is located.	Ranges between 1 per thousand (0.1%) and 16 per thousand (1.6%)

Source: Proexport Colombia (2012).

<sup>5...</sup> 

<sup>&</sup>lt;sup>15</sup> Horizontal equity implies that people in a similar economic situation are able to pay the same amount of taxes. In this sense, rates should be the same for them. As for vertical equity, it implies that people under different economic situations are not able to pay the same amount of taxes, so, tax rates should be given according to their ability to pay (Economics online, 2012)

The main direct tax in the country is the Income tax. It constitutes 5.6% of the 13 percentage points of tributary collection of the Central Government, that is, 42.7% of the total (Table 10). This tax is progressive in its design, since the rates are progressive up to 33%. Unfortunately, the revenue is reduced by several tax exemptions, which represented 1.4% of the GDP in 2009. One of these exemptions is a tax relief of up to 40% for companies that reinvest their profits. This relief constituted 0.8% of the GDP in 2009 (Clavijo, 2010).

The Value Added Tax represented 5.2% of the tributary collection in 2009, that is, 39.7% of the total. Indirect taxation has been gaining weight over time: VAT collection increased from 3.5% of the GDP in the mid-nineties to 5.2% in 2009 (Clavijo, 2010). The standard rate is 16%, but there are eight different VAT rates, such as a reduced rate of 10% for commercial air transportation and 7% for certain foods (Tax Rates, 2012). The productivity of this tax has increased from 33% to 35% in the last decade; however, as a result of the multiplicity of rates, it is still low in comparison to countries like Chile where productivity reaches 44% <sup>16</sup> (ibid).

Table 10. Tax collection (2009)

Тах	as % of GDP	as % of all taxes
Income tax	5.6	42.7
Wealth tax	0.4	3.1
VAT	5.2	39.7
Financial transactions tax	0.6	4.6
Others	1.3	9.9
Total	13.1	100

Source: Clavijo, 2010.

Overall, the tax burden is low. An economic assessment of Colombia made by the OECD in 2010 shows that tax revenues in the country are below international standards: they are not only half of the OECD countries average, but they are also lower when

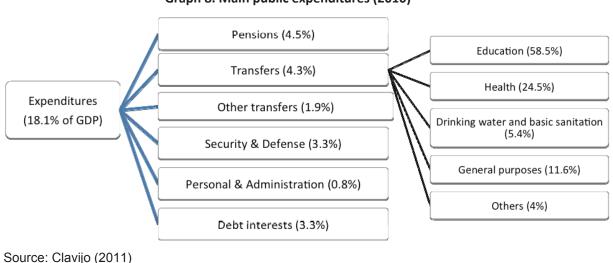
<sup>16</sup> Tax productivity = [(Tax collection/GDP)/Tax rate]. In Chile, the VAT rate is 19% and collects 8.4% of the GDP. In Colombia collection is 5.2% vs. a rate of 16% (Clavijo, 2010).

compared to some of its Latin American partners<sup>17.</sup> The tax collection of the Central Government was on average 13% of the GDP, even in boom periods like 2003-2010 where the average GDP growth was at times above 4.6%. This share is well below the region's mean of 17% (Clavijo, 2011).

The low tributary burden has been the result of a tax policy aimed at accelerating the economy via tax exemptions; and a multiplicity of VAT taxes that complicate tax collection (Clavijo and Vera, 2010). The scope for an effective redistribution in the country is thus constrained from the side of taxes because of the collection level. At the same time, evasion is significant: in 2009, levels of non-payment of the Income Tax and VAT are estimated to have reached 31.4% of the potential collection (Parra Jimenez and Patiño Jacinto, 2010).

#### 4.3.2. Expenditures

Public expenditures have been increasing in the last 20 years, passing from 10% of the GDP at the beginning of the nineties, to an average of 17.3% in the period 2002-2006 and 18% in 2007-2010 (Clavijo, 2011). As for social expenditures, they have been on average 11% of GDP in the last decade. In 2010, they were 10.7% of GDP (Graph 8).



Graph 8. Main public expenditures (2010)

 $^{17}$  Tax to GDP ratio in 2008 was 17% in Brazil, 20% in Chile and 16% in Peru (WDI, 2012).

Cource. Clavijo (2011)

#### Education

Expenditures in education represented almost 59% of transfers in 2010. This expenditure is distributed in different education programmes or levels, from pre-school until higher education.

Table 11 indicates how education transfers were distributed per income quintile in the year 2008. The chart shows that, in every educational level, there is a share of the transfers that is captured by the highest income quintiles (4 and 5). This situation is particularly strong in university programs. Following an analysis of Nuñez Mendez (2009), 45.8% of public expenditure in higher education goes to the richest people in the country, while only 3.7% to the poorest quintile. At the technological and technical levels, the highest quintile has a share in public expenditure of 22.9% and 18.6%, respectively; whilst the poorer population only participates with 11.3% and 9.6%; about half of the richest quintile participation. In the other education programs, the best focus is on pre-school levels, where 32.3% of expenditure is received by the first quintile and only 2.8% go to the highest.

Table 11. Participation of education subsidies, per income quintile (2008)

Education level	Q1	Q2	Q3	Q4	Q5
Pre-school	35.3	28	22.2	11.7	2.8
Primary school	34.8	28.4	19.8	12.4	4.5
Secondary	24.7	24.3	23.2	17.7	10
Technical	9.6	16.5	22.1	33.1	18.6
Technological	11.3	5.3	27.3	33.2	22.9
Superior	3.7	6.7	15.4	28.4	45.8
Total	26.8	23.9	20.8	16.7	11.8

Source: Nuñez Mendez (2009).

#### Health

The General System of Social Security in Health was introduced in the country in 1993 as a single assurance system. It is based on a principle of "crossed transfers" between two systems: the Contributive and the Subsidised. The first one distributes the insurance costs between the employer and the employee. The second one is, in theory, destined for poor

people who cannot pay for health services, so the State pays all or part of the cost. It is "crossed", as the Contributive system should contribute two thirds, so the fiscal system needs only contribute one third.

In 2010, about 8.7% of the GDP went towards health services (both public and private expenses). This amount covers approximately 92% of the population, a great improvement when compared to the 28% of coverage observed 18 years ago (Clavijo and Peña, 2010).

The distribution of health subsidies per quintiles in 2008 is shown in Table 12. Overall, it is the richest quintile that benefits more from expenditure in health (22%), whilst the poorest quintile benefits less with 17.4%. The highest participation in the subsidised system is from quintiles 1 and 2, with a share of 62.4%. However, it is surprising that 12.2% of the people under this system are from the 4<sup>th</sup> quintile, moreover, that the richest quintile has a participation of 5.3%, as it is expected that people in these quintiles have the means to be affiliated to the contributive system.

Table 12. Participation of health subsidies, per income quintile (2008)

Health regime	Q1	Q2	Q3	Q4	Q5
Subsidised	32.7	29.7	20.1	12.2	5.3
Contributive	5.9	11.8	19.6	27.9	34.8
Total	17.4	19.4	19.9	21.1	22

Source: Nuñez Mendez (2009).

#### Pensions and other cash transfers

Expenditures in pensions amounted to 4.5% of the GDP in 2010. In spite of this elevated cost, only one third of the population is covered by the system. This can be partially explained by the high level of labour informality in the country: urban informality reached 50.8% in 2011. Only 10.6% of them are affiliated to a pension fund (Rojas, 2011). Not only is the coverage scope discouraging, but its distribution is worse. Historically, subsidies have been an important part of the pension system as the level of contributions has been low, but the distribution per quintiles is strongly uneven: the poorest 20% of the country receive a minimum subsidy (only 0.1%) whereas the richest 20% receive more than 86.3% (Table 13).

Conditional Cash Transfer programs have become an important component of social expenditures in Latin American countries, including Colombia. Their distribution has been progressive and at relatively low costs, ranging between 0.3% and 0.4% of the GDP as is the case in Brazil. There the "Bolsa Familia" is considered to explain 25% of the poverty reduction. In Colombia this program is called "Familias en Acción". It started in 2001 and operates under the condition that, children between 7 and 17 years attend school; and that children up to the age of 6 years attend health controls. The transfers going to this program were only 0.3% of the GDP in 2010; however, they have been successfully focused towards the poorest population. Table 13 shows that 74.4% of the subsidies of this program go to the poorest quintiles, and only 1.3% is received by the richest one.

Table 13. Participation of cash transfers, per income quintile (2008)

Programme	Q1	Q2	Q3	Q4	Q5
Familias en Acción	44.9	29.5	16.1	8.2	1.3
Pensions	0.1	0.2	2.3	11.1	86.3
Familias Guardabosques	42.3	30.8	11.4	10.2	5.2
Total	3.1	2.6	3.8	11.5	79

Source: Nuñez Mendez (2009).

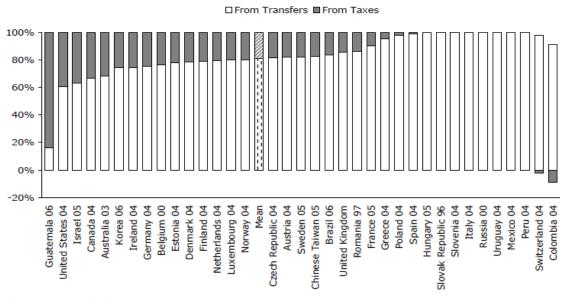
When analysing cash transfers in total, the balance is negative: 79% of these transfers go to the 5<sup>th</sup> quintile, and only 3.1% to the poorest one. Most surely, this is due to the high share of public expenditure invested in pensions.

### 4.3.3. Inequality after redistribution

From the analysis of the previous variables, it is clear that the problem with social regressivity and progressivity in the country is related to important components of social expenditure, where basic education and preventative health programmes are progressive; and cosmetic health, higher education and pension benefits accruing to higher income levels have been strongly regressive.

Overall, does the fiscal system lead to a better income distribution in the country? A study performed by Wang and Caminada in 2011 shows the effects of taxes and transfers around the year 2004 in different countries. The results for Colombia show that the partial effect of transfers is positive but less than in the other countries from the sample. The

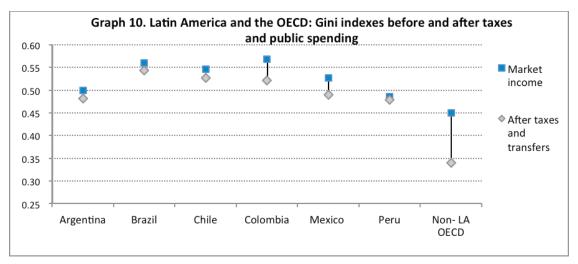
partial effect of taxes is negative, showing that the tax system was regressive. These relative redistributive effects are contained in Graph 9.



Graph 9. Relative redistributive effect of taxes and transfers around 2004

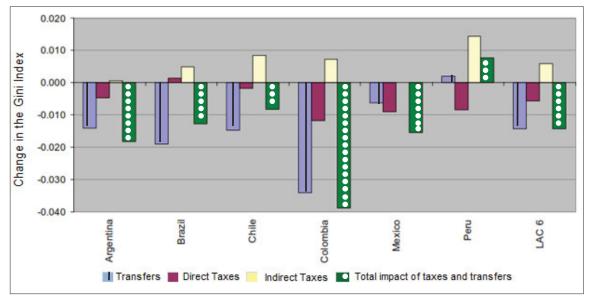
Source: Wang & Caminada (2011:13)

Has the situation improved over the years? A comparison of the Gini index before and after taxes and transfers in the year 2008 shows that redistribution through fiscal policy does have a positive effect on equality: the Gini index drops from a market income value of approximately 0.57, to a disposable income value of 0.524 (Graph 10). This is a better picture when compared to 2004, where the relative redistributive effect was lower than in Mexico and Peru. Moreover, Colombia has the strongest redistribution effect from the countries in the Graph, in contrast to Wang & Caminada.



Source: Latin American Economic Outlook (2012).

Analysing the effect of taxes and expenditures independently (Graph 11), 3.4 points can be accrued to public expenditures (in spite of the very regressive pension system). In terms of taxes, the impact of redistribution is less (about 1.2 points) but positive, mainly as a result of the income tax progressivity, in contrast to Wang and Caminada.



Graph 11. Impact of transfers, direct and indirect taxes on inequality

Source: Prasad (2008:19)

One point to highlight is that disposable income only takes into account the effect of direct taxes and transfers. Since they do not include the regressive effect of indirect

taxation, the results might be giving too much credit to the redistributive role of the Government. Prasad (2008) based on Goñi et al. (2008) included the effect of indirect taxes such as value added taxes, excise taxes and import tariffs. As expected, when they are included, income inequality grows by about 0.7 points.

# 4.4. Comparison

Chapter 4 discussed those factors considered responsible for keeping inequality levels so high in the country. Which one has a heavier weight among them? Certainly some may be more important than others; nonetheless, inequality is influenced by a variety of reasons: choosing one variable at a time and indicating if it plays a minor or a major role would not be very helpful in creating the whole picture. Since income inequality is a measure of the degree of disparity or the gap between high and low income households, a better approach for this comparison will be to expose how these determinants affect the highest and lowest quintiles in the income distribution.

## 4.4.1. Pushing the gap down

The analysis of the share accrued to the lowest quintile in the income distribution in the last decade showed a very modest but constant increase (with the exception of the year 2002). However, the participation of the poorest quintile was low compared to other countries in the region.

The land distribution issue affects the lowest quintile in several ways: first, those peasants without land or with too little access to land are not able to generate enough income to advance on the income scale. Moreover, their low income prevents them from affording further education, reducing their possibilities of receiving a higher wage by getting employed in other rural sectors, such as rural manufacturing, rural commerce or rural services<sup>18</sup>. Also important for the analysis is the internal conflict related to land distribution, which forces people to move from rural to urban areas even if they do not

<sup>&</sup>lt;sup>18</sup> In terms of hourly wages, the lowest levels are found in the agricultural sector (despite it being the main rural employer), whilst the higher levels are found in the services sector (Tenjo Galarza, Bernat Díaz & Uribe Castro, 2007).

have enough assets to make a proper living in the cities. This internal migration cannot be explained by an increasing agricultural productivity, as rural productivity increases slowly in the country.

In 2003, 64.4% of the population in the poorest quintile was urban, while 35.6% was rural. In the rural sector, more than 50% of the population was located in this quintile (Tenjo et al., 2007). The fact that more than 30% of this quintile is constituted by the rural population is a clear indicator of how the problems with land affect rural income levels. On the other hand, even though the majority of the population in the lowest quintile in that year was urban, it would be incorrect to jump to the conclusion that land distribution does not affect the lowest quintile in an important way. In order to properly interpret these data, the issue of displacement must be taken into account.

One of the conclusions regarding land distribution and displacement was that about 30.4% of the population in the lowest quintile in 2010 was the displaced without assets. If we assume that the ratio of rural and urban population in the first quintile in 2010 was similar to 2003, it would imply that almost half of the urban poor are those displaced without land. Moreover, if we take into account the high share of urban poor as a percentage of the total population (33%), in a country with the degree of urbanisation of Colombia (75%) (WDI, 2012), it strengthens the point about land distribution and internal migration. This high ratio of urban poverty does not occur in other Latin American countries with similar levels of urbanisation (Table 14).

Table 14. Urban poverty and urbanisation (2010)

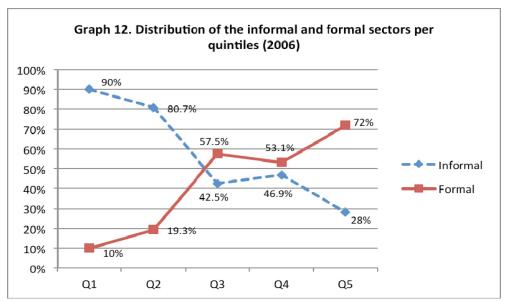
Country	Urban poverty (% of urban population)	Urban population (% of total)
Argentina	9.9	92.4
Chile (2009)	15.5	89
Colombia	33	75.1
Ecuador	22.5	66.9
Peru	19.1	71.6

Source: WDI (2012).

Forced displacement strengthens the informal economy in the country. Most of the displaced have an insufficient level of education, which prevents them from accessing a

job in the cities they migrate to, so they draw on informal activities such as street trading to make a living. This does not imply that the informal sector is completely constituted by the displaced people; however, they do represent an important share. Hence, a short analysis of this sector can also reveal the indirect weight of land on the poorest income quintile.

Graph 12 shows the distribution of formal and informal<sup>19</sup> labour per income quintiles in 2006<sup>20</sup>. In this year, 90% of the people in the informal sector belonged to Q1, while only 10% of the people in the formal sector were in it (Uribe García et al., 2008). From the graph, it can be concluded that there is a direct relation between the level of income and informality, and an inverse relation between informality and the level of income: the better paid jobs are in the formal sector, and the worst paid, in the informal. This reflects that informality strongly pushes down the lowest 20% income quintile. However, the underreporting of data due to informality can also lead to an underestimation of the income in Q1.



Source: Uribe García et al. (2008)

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<sup>&</sup>lt;sup>19</sup> The main features that define Informality in the country are: individual employees and workers working in establishments, business or enterprises employing up to five people in all its branches (including the employer and/or shareholder); unpaid family workers; unpaid workers in companies or businesses from other households; domestic workers; day labourers or farmhand; self-employed people working in establishments up to five people (excluding independent professionals); employers of firms with up to five workers; governmental employees are excluded (Uribe García, Ortiz Quevedo et al. 2008:214)

<sup>&</sup>lt;sup>20</sup> The rate of informality was 51.4% in this year (DANE, 2012).

The functional distribution of income in Colombia in the last decade showed that profit incomes (including depreciation) are almost twice the wage share, without a clear downward trend for this gap. As the participation of wage and salaried labour in the labour force is low (and decreasing), and the participation of self-employed higher when compared to Latin American standards, the functional income distribution could be primarily explained as a consequence of the social structure of the labour force. However, other countries in the region have a high participation of wage and salaried workers in the labour force and still the wage share in their functional income distribution is low.

The fact that the income distribution has not improved after a decade of economic growth could also be a sign of trade unions, which have not been effective in their duty of pushing for a more balanced income distribution. When weak, trade unions are handicapped in their ability to influence national policies that improve the conditions of the population working in the informal sector (i.e. fight for the imposition of formal contracts and affiliation to the social security system).

There are no empirical studies in the country concerning how trade unions are related to informality. Nonetheless, the functional distribution is partly a reflection of the reality of trade unions in Colombia: the Constitution establishes the organisation of trade unions as a legal right; however, they have been victims of the illegal armed organisations for the last 30 years (Congreso Visible, 2011). Their situation is also hard in the rural sector, where the political influence of landowner elites restricts the liberties of agricultural unions.

So far, land concentration and the functional distribution of income are factors that affect the lowest quintile in Colombia. What about the fiscal system? The evaluation of the impact of redistribution from the quintiles perspective pointed out that the balance of transfers going to the poorest quintile is extremely low when compared to the share going to the highest quintile (3.1% vs. 79%), mostly because of the pension expenditures. This reflects a failure in the system that hampers the chances of people in the lowest quintile to get a better income.

Table 15 presents a summary of the distribution of subsidies per income quintiles in 2008. Two scenarios are considered: with and without pensions. In the first one, even though the participation of the poorest quintile improves when pensions are not included in

the analysis, their share of public expenditures is still low in comparison with Q5 (18.7% vs. 30.7%). This scenario shows slight progress in the participation of Q1 when compared to 2003 (from 17.5% to 18.7%). Nonetheless, it shows that the participation of the richest population in public expenditure also increased (from 29.1% to 30.7%).

Table 15. Participation of total subsidies, per income quintile (2008)

Concept	Q1	Q2	Q3	Q4	Q5
Total subsidies without pensions	18.7	17.8	16.5	16.3	30.7
Total subsidies	13.7	13.1	12.9	15.5	44.8
Results 2003	17.5	17.6	16.8	19	29.1

Source: Nuñez Mendez (2009).

On the other hand, the fact that disposable income inequality improves after redistribution could be an indicator that the fiscal system is not necessarily the main reason why income inequality is still so high in the country. Nevertheless, this does not mean that the fiscal system could not play a better role in the distribution; not only by allocating transfers in a more balanced way, but also by reducing the size of the richest quintile through a more progressive tax system.

One point that has not been analysed so far is the weight of the subsistence economy in the poorest quintile. The absolute poor, defined at US\$ 1.25 a day (PPP) were 8.16% of the total population in 2010 (WDI, 2012). Most surely, a share of them survives to some extent on subsistence economy with minimal or no cash income<sup>21</sup>. If this were the case, the low income in Q1 could be partially explained by it, as income in kind underestimates the cash income of this quintile. However, there is no official data available on subsistence economy in Colombia.

### 4.4.2. Pushing the gap up

The share received by the poorest 10% and 20% of the Colombian population can only be considered as low or too low when compared to the share that the richest 10% and 20% receives.

<sup>21</sup> Some unofficial sources indicate that cocoa farmer families have a subsistence economy. Also, that the vast majority of poppy seed crops in the country are part of a subsistence economy of farmers and indigenous people.

The functional distribution is one of the factors that clearly affects the highest income decile and quintile of the country: not only is the level relevant (measured in the way the gross domestic product is divided between capitalists and workers), but also the trend: ten years of a high average gap between capital and wages, and no signs so far indicating that the it will shrink. This unchanging trend could be both related to the weakness of trade unions in the country and the structure of the labour force.

Returning to the discussion about the fiscal system, a better redistribution would not only be helpful in reducing the GDP share accruing to the richest population in benefit of the poorest quintile, but it could also strengthen the middle class in Colombia.

The importance of a growing middle class is well indicated in Pressman (2011). He refers to Estache & Leipziger (2009) stating that income distribution is particularly important for less developed countries, as an increasing middle class leads to more economic growth: when more money is being allocated to the middle classes, consumption increases and thus aggregate demand. Moreover, they begin to constitute a driving force supporting economic policies that benefit both low and middle income households.

What is the situation of the middle class in Colombia? Looking at the three middle quintiles in the income distribution (Q2, Q3 and Q4), we can see that the gaps between them are not so pronounced. However, the gap between the two richest quintiles is very significant: in Colombia, the income of Q5 exceeded by approximately 220% that of Q4 in the last decade.

Using Pressman's (2011:131) definition of middle class, "middle class households are those where incomes are located in the middle part of the nation's income distribution". In 2004, the percentage of population in Colombia falling under this definition was 22.6%. As can be seen in Table 16, this was better than the average in countries like Mexico, Peru and Guatemala; but still low when compared to developed countries were the middle class, accounting for about 40% of the total population (ibid).

Table 16. Middle income households (as a percentage of all households) 22

Country	Middle class
Brazil	18.8%
Colombia	22.6%
Guatemala	19.1%
Mexico	19.7%
Peru	19.5%
Uruguay	26.8%

Source: Pressman (2011:133)

The fiscal system can be a key determinant when it comes to the size of the middle class in developing countries. For instance, progressive tax systems where lower income households pay negative taxes help the middle class to keep their incomes and consumption patterns even in bad economic times. Public expenditure that truly benefits low and middle income families is important as well. Table 17 shows a relation between the fiscal system and middle classes in 2004. It can be observed that the fiscal policy does not really change the size of the middle class in the country, as the difference between market income and disposable income is only one percentage point.

Table 17. Fiscal policy and middle income households

Country	Share of middle class households (disposable income)	Share of middle class households (market income)
Brazil	18.8%	18.9%
Colombia	22.6%	22.5%
Guatemala	19.1%	18.9%
Canada	34.9%	26.6%
USA	28.7%	23.5%

Source: Pressman (2011:143)

These numbers are in line with the results of the fiscal system analysis, where public expenditures, particularly pensions, are not so effective in protecting the poor as they benefit the families in the richest income quintile. In a way, it can be said that pensions affect the size of the middle income class in Colombia.

<sup>22</sup> Defined according to the adjusted disposable household income that is between 75% and 125% of the household income adjusted mean (Pressman, 2011:132).

So far, the functional distribution of income and the fiscal system are factors affecting the highest income quintile. And land concentration? One of the conclusions that arose from the analysis of "Property Income" in the Colombian National Accounts was that the rents received by large landholders are less important than other types of proprietary income, thus the 5<sup>th</sup> quintile is not so much affected by them. The richest Colombians are business owners that have accumulated wealth that generates profits, dividends and interests, not latifundistas. However, according to anecdotal evidence in the local media, some of the richest people come from families that hold large amounts of land. In this sense, the particularities of the current income distribution could simply be the delayed effects of the historical concentration of land in Colombia, but there is no empirical data to have a better judgment on this issue.

### 5. Conclusions

There are different opinions about the reasons keeping inequality so high in Colombia. Some focus on labour market distortions, particularly the high levels of informality. Others refer to the low quality of education or to the internal conflict, and blame the Government for the strong military spending that takes away resources that could be invested in other areas. The principal message of this paper is that the current situation will only be partially understood unless the structural determinants of inequality are included in the picture.

The first determinant is land concentration, a historical feature of the country which has further deteriorated in the last decade. Current income inequality is strongly rooted in land inequality, as it has perpetuated poverty and affected human capital accumulation in the rural areas. Moreover, land has been the scenario for the intensifying internal conflict, leading to forced displacement and urban poverty. By widening the base of people living under the poverty and extreme poverty lines, land becomes a key determinant for inequality.

Secondly, the analysis of the functional income distribution shows how unbalanced income distribution is in the country. Capitalists share in GDP has been almost twice the workers' share in the last ten years, which could explain why the richest quintile in Colombia receives approximately 60% of the GDP. This distribution is influenced by the low participation of wage labour in the labour force structure.

The fiscal system is also relevant: overall, fiscal policies lead to a slight reduction of the Gini coefficient, but the analysis of taxes and public expenditure shows that expenditure mainly benefits the highest income quintile, particularly through pension subsidies. Although the aim of social public expenditure in the country has been to reduce poverty and inequality, failures in the system design have permitted social investments to end up in the hands of those who do not need them.

The fact that the middle class in Colombia has managed to keep a share of the national income in a very uniform way during the last decade reveals that the true origin of inequality is found in the extreme richness of the rich and the extreme poorness of the poor. With this foundation, the direction of the policies aimed at fighting inequality becomes clearer.

First, the formalisation of land property and restitution of land to the displaced population are essential. Land property rights are one of the structural causes for the military conflict, thus, formalising the property of peasants and ensuring the restitution of land to the displaced could solve this piece of the conflict puzzle. Moreover, land restitution could be an effective way to bring the displaced out of poverty: they could go back to their lands or sell them and invest the money in another type of productive business.

In addition, the governmental policy is crucial: it should include a more progressive tax system which taxes Q5 stronger and public expenditure programmes well targeted to the lower income classes, especially Q1. The high levels of income tax evasion and the low tax collection show that this is an area where changes need to be implemented. However, taxes and expenditure cannot be the only focus in the search for a more equal distribution. There should also be an improvement in the primary distribution of wages and capital income, through policies that increase employment and the participation of wage and salaried labour in the social structure of the labour force.

Inequality is a long-term phenomenon with structural causes that will not change overnight. Taken together, the three elements discussed in this paper determine the pattern of income inequality in Colombia in the last decade, as they influence the quintiles and deciles at the extremes of the income distribution. This has important economic consequences as low incomes coming from unfairly low wages, lack of assets and

informal labour, limit domestic demand. These determinants call for specific institutional changes that require a strong conviction and political will to see changes beyond a number or an index: there are equity and distributive fairness reasons to see inequality improve in the country far beyond the fact of it being a drag for economic growth.

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