

Research papers

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Promoting a More Progressive Approach

Evaluating the Impact of
Social and Fiscal Policies in
Mexico and Colombia
amidst the Covid-19
Pandemic



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**Promoting a More Progressive
Approach: Evaluating the
Impact of Social and Fiscal
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amidst the Covid-19 Pandemic**

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Abstract

This research paper analyzes the redistributive impact of some fiscal policies and social programmes (direct taxes and transfers) before and after the pandemic Crisis in Mexico and Colombia, following the CEQ methodology. It considers different concepts such as Market Income, Market Income plus Pensions and Disposable Income in order to analyze the impacts of fiscal policies and social programmes on inequality in these countries. Our findings show that Colombia's fiscal policy became slightly more progressive with the pandemic,

while Mexico's became less so. Even with this change that took place in Colombian policies, Colombia's fiscal policy was less progressive than Mexico's overall in 2020.

Key words:

Fiscal policy, social protection, COVID-19, redistributive policies, Latin America.

JEL codes

H23, H53, I38, D31

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Résumé

Ce document de recherche analyse l'impact redistributif de certaines politiques fiscales et programmes sociaux (impôts directs et transferts) avant et après la crise pandémique au Mexique et en Colombie, en suivant la méthodologie du CEQ. Il prend en compte différents concepts tels que le revenu du

marché, le revenu du marché plus les pensions et le revenu disponible afin d'analyser les impacts des politiques fiscales et des programmes sociaux sur l'inégalité dans ces pays. Nos résultats montrent que la politique fiscale de la Colombie est devenue légèrement plus progressive avec la pandémie, tandis que celle du Mexique l'est devenue moins. Même avec ce changement dans les politiques

colombiennes, la politique fiscale de la Colombie était moins progressive que celle du Mexique en 2020.

Mots clés

Politique fiscale, protection sociale, COVID-19, politiques de redistribution, Amérique latine.

Introduction

Fiscal policy and social programmes are the two most crucial instruments a country possesses to reduce inequality post-distribution. In Western countries there has been a tendency towards inequality of market income that is only lowered with post-fiscal redistribution in some of them, while in Asian countries there tends to be a better pre-fiscal distribution (Milanovic, 2018). To level the economic playing field and fund public services and goods, income taxes are applied and, in most countries, there are also public goods and services offered to some or the whole of the citizenry. Additionally, in many countries, cash transfers are provided either to the entire population or to specific groups based on socioeconomic and demographic criteria. The aim of these transfers is to equalise economic opportunities and ensure that the entire population has effective access to social rights.

In the aftermath of the pandemic, there was a global shift in social protection views. The sudden crisis and the need for lockdowns motivated many countries to adopt or expand cash transfers. One out of six people in the world received at least one cash transfer payment, although they were of short duration and uncertain in extension (Gentilini, 2022).

While the global impact of the pandemic has been profound, its effects have been particularly acute in middle-income countries, where pre-existing inequalities and structural vulnerabilities exacerbated the crisis. In Latin America, a region characterized by some of the highest levels of income inequality in the world, the pandemic deepened social and economic divides.

This crisis disproportionately affected low-income households, women, and informal workers, while also underscoring the role of social protection systems in mitigating these effects. For instance, in countries like Brazil, expanded social assistance programs more than offset the negative income effects of the pandemic, significantly reducing poverty and inequality. The effects of expanded social assistance, however, varied by country, Brazil did significantly better than most, followed by Argentina. Colombia was the country that implemented expanded social assistance with the least impactful results. Mexico was the country with no expanded social assistance and inequality and poverty rose sharply (Lustig et al., 2023).

Other long-term consequences of the pandemic in Latin-American countries were related to educational inequality, as school closures and income losses disproportionately affected children from

disadvantaged backgrounds, potentially exacerbating intergenerational poverty (Lustig et al., 2023).

This regional context provides a critical lens through which to examine the pandemic's impact at the country level, where unique political, economic, and social dynamics further shaped outcomes.

Colombia and Mexico both adapted their pre-existing social policies and programmes to address the challenges posed by the COVID-19 pandemic on the well-being of their populations. While certain measures were directed towards health concerns, others were aimed at mitigating the economic difficulties faced by the populace.

However, the contexts varied significantly. In Mexico, there had recently been a major government shift, with the longtime opposition (leftist) candidate finally winning the elections in 2018. Consequently, policy changes were aligned with this new perspective on social programmes (detailed below), and no counter-cyclical programme was created during the pandemic. In contrast, Colombia introduced a temporary unconditional cash transfer programme called *Ingreso Solidario*, which provided funds to those who did not benefit from existing conditional cash transfer programmes aimed at the impoverished population.

Until 2018, Mexico's main social programme was *Prospera* (previously named *Oportunidades* and *Progresá*), a conditional cash transfer programme similar to one of Colombia's primary social programmes, *Familias en Acción*. Both programmes imposed conditions on families, requiring them to attend regular medical checkups, participate in some form of training, and ensure that their children attended school.

Because of the shift in government mentioned previously, in 2019 *Prospera* was cancelled and replaced by other social programmes. The primary replacement is a universal non-contributive pension for the elderly, along with scholarships for both basic and higher education. However, these scholarships are not universal across all educational stages. They are primarily available for high school, or upper secondary education, when attending a public school. For basic education, only schools in predominantly poor areas are selected to receive the scholarships, and the same applies to higher education. When the pandemic occurred, Mexico's President stated that the existing programmes were sufficient for families to cope with the economic crisis resulting from the lockdown, and no additional programmes were introduced.

Other relevant social programmes existed both in Mexico and Colombia. In Colombia, besides *Familias en Acción*, there are several programmes targeting individuals living in extreme or moderate poverty as

identified by the SISBEN IV (Identification System of Potential Beneficiaries of Social Programmes). This system was recently revised to consider not only the material wealth a family possesses but also their potential to generate wealth, thereby addressing multidimensional poverty (Medellín & Sánchez, 2015).

The social programmes to which individuals can be beneficiaries in Colombia are determined by their classification in SISBEN IV. Some of the programmes available to those classified as living in extreme to moderate poverty include Colombia Mayor, Jóvenes en Acción, Familias en Acción, Red Unidos, and Compensación de IVA (Value Added Tax compensation) (Barrientos, 2023).¹

All of these social programmes are supported by fiscal policies that determine how they will be funded. The fiscal policy of a country specifies who will provide the necessary funds to ensure that social programmes can address market inequalities. However for the purpose of this study we will only analyze personal income taxation, and not the whole of the fiscal policy.

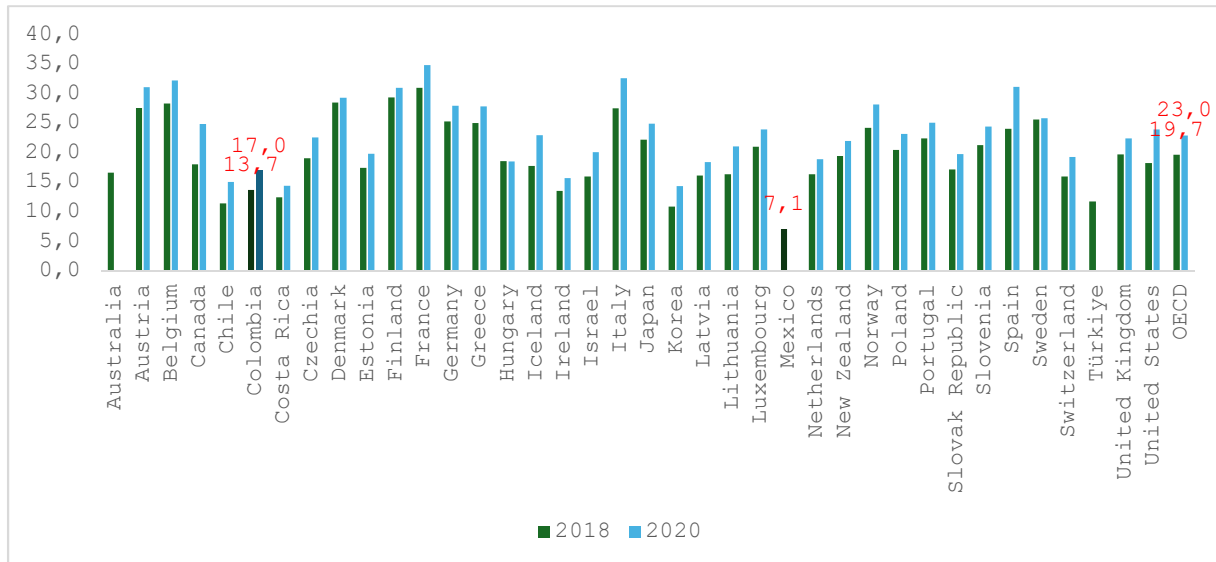
Social spending in both Mexico and Colombia, as a percentage of GDP, falls below the OECD average. While there is no data for Mexico's social spending in 2020 in the OECD database, we can see that in 2018 it was notably below the average. Conversely, Colombia was also below the OECD average in the same year, but the difference was less pronounced, as illustrated in Graph 1.

¹ Colombia Mayor is a cash transfer programme for women aged 54 or older and men aged 59 or older who are classified as poor according to SISBEN IV. Jóvenes en Acción targets youth aged 16–24 who are enrolled in higher education, either university or technical institutions, and who are either poor or identified as a disadvantaged indigenous ethnic group. Red Unidos, later renamed Estrategia Unidos,

focuses on identifying families in extreme poverty to ensure they receive access to more social programmes available to the population. Compensación de IVA aims to refund the Value Added Tax (VAT) paid by lower-income groups. Additionally, Colombia has various in-kind schooling programmes that differ significantly from one municipality (alcaldía) to another, which this research will not cover.

Graph 1. Social spending as GDP percentage for OECD countries and OECD average, 2018 and 2020

Source: Own elaboration with OECD.Stat database (OECD, 2022).



To assess the efficacy of poverty alleviation and inequality reduction, it is essential to analyse the fiscal impact of policies within a given country. The COVID-19 crisis has highlighted the vulnerabilities faced by lower-income populations and emphasised the need for progressive public policies, especially during such challenging times. Various studies have explored taxation, inequalities, and redistribution using different methodological approaches. Some focus primarily on fiscal design, investigating whether the tax structure is redistributive, without considering cash or in-kind transfers to households (Duncan y Sabirianova Peter, 2016; Engel et al., 1998; Sabirianova et al., 2008). Others concentrate on the redistributive effects of transfers, giving less attention to taxes (Lindert et al., 2006), while some examine

whether specific tax structures are linked to economic growth (García-Peñalosa and Turnovsky, 2007; Lee and Gordon, 2005).

Various methodologies have been used to assess the progressiveness of fiscal policies. Duncan and Sabirianova (2016) analyse spending patterns across countries to evaluate their effectiveness. Sabirianova, Buttrick, and Duncan (2008), along with Lee and Gordon (2005), also conduct cross-country comparisons. Sabirianova, Buttrick, and Duncan (2008) focus on Personal Income Tax structures, irrespective of their actual outcomes, while Lee and Gordon (2005) investigate the relationship between tax structures and economic growth. However, these approaches do not offer insights into how fiscal policies affect household income

before and after the application of taxes and social policies.

Additionally, other methodological strategies have exclusively focused on social spending, neglecting the crucial role of taxation in the redistributive process. Examples of this approach include the work of Lindert, Skoufias, and Shapiro (2006). On the other hand, some studies do take both taxation and social spending into account, such as the work by Breceda, Rigolini, and Saavedra (2008). However, these studies rely exclusively on household income surveys for tax allocation and quintile analysis.

Engel, Galetovic, and Raddatz (1998) adopt a different approach for the Chilean case, utilising multiple surveys to address the limitations of relying on a single survey for comprehensive data. They allocate taxes based on household income surveys, assuming these taxes are paid. However, their analysis does not consider the allocation of social spending to households.

The Commitment to Equity (CEQ) methodology has emerged as a valuable tool for evaluating the impact of fiscal policies on inequality and poverty across households. The development of the CEQ handbook by Lustig (2018), has established a standardized framework, enabling the

estimation and comparison of the redistributive effects of fiscal policies across countries. This methodology has been widely adopted, with studies using the CEQ approach conducted in various countries, including Vietnam, Argentina, Bolivia, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Ethiopia, Ghana, Guatemala, Iran, and Mexico. Additionally, the CEQ Institute has published a range of works applying this methodology, providing valuable insights into the specific redistributive effects of fiscal policies in these countries and facilitating comparative assessments within the Latin American region. (*Publications – CEQ Institute, n/d*). Overall, the CEQ methodology has played a crucial role in promoting evidence-based analyses of the impact of fiscal policies on inequality and poverty

However, the CEQ methodology has several limitations, such as not capturing behavioural responses to tax and transfer changes, impacts of macroeconomic stability or growth, or the disregard for intra-household distribution dynamics. Besides from this, the data poses some limitations on its own, like the underreporting and missing information on taxes and transfers or the allocation of revenue and spending items to households (Amjad et al., 2024).

Methodology

The first step of the CEQ methodology is to estimate the monthly income of households, considering first the pre-fiscal income or market income, which considers wages and salaries and income from capital, plus employer's contributions to social insurance, plus private transfers, such as remittances, private pensions, etcetera, plus imputed rent and own production. This pre-fiscal income or market income considers contributory pensions as government transfer (PGT). Then the Market Income plus Pensions (PDI) is estimated. The first part is quite similar to the market income (PGT), it considers wages and salaries and income from capital, employers' contributions to social insurance, plus private transfers, plus imputed rent and own productions, minus employees' and employers' contributions to social insurance old-age pensions, plus contributory social insurance old-age pensions.

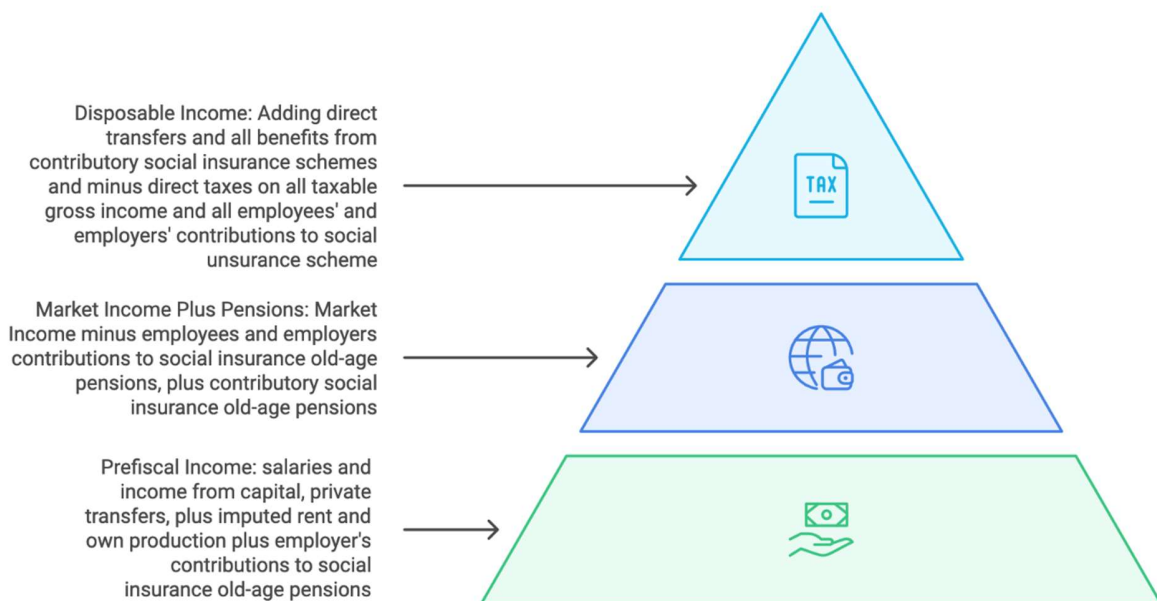
Then the disposable income is estimated. It can be done by either adding direct transfers and all benefits from contributory social insurance schemes and subtracting direct taxes on all taxable gross income (PGT), and all employees' and employers' contributions to social insurance schemes, or by adding direct transfers and all benefits from contributory social insurance schemes, excluding employees' and employers contributory social insurance old-age pensions and subtracting direct taxes on all taxable gross income (PDI), and all employees' and employers' contributions to social insurance schemes, excluding employees' and employers' contributions to social insurance old-age pensions.

Either way the result is the Disposable Income, shown on illustration 1, which is the final income we are considering to assess the redistributive effects of fiscal and social policy in both Mexico and Colombia from 2018- 2020, using data from the National Income Surveys, which for Mexico is the ENIGH (National Survey of Household's Income and Expenditures) survey from INEGI (National Institute of Statistics, Geography and Informatics) (for 2018 and 2020) (INEGI, 2019, 2021) and for Colombia is ENCV (National Survey on Quality of Life) (for 2018 and 2020) from DANE (National Administrative Department of Statistics) (DANE, 2024a, 2024b). We found surveys for the same pair of years for both countries. 2018 in Mexico serves as a prelude to the significant government shift that occurred at the end of the year. The data for this analysis was gathered by the ENIGH (Encuesta Nacional de Ingresos y Gastos de los Hogares), which records household incomes and expenses, between August 11 and November 18 of 2018 and the data for Colombia's ECV 2018 survey was gathered from October 16th and December 21st. Even when income surveys were held at the same pair of years, for 2020 the data was collected in different months and thus, the effects of the pandemic might vary a great deal, since Mexico's survey was held from late March to April (planned to end by March 27th, but was extended because of

the circumstances) and Colombia's survey was held from September to November (INEGI, 2020; DANE, 2021)

Illustration 1. Types of Income and components of each category of income

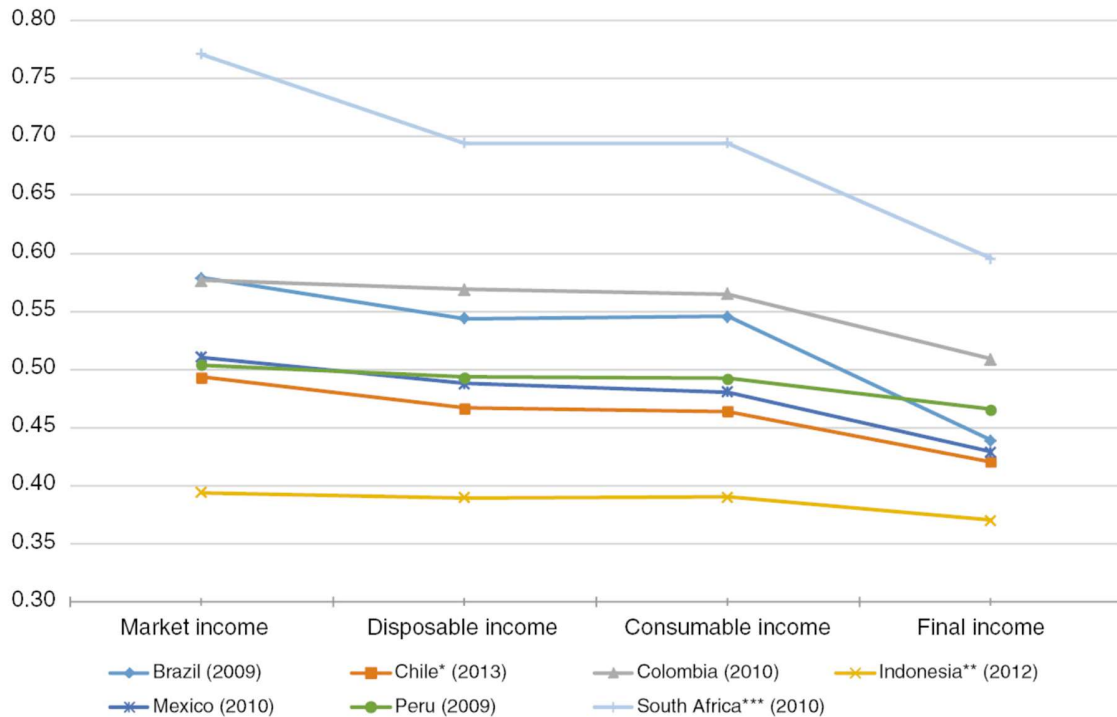
Source: Own elaboration based on Lustig (2018)



The Disposable income has limitations since there is no allocation of public goods and services, as there is with consumable or final income in the CEQ methodology, however, other studies have shown there is not a considerable difference in inequality from Market Income to Consumable Income either in Mexico or Colombia, (Lustig, 2015) as it will be illustrated in figure 1.

Figure 1. Gini index change by type of income

Source: Lustig, 2015



Building on the insights provided by the CEQ methodology, the following sections delve deeper into the analysis of fiscal policies and their redistributive impacts. Each section systematically examines different aspects of fiscal policy, from the specific social programmes in Mexico and Colombia to the broader implications of these policies on inequality and poverty. In Section 1, we will discuss the changes in Mexico's fiscal policies and social programmes from 2018 to 2020. Section 2 will then explore similar developments in Colombia during the same period. After describing the changes in each country, Section 3 will address the relevant issues related to both sets of fiscal policies, focusing on pensions and cash transfer programmes. By employing the CEQ framework and other relevant methodologies, these chapters aim to offer a comprehensive understanding of how fiscal interventions and social spending can be optimized to promote social equity.

1. Mexico

The period from 2018 to 2020 in Mexico was marked by significant shifts in fiscal policies and social programmes, driven by a new administration with a distinct approach to governance and social equity. Following the election in 2018 of a long-time opposition candidate, the Mexican government undertook substantial reforms aimed at addressing income inequality and enhancing social protection. However although he assumed the presidency in 2018, it was only in December, so the most part of the year 2018 can serve as a 'before' scenario. This section explores the key changes implemented during this period, including the cancellation of the Prospera programme and the introduction of new initiatives such as a universal non-contributive pension for the elderly and targeted scholarships for education. By examining these policy changes, we aim to understand their impact on poverty alleviation and inequality reduction in Mexico during these transformative years.

This section will first assess the inequality situation in 2018, examining the effects of taxes and cash transfers on income distribution in Section 1.1. It will then compare these findings with the inequality situation in 2020 in Section 1.2, highlighting any notable changes. Finally, Section 1.3 will analyse the impact of these policies on poverty, comparing the changes in poverty levels and income types between 2018 and 2020. Through this detailed examination, we aim to understand the redistributive impact of Mexico's fiscal and social policies during this transformative period.

1.1. Mexico's fiscal and social policy effects on income (2018)

In this section, we will first evaluate general inequality using the Gini Index, providing an overview of income distribution before and after the implementation of taxes, pensions, and cash transfers from social programmes. Following this, we will examine the detailed distribution of income changes by decile, assessing the impact of these fiscal and social policies on different segments of the population.

In this section, we will first compare the Gini Index for various stages of income distribution to assess the impact of fiscal and social policies on inequality. Specifically, we will examine the Gini Index of pre-tax and pre-social transfer income and compare it with the Gini Index of post-tax income, post-pensions income, and post-social transfers income. This comparison will

provide a comprehensive view of how these interventions influence income inequality across different stages of fiscal redistribution.²

Even though the Gini Index is a general measure, it is valuable due to its widespread use across countries and its ability to provide a clear overview of income inequality. In this section, we will first compare Mexico's Gini Index before and after the implementation of fiscal policies considering only direct taxes and subsidies and social programmes in 2018. This comparison will be detailed in Table 1, which illustrates the changes in income inequality resulting from taxes, pensions, and social transfers.³

Table 1. Mexico's 2018 Gini Index of Market Income, Market Income + Pensions and Disposable Income
Source: Own elaboration based on CEQ Methodology and ENIGH

Gini Index	Market Income (pre-tax, pre-transfers)	Market Income + Pensions	Disposable income (Market income plus taxes and transfers)
2018	0.472	0.486	0.458

Mexico's policies in 2018 demonstrated a modestly progressive impact. The Gini Index for market income plus pensions was higher compared to the Gini Index for disposable income, which accounts for taxes and cash transfers related to social programmes. Specifically, the Gini Index for disposable income was 0.458, compared to 0.472 for market income plus pensions. While the Gini Index is a valuable tool for simplifying inequality into a single number, it may obscure the detailed distribution of inequality within different income segments of the population.

² For all the analysis in this document, only cash transfers will be analyzed and in-kind transfers will be left out, because in-kind transfers are not very relevant for the study of inequality. While in-kind transfers can be more significative for poverty studies the complexity of allocating in-kind transfers to households and the fact that we are centering on inequality studies were the reasons to leave it out of this study, as can be seen in the research documents of Scott, de la Rosa and Aranda (2017), and Scott, Massa and Parada (2024) where poverty changes a great deal from disposable to consumable and final income but Gini's index not as much.

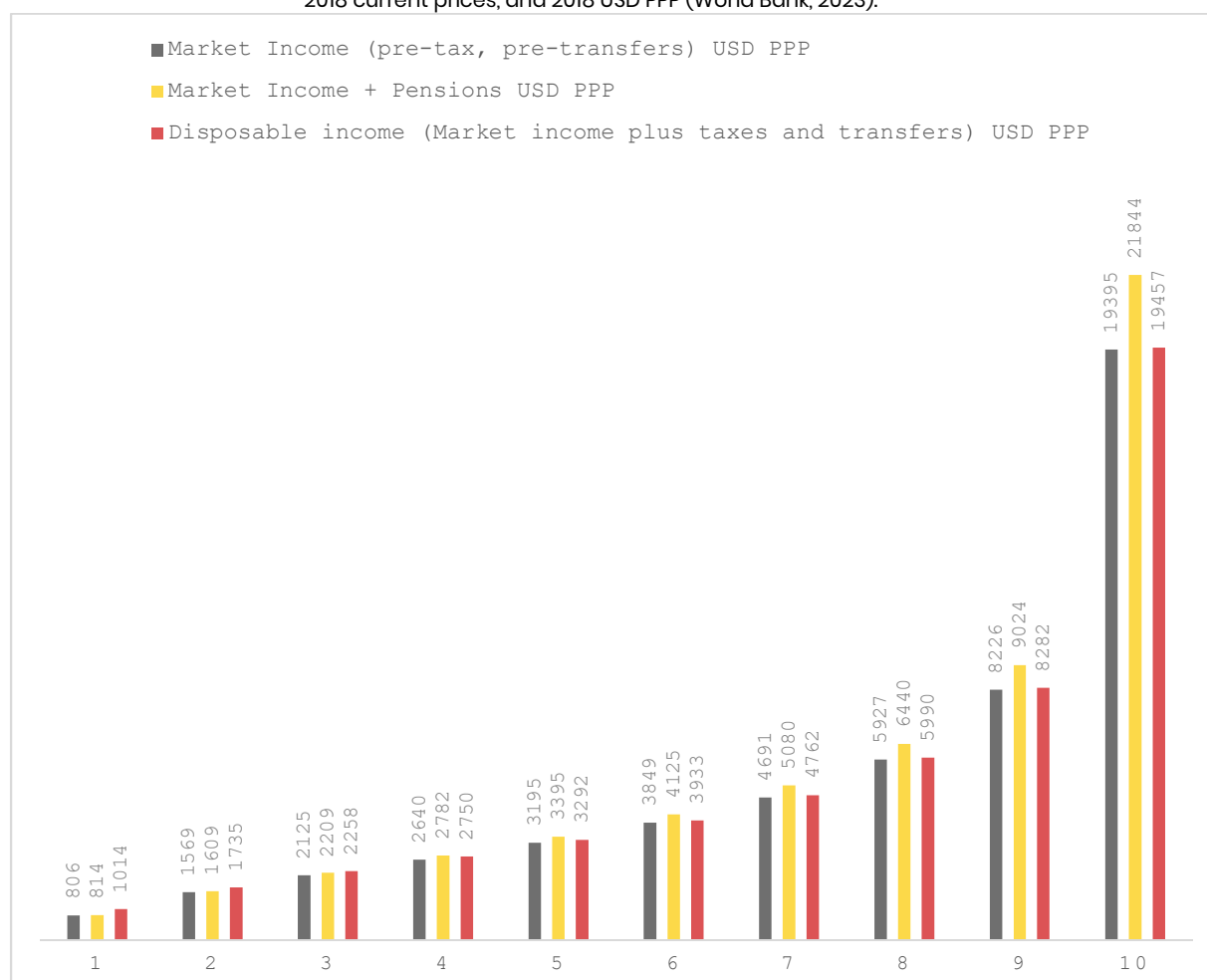
³ Gini Index goes from 0 to 1, where 1 is the most unequal distribution and 0 is where everything is distributed equally in a given administrative region.

A closer examination of the distribution across income deciles reveals the shape of income inequality. Graph 2 presents the mean income for each decile at various stages: pre-tax, pre-pensions, and pre-transfers, as well as after pensions and after taxes and cash transfers. The latter is referred to as disposable income. This analysis demonstrates that disposable income increased for each decile, including the top decile. However, the growth was more pronounced in the lower income deciles. Despite this, even the highest income decile did not experience a reduction in income. This graphical representation helps to highlight how income is distributed among different deciles and the impact of fiscal policies on income inequality.

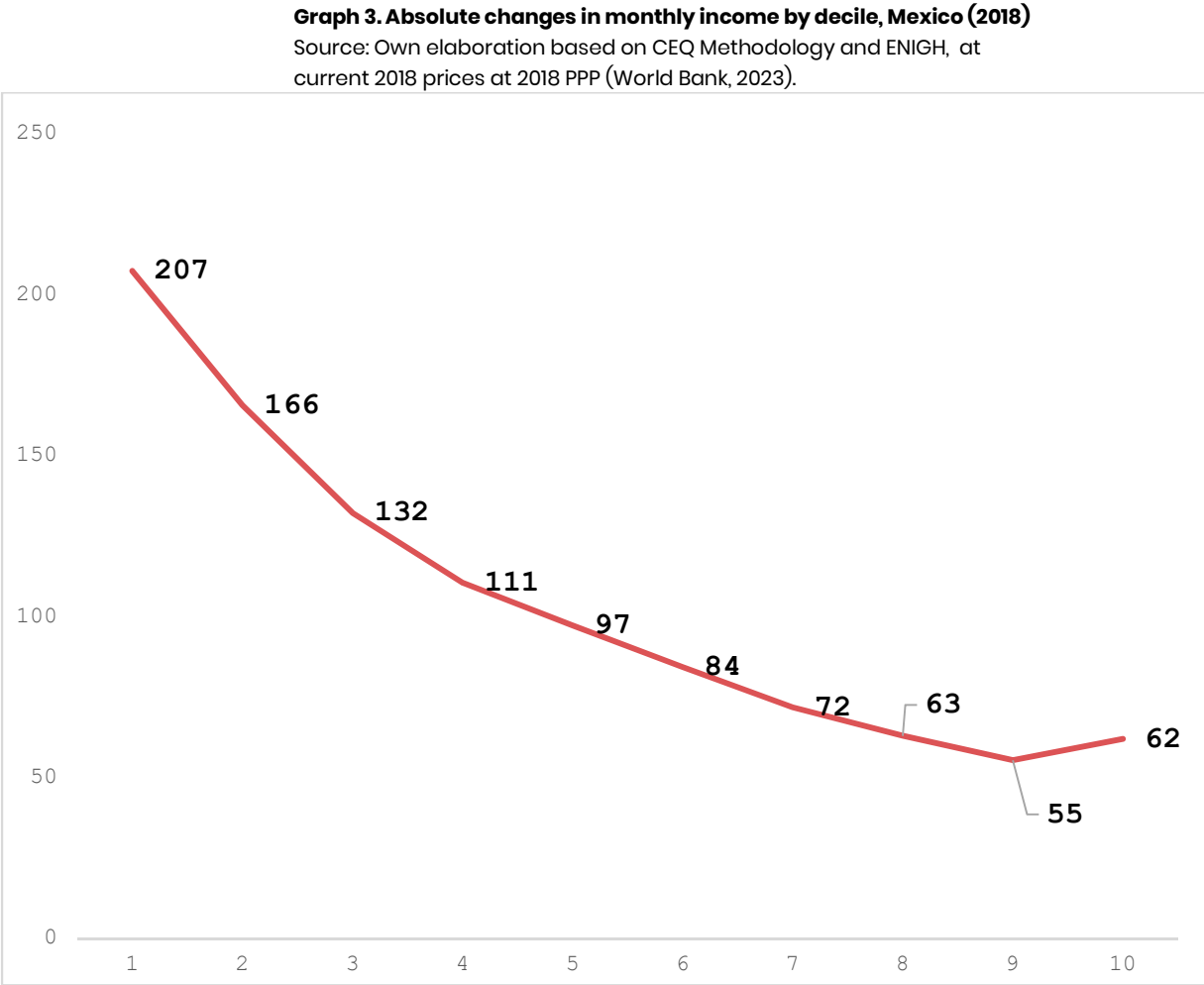
Nonetheless, the relatively modest increase for lower income deciles is significant for their budgetary constraints and overall income allocation, as illustrated in Graph 4.

Graph 2. Changes in monthly income distribution by decile. Mexico (2018)

Source: Own elaboration, following CEQ methodology with ENIGH data at 2018 current prices, and 2018 USD PPP (World Bank, 2023).

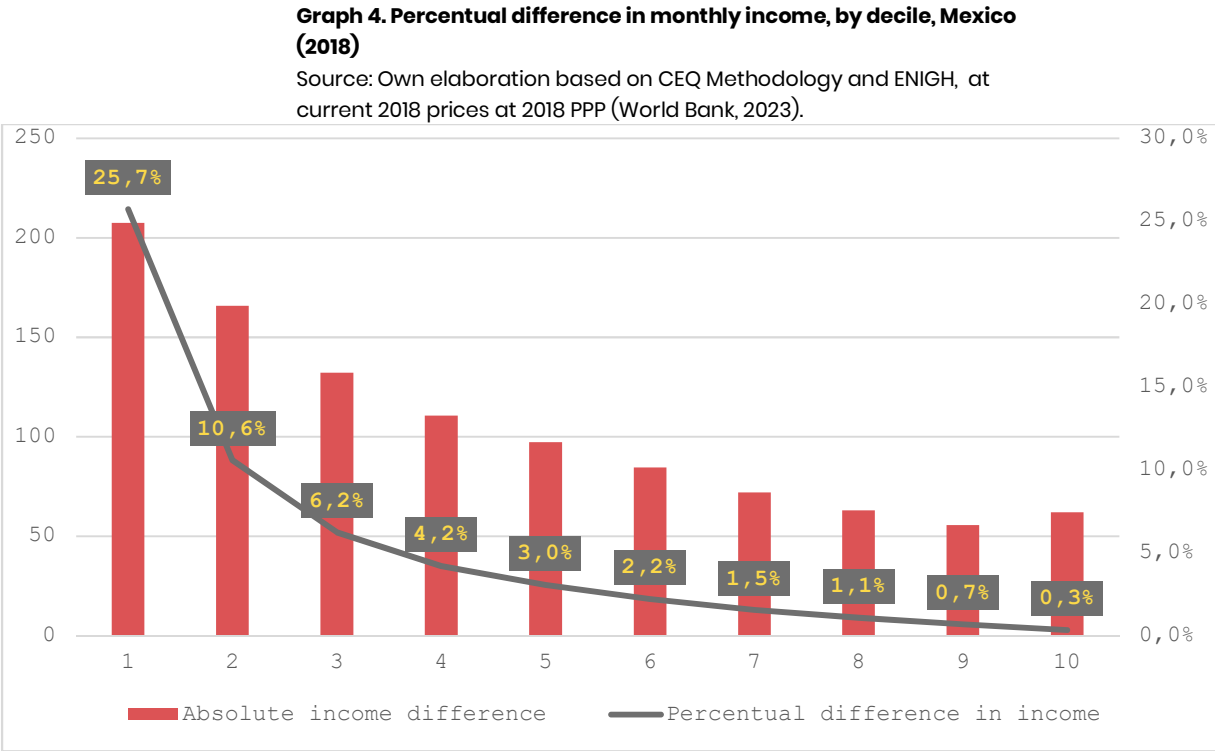


Graph 2 illustrates that the overall shape of inequality remains largely unchanged after the implementation of taxes and social programmes. To further examine the impact, Graph 3 focuses on the gap between market income and disposable income (market income after taxes and cash transfers) for each decile. This graph highlights the difference in income for each decile, showing the extent of redistribution achieved through fiscal policies and social programmes.



All deciles experience an increase in disposable income after taxes and transfers, although the amount of increase generally decreases from the first to the tenth decile. Notably, the ninth decile sees a smaller increase compared to the tenth decile. The increase in disposable income for the tenth decile is almost equivalent to the increase observed in the eighth decile. However, the absolute amount of change does not fully capture the significance of these differences for households. For example, a household in the lowest decile whose income rises from \$806 to \$1,014 experiences a substantial improvement in their purchasing power, which is crucial for

their well-being. In contrast, a household in the tenth decile, with an income rising from \$19,395 to \$19,457, sees a less impactful change, making it rather futile to spend in increasing their income. Graph 4 illustrates the percentage difference in income for each decile, providing a clearer picture of the relative impact across the income distribution.



For households in the first decile, the change from market income to disposable income was significant, amounting to 25.7%. This means that cash transfers constituted a quarter of their total income. It is important to note that this analysis only considers direct taxes; value-added taxes or other indirect taxes paid by all deciles are not included. For the top deciles, the difference in income was much less pronounced, representing only 0.7% for the ninth decile and 0.3% for the tenth decile. Although the absolute increase in income was larger for the tenth decile compared to the ninth, its significance as a percentage of total income was minimal.

Having examined the income distribution and the impact of fiscal and social policies on inequality in Mexico for 2018, we now turn our attention to the subsequent period. In the following section, we will explore the fiscal and social policy effects on income in 2020. This analysis will provide insights into how the new administration's reforms and the challenges posed by the COVID-19 pandemic have shaped income inequality and poverty alleviation efforts in Mexico.

By comparing the data from 2018 and 2020, we can better understand the evolution of these policies and their effectiveness in addressing socio-economic disparities.

1.2. Mexico's fiscal and social policy effects on income (2020)

The year 2020 was a pivotal period for Mexico, marked by both the continued implementation of social policies that began in 2019 and the unprecedented challenges of the COVID-19 pandemic. This section examines how these policies influenced income distribution and inequality. We will analyze the data collected to assess the effectiveness of government measures in mitigating the economic impacts of the pandemic and in continuing the administration's efforts to reduce income inequality. By comparing the 2020 data to that of 2018, we aim to understand the progress made and the areas needing further attention. This examination will provide a comprehensive view of how fiscal and social policies have shaped the socio-economic landscape in Mexico during a year of profound upheaval.

During 2019, most social programmes in Mexico underwent significant changes, with many being cancelled and new ones created due to the substantial government shift that occurred at the end of 2018. President López Obrador, who had been vying for the presidency since 2006, finally won the election with a promise of change. To demonstrate that this change was underway, the new administration revamped the social programmes to reflect its commitment to addressing inequality and improving social welfare.

Given the context where changes to social programmes had just taken place before the pandemic began, President López Obrador asserted that Mexico was well-prepared to face the crisis due to savings of 400,000 million pesos (1.6% of GDP). He emphasized that these funds would ensure the continuation of social programmes and infrastructure projects aimed at boosting employment ("López Obrador no cancelará programas sociales, ni megaproyectos por coronavirus", 2020). However, he faced criticism for not implementing a specific programme to address the economic crisis brought on by the pandemic, suggesting that the newly established programmes would suffice without additional interventions (Ríos, 2020).

In the following tables and graphs, we will examine whether the pre-pandemic programmes were effective in redistributive terms to address the crisis. Table 2 will illustrate how the Gini Index changed before and after pensions, taxes, and cash transfers from social programmes. We will also compare the overall inequality in 2020 to that of 2018 to assess the impact of these programmes during the pandemic.

Table 2. Mexico's 2020 Gini Index of Market Income, Market Income + Pensions and Disposable Income

Source: Own elaboration, following CEQ methodology with ENIGH data

Gini Index	Market Income (pre-tax, pre-transfers)	Market Income + Pensions	Disposable Income (Market income plus taxes and transfers)
2018	0.472	0.486	0.458
2020	0.461	0.466	0.448

During 2020, overall inequality was lower than in 2018. However, this decrease was likely due to the pandemic's impact on reducing most incomes, rather than an improvement in economic conditions for all. The social programmes in place proved to be as effective in equalizing income as those in 2018, as evidenced by the minimal difference in the reduction of inequality between market income and disposable income, with 2020 showing only a 0.01 improvement over 2018. It is not quite comparable to other results that followed the CEQ methodology for the pandemic, because those took into consideration only social programmes that were specifically created to address the pandemic, and Mexico had none (Blofield et al., 2021; Lustig et al., 2020), yet our results show a similarity between market income and ex ante scenarios (Lustig et al., 2020).

As stated before, it is important to closely examine the changes in income distribution after accounting for taxes, pensions, and cash transfers. Graph 5 illustrates that the changes in income after these adjustments remain similar to the situation in 2018. It is crucial to note that these incomes are not adjusted to national accounts, and the income at the higher end typically increases significantly when such adjustments are made.

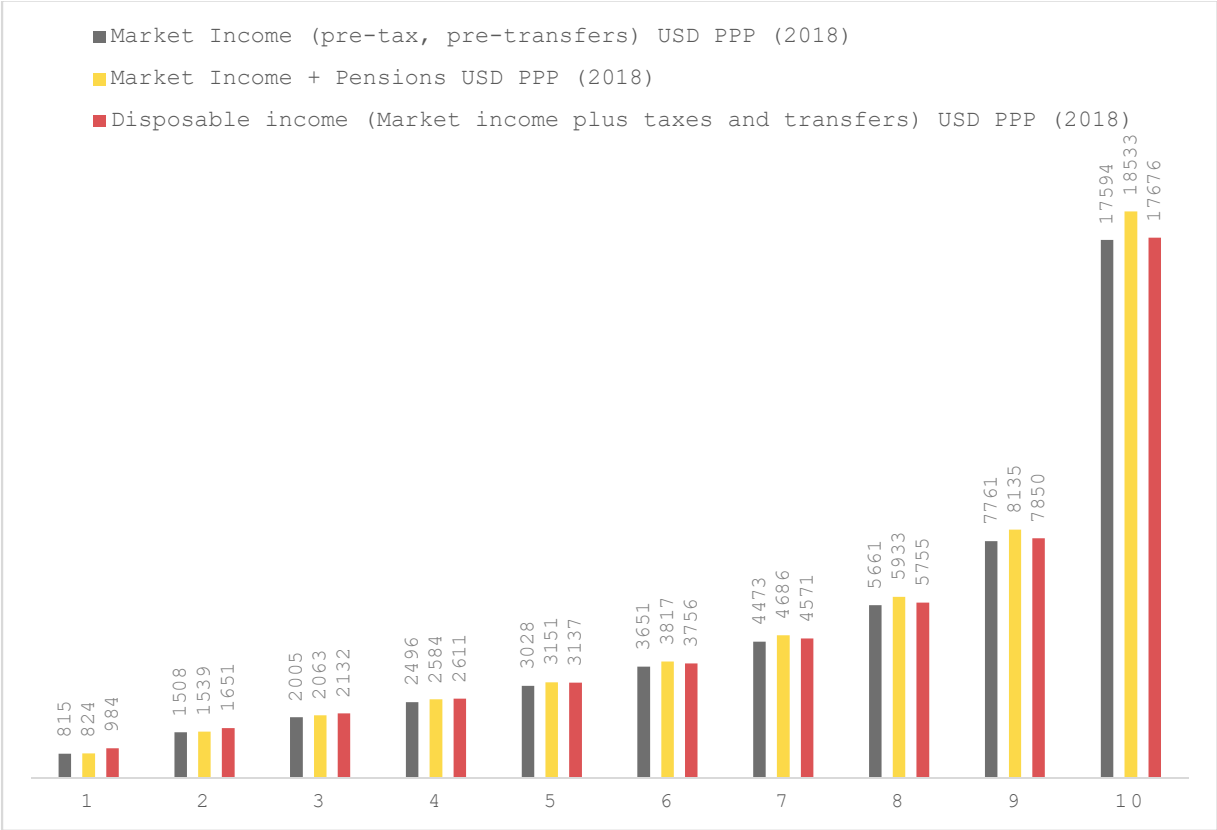
There were widely shared reports about the fortunes of the richest individuals growing even larger during the pandemic (Ahmed et al., 2022; Cooban, 2022; Elliott, 2022). This raises critical questions about whether inequality in Mexico was adequately addressed during such challenging times. Were the new programmes truly sufficient to manage the crisis without implementing a specific programme to support the families who were struggling the most? In the following analysis, we will delve into whether these existing measures were effective in mitigating the economic hardships faced by lower-income households during the pandemic.

Graph 5 provides a detailed view of the income distribution in 2020 across all deciles, highlighting the differences in income types. A closer examination of the changes by decile,

both pre- and post-taxes and transfers, reveals that in 2020, even the top 20% of the income distribution had a slightly higher income after accounting for taxes, pensions, and cash transfers, a trend also observed in 2018. In 2018, the bottom 30% of the income distribution saw a greater increase in income after transfers and taxes compared to after pensions. Similarly, in 2020, this trend extended to the bottom 40% of the income distribution.

Graph. 5 Changes in monthly income distribution by decile. Mexico (2020)

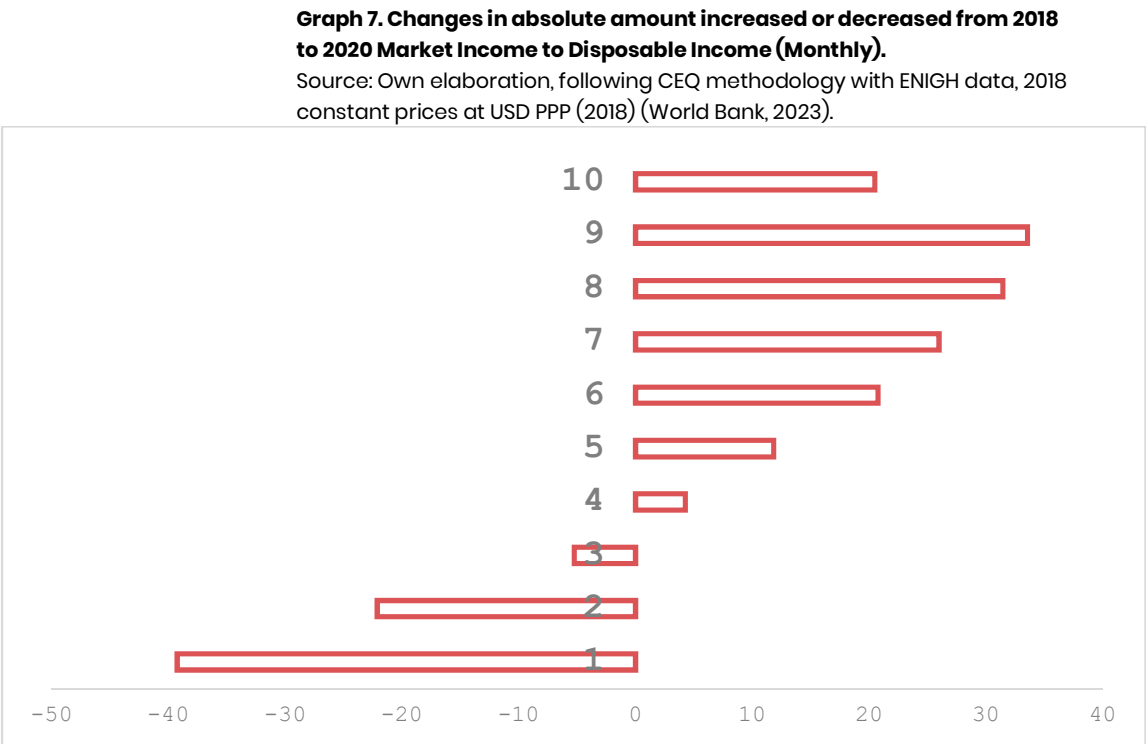
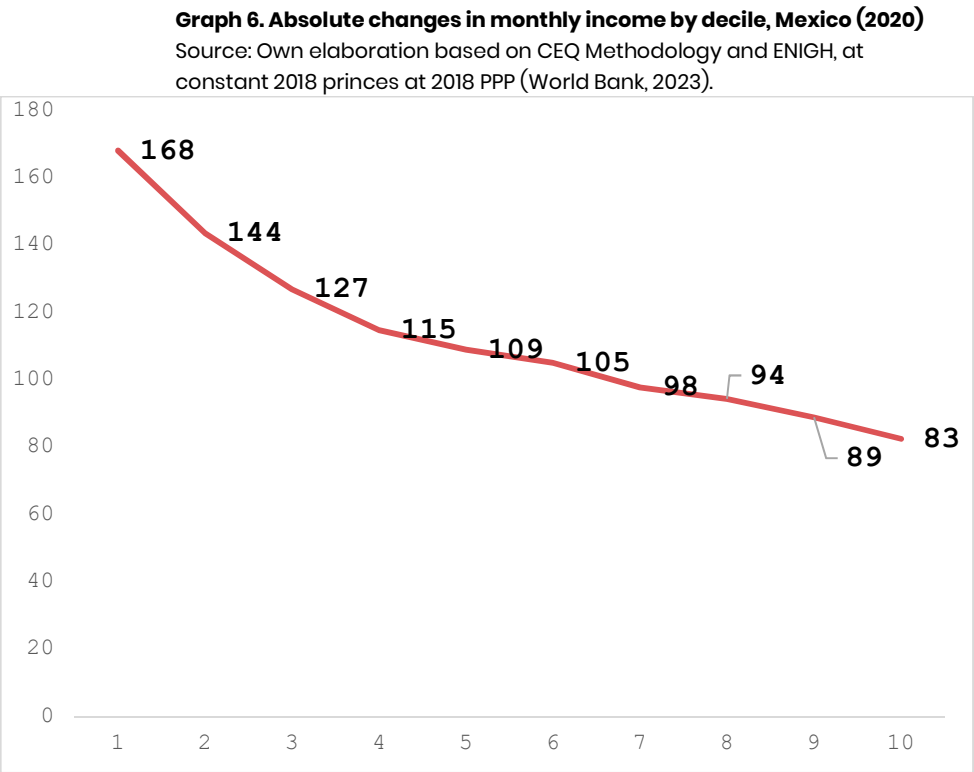
Source: Own elaboration based on CEQ Methodology and ENIGH, at constant 2018 at 2018 PPP (World Bank, 2023).



Absolute changes in income are indeed very relevant. Graph 6 illustrates these absolute changes from Market Income to Disposable Income for each decile.

The amounts of increases in income decrease consistently across deciles, resembling a staircase pattern, with no exceptions in 2020. In 2018, the 9th decile was an exception, as its income increase was lower than that of the 10th decile. To better understand these differences compared to 2018, we will first present how the income increase varied by decile, as shown in

Graph 7. This will be followed by an analysis of the percentage changes in income for each decile.

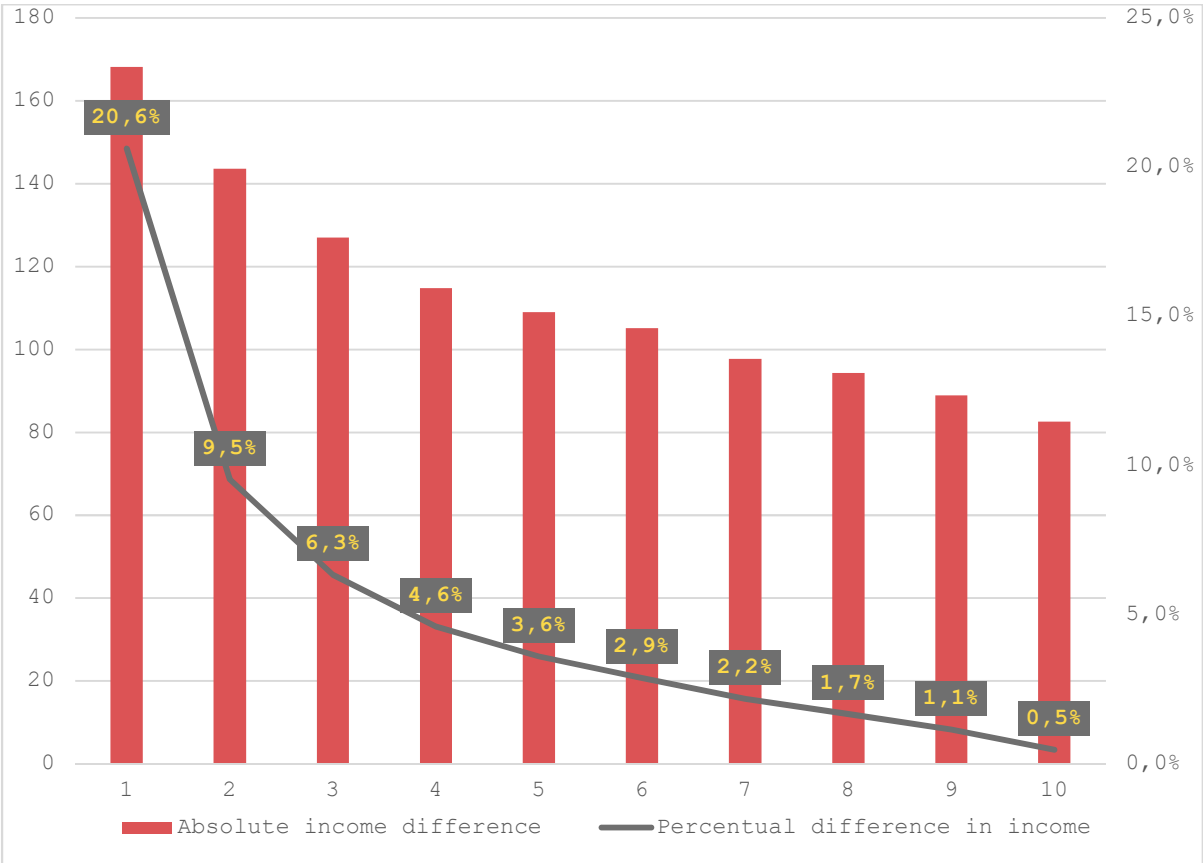


Graph 7 clearly illustrates that, in 2020, the absolute income increases received by the lowest income households were less compared to 2018, when adjusted for constant dollars. In contrast, the top income decile saw a larger increase in absolute terms. This suggests that, in terms of absolute income change, lower-income households received less support in 2020 compared to the support they had received before the pandemic.

In Graph 8, we will present the percentage change in income for each decile, highlighting the considerable differences. While in 2018 the lowest decile saw a 25.7% increase in income, this figure decreased to 20.6% in 2020. From the third decile onward, the percentage increases in 2020 surpass those of 2018. This is particularly relevant, as it demonstrates that a significantly larger amount is required to achieve similar percentage increases for higher income deciles.

Graph 8. Percentual difference in monthly income, by decile, Mexico (2020)

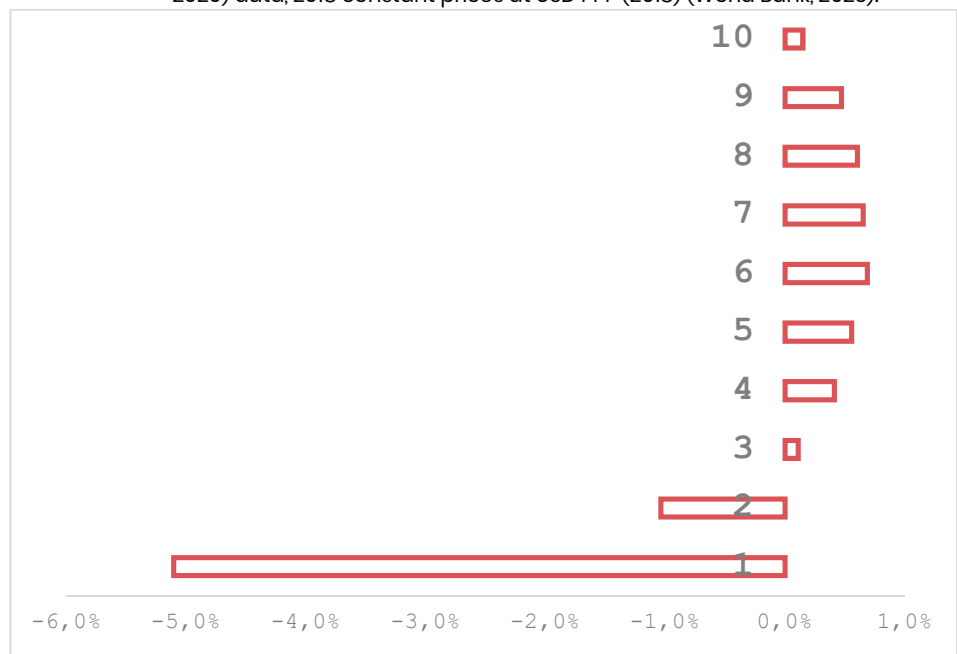
Source: Own elaboration, following CEQ methodology with ENIGH 2020 data, 2018 constant prices at USD PPP (2018) (World Bank, 2023).



To replicate the analysis of absolute amounts, we will examine the percentage change for each decile in both 2018 and 2020, as illustrated in Graph 9. The graph clearly shows that the income changes for the bottom two deciles had a significantly negative impact, while the upper income deciles experienced only a slight percentage increase, which was likely negligible, particularly for the top decile. Had the funds been more heavily allocated to the bottom two deciles, the improvement in well-being for those households could have been substantial.

Graph 9. Changes in the percentual relevance of the changes in monthly income from 2018 to 2020 Market Income to Disposable Income.

Source: Own elaboration, following CEQ methodology with ENIGH (2018, 2020) data, 2018 constant prices at USD PPP (2018) (World Bank, 2023).



As we transition to the next section, we will shift our focus from the changes in income distribution to the impact on poverty levels. Section 1.3 will explore how poverty percentages evolved from 2018 to 2020 across different types of income. By examining these changes, we aim to understand how shifts in fiscal and social policies influenced poverty rates and assess whether the measures in place were effective in alleviating poverty during this period.

2. Colombia

From 2018 to 2020, Colombia experienced significant developments in its fiscal and social policies, influenced by both domestic and global events. During this period, the Colombian government faced the challenge of addressing persistent poverty and inequality while navigating the complex impact of the COVID-19 pandemic. Key policy shifts included the continuation and expansion of existing social programmes, as well as the introduction of new initiatives aimed at mitigating the economic fallout from the pandemic. In this section, we will delve into the evolution of Colombia's social and fiscal policies over these years, examining their effectiveness in combating poverty and reducing inequality. Through a detailed analysis of income distribution, policy impacts, and programme changes, we aim to understand how Colombia's approach compared to that of Mexico and other countries during this transformative period.

In Colombia, several social programmes operate at the county or municipal level, many of which involve in-kind transfers related to education. However, our analysis focuses solely on federal cash transfer programmes and fiscal policies to assess inequalities and income distribution changes. This approach provides a general overview of the broader impact of federal policies, though it does not capture the full extent of social support at the local level. In this section, we will first examine the changes in inequality for 2018 in Section 2.1, followed by an analysis of the situation in 2020 in Section 2.2, which will also include comparisons between 2018 and 2020. Finally, Section 2.3 will explore the distribution of cash transfers across different income deciles.

2.1. Colombia's fiscal and social policy effects on income (2018)

In 2018, Colombia's fiscal and social policy landscape was characterized by a mix of ongoing initiatives and evolving strategies aimed at addressing poverty and inequality. This period marked a time of continuity in several key social programmes, with a focus on improving the efficiency and reach of existing policies. This section, 2.1, will delve into the impact of Colombia's fiscal and social policies on income distribution for the year 2018. By examining the changes in income inequality before and after the application of taxes, pensions, and cash transfers, we aim to gain insights into the effectiveness of these policies in addressing socio-economic disparities. This analysis will set the stage for understanding how Colombia's approach to social protection and fiscal policy evolved leading up to and during the COVID-19 pandemic.

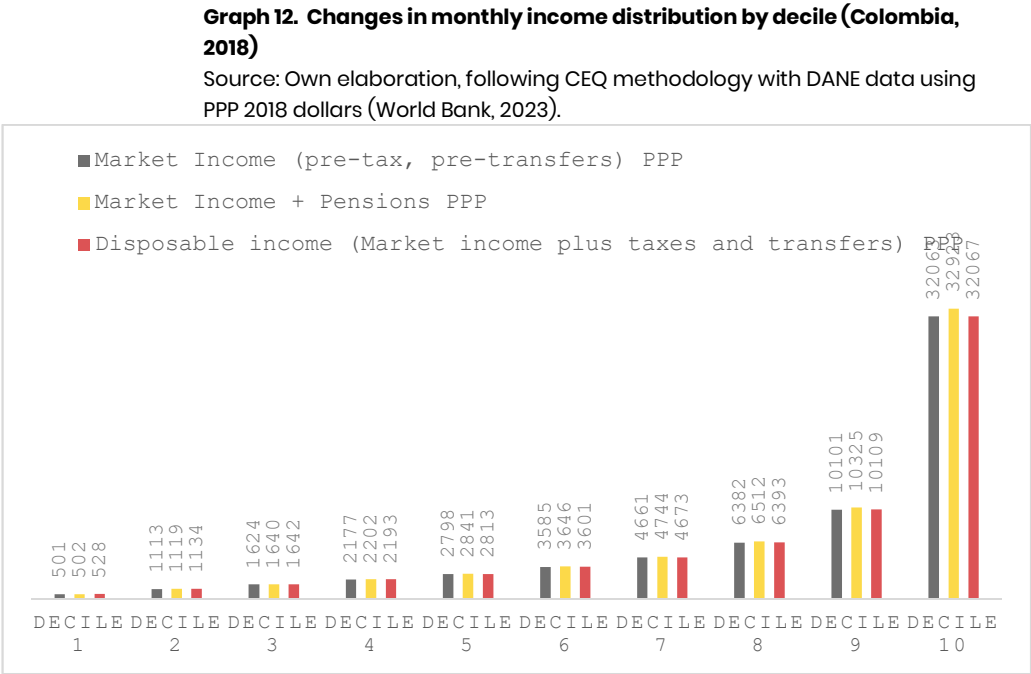
To start our analysis, we will follow a similar approach to that used for Mexico by examining the Gini Index for Colombia in 2018 across different income types. This will be detailed in Table 3.

Table 3. Gini Index for each income type (2018)
Source: Own elaboration, following CEQ methodology with DANE (2018) data, 2018 current prices at USD PPP (2018).

Market Income (pre-tax, pre-transfers) PPP	Market Income + Pensions PPP	Disposable income (Market income plus taxes and transfers) PPP
0.605	0.607	0.603

In 2018, the Gini Index reveals that inequality in Colombia was notably high. The situation improved only marginally after accounting for taxes and cash transfers, with a reduction of just 0.002 points. As mentioned earlier, the change in inequality when considering disposable income does not reflect a substantial difference in the Gini coefficient.

To understand the implications for the majority of the population, we will examine how incomes varied across deciles in 2018. This analysis is presented and visually illustrated in Graph 12.

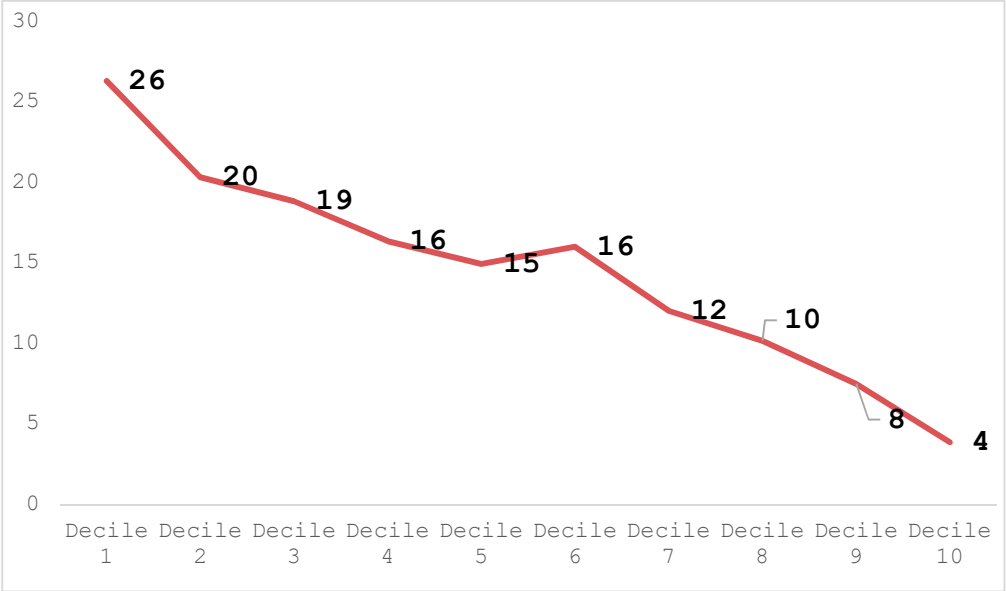


The data in Graph 12 indicate that the overall shape of inequality remains largely unchanged after accounting for taxes and social programmes. To further illustrate this, Graph 13 details the

differences between market income and disposable income for each decile, highlighting how much the income gap is reduced by these fiscal and social measures.

Graph 13. Absolute monthly income difference, by income decile (Colombia, 2018)

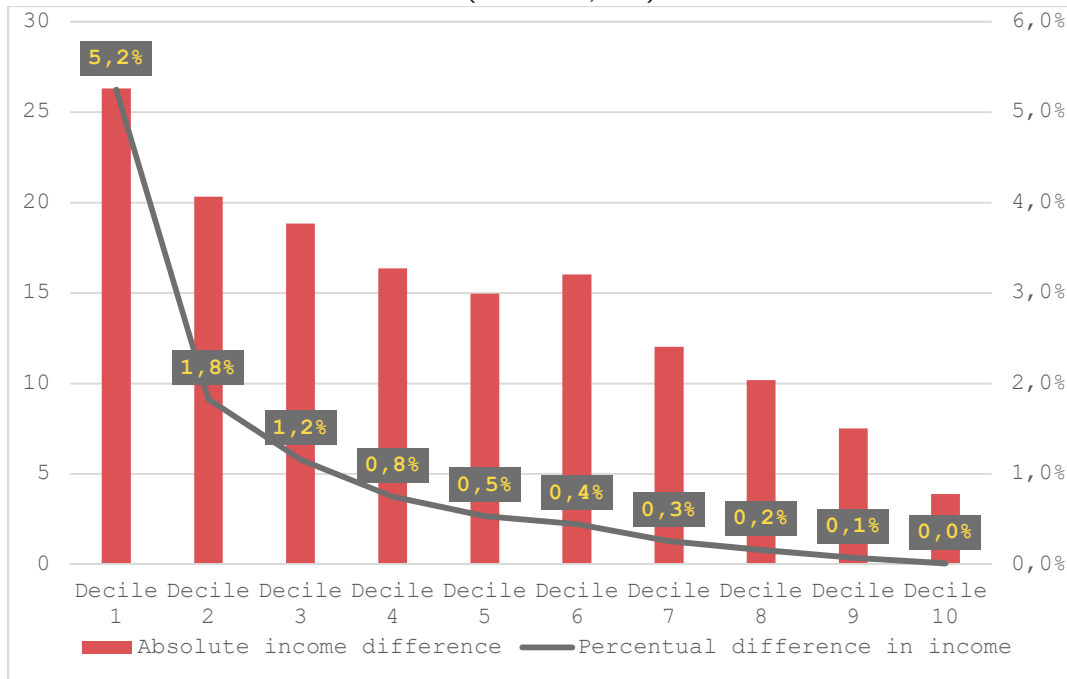
Source: Own elaboration, following CEQ methodology with DANE data using PPP 2018 dollars (World Bank, 2023).



All deciles see an increase in disposable income after taxes and transfers, but the magnitude of this increase generally decreases from the first to the tenth decile, with the notable exception of the 6th decile, which experiences a larger increase than the 5th decile. While the absolute changes in income are relatively modest across all deciles, their significance varies greatly. For instance, a household in the first decile with an income of \$501 sees a meaningful increase, while a household in the tenth decile, with an income rising from \$32,063 to \$32,067, experiences a negligible change. Graph 14 illustrates the percentual differences in income for each decile, providing a clearer picture of how these changes impact different income groups.

Graph 14. Percentual difference in monthly income, by decile (Colombia, 2018)

Source: Own elaboration, following CEQ methodology with DANE data using PPP 2018 dollars (World Bank, 2023).



In 2018, even the deciles that saw the largest increases in income in Colombia did not experience significant gains. For instance, the first decile, which saw its income rise by \$26, experienced a 5.2% increase relative to their market income. Notably, the change between the first and second decile was 1.8% of their market income, with the percentage decrease becoming more pronounced as we move up the deciles, despite the absolute amount of income not necessarily declining for deciles 5 and 6. This pattern may be influenced by the presence of in-kind transfers administered at the subnational level, which are not captured in the federal cash transfer and fiscal policy data analyzed here.

As we have examined the impact of Colombia's fiscal and social policies on income distribution in 2018, it is clear that while there were some improvements, the overall changes were modest. To gain a comprehensive understanding of the effectiveness of these policies, we must now turn our attention to 2020. This period, marked by the COVID-19 pandemic, brought significant challenges and necessitated a reevaluation of the country's social and fiscal strategies. In Section 2.2, we will analyze the effects of these policies on income in 2020, comparing them with the 2018 data to assess any shifts in inequality and poverty amidst the crisis.

2.2. Colombia's fiscal and social policy effects on income (2020)

In 2020, Colombia, like many other countries, faced unprecedented challenges due to the COVID-19 pandemic. The crisis not only strained public health systems but also exacerbated economic inequalities and highlighted the need for effective social and fiscal interventions. During this period, the Colombian government implemented various policy measures aimed at mitigating the pandemic's impact on vulnerable populations. This section will explore how these fiscal and social policies influenced income distribution and inequality in Colombia for the year 2020. By comparing this data with the previous year, we aim to understand the effectiveness of these measures in addressing the economic challenges posed by the pandemic and to evaluate their role in shaping income disparities during a time of significant crisis.

In response to the pandemic, Colombia introduced the Ingreso Solidario program, a cash transfer initiative designed to provide financial support to vulnerable households. This program, which ran until December 2022, offered bimonthly payments of approximately \$100 USD to families identified as extremely poor in the SISBEN social database. The amount of the transfer could vary based on sociodemographic factors; for instance, female-headed households in extreme poverty received nearly double the standard amount. This targeted approach aimed to address the immediate needs of the most disadvantaged groups during the economic upheaval caused by the pandemic.

Despite the implementation of the Ingreso Solidario program, Colombia's Gini Index for 2020 did not show a large improvement in inequality from Market Income to Disposable Income, though it was slightly less unequal than in 2018, as can be seen in Table 4. This coincides with results other studies have shown (Lustig et al., 2020). This modest improvement is likely attributed to a decline in income among the top deciles rather than a significant increase in the redistributive impact of fiscal policies and social programs.

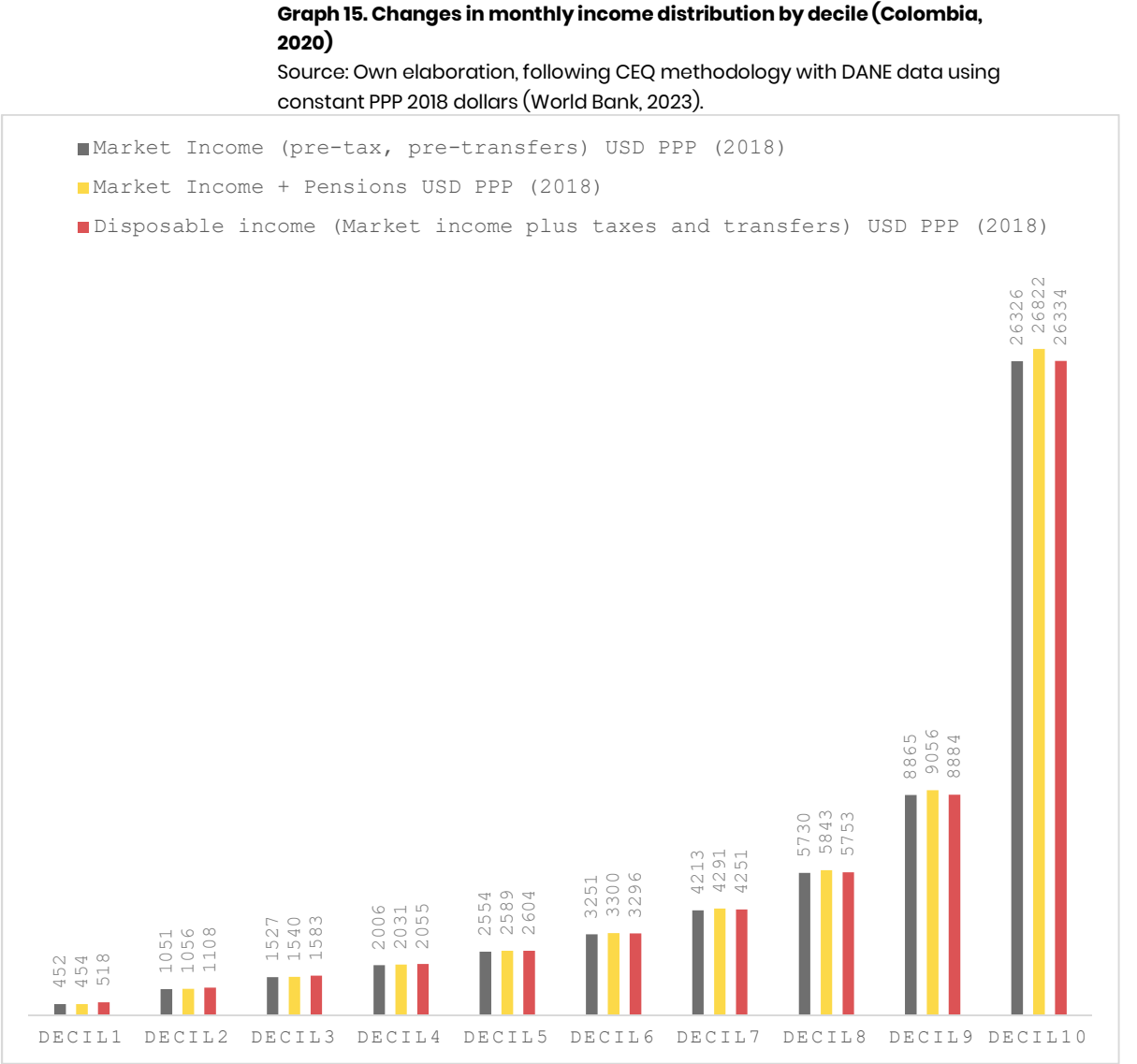
Table 4. Changes in Colombia's Gini Index for each type of income in 2018 and 2020

Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).

	Market Income (pre-tax, pre-transfers) PPP	Market Income + Pensions PPP	Disposable income (Market income plus taxes and transfers) PPP
2018	0.605	0.607	0.603
2020	0.583	0.584	0.578

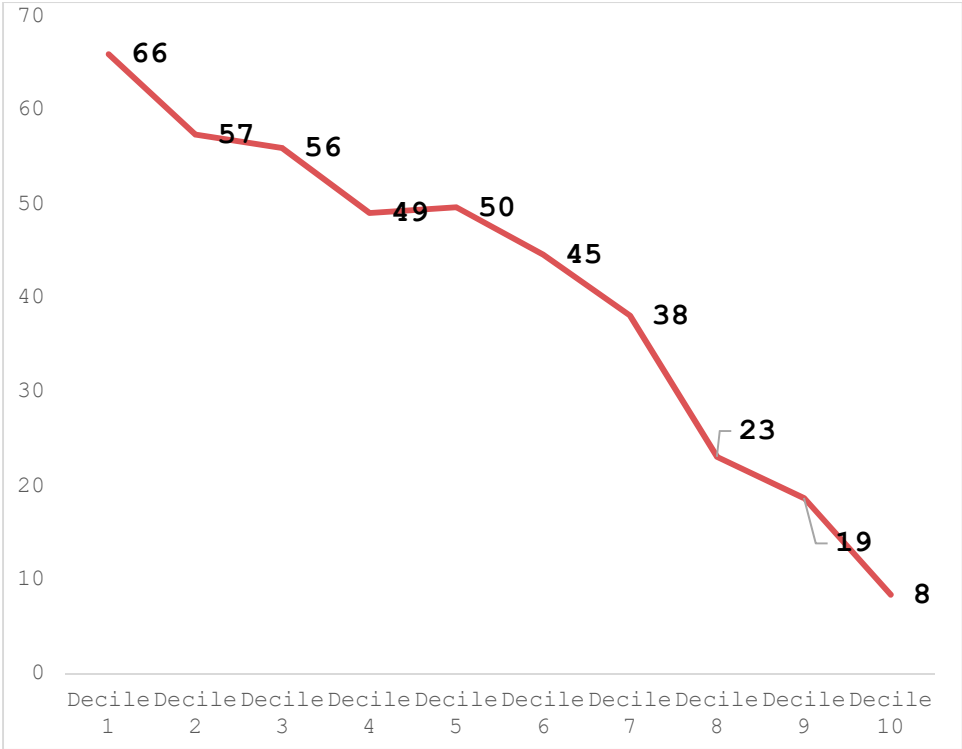
As previously mentioned, examining the changes in income distribution after taxes, pensions, and cash transfers is crucial. Graph 15 reveals that the distribution of income in 2020, after accounting for these factors, closely resembles the situation in 2018. It is important to note that these figures are not adjusted for national accounts, and typically, higher-end incomes tend to show more significant changes when such adjustments are made.

The stark increase in income from the 9th to the 10th decile vividly illustrates the inequality present in Colombia. The transition from Market Income to Disposable Income has done little to alter this disparity. For a clearer visual representation of the inequality across deciles and the impact of fiscal policy and cash transfers in 2020, refer to Graph 15.



From the first to the second decile income doubles, but it seems like a meaningless change in comparison with the large inequality that the income of the tenth decile households means. From Market Income to Disposable Income the changes are rather slight, and do little (to not say nothing at all) to revert the inequality but we can take a closer look at those changes in Graph 16, where we will only look at those gaps.

Graph 16. Absolute monthly income difference, by income decile (Colombia, 2020)



Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).

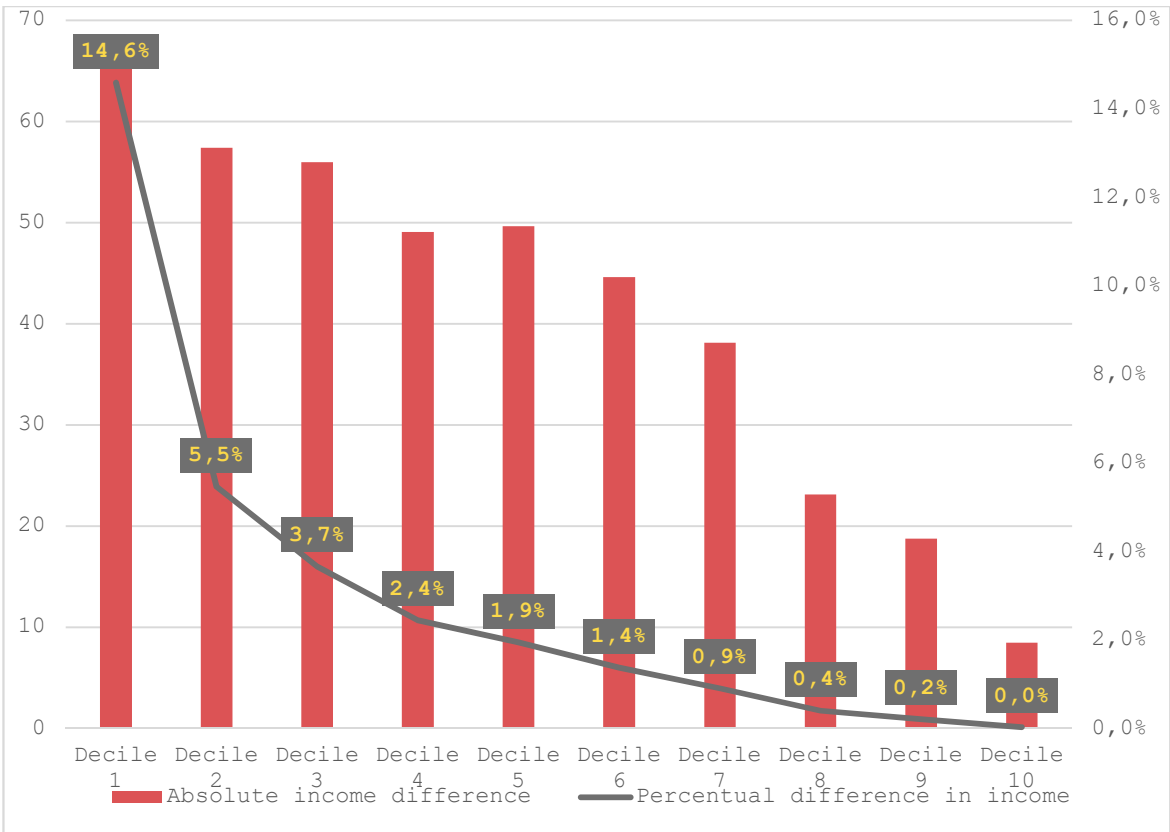
In 2018, the increase in absolute income by decile saw a notable exception where the lowest deciles experienced a higher relative gain compared to the higher deciles. In contrast, in 2020, while the income of the lowest deciles did see a more significant increase than the \$26 observed in 2018, the overall increase remains modest. To better understand the implications of these changes, let's examine the impact on the total Market Income of households across each decile, as illustrated in Graph 17.

In 2018, the increase in income after taxes and cash transfers represented just 5% for the first decile, a modest gain that barely impacted overall inequality. In 2020, however, the increase for the first decile rose to 14.6%, reflecting a more substantial improvement, though still insufficient

to significantly address the income disparities. Additionally, the percentage increase in income for the second and third deciles was higher than in 2018, yet these changes remain minimal and do little to counteract the broader inequalities present in market incomes.

Graph 17. Percentual difference in monthly income, by decile (Colombia, 2020)

Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



As we have explored the impact of fiscal policies and social programmes on income distribution in Colombia during 2018 and 2020, it is clear that while there have been some improvements, significant inequalities remain. To gain a deeper understanding of these dynamics, it is essential to examine the role of cash transfers from social programmes. In the following section, we will analyze the distribution of these cash transfers across all income deciles from 2018 to 2020, shedding light on their impact on poverty alleviation and income inequality in Colombia.

2.3. Cash transfers from social programmes in Colombia (2018–2020)

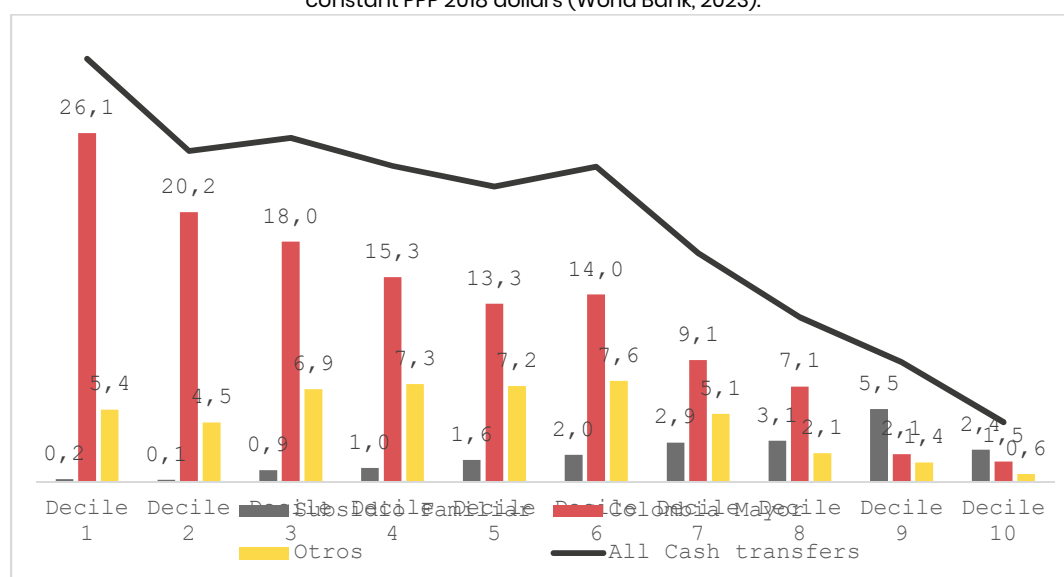
Section 2.3 focuses on the cash transfers from social programmes in Colombia during the period 2018–2020. By analyzing the distribution of these transfers across different income deciles, we aim to understand their impact on poverty reduction and income inequality. We will examine how these programmes have evolved over the years and assess their effectiveness in supporting the most vulnerable populations. This section will provide insights into the extent to which cash transfers have contributed to mitigating economic disparities and improving the overall well-being of Colombian households.

In the previous sections, we established that the redistributive impact of fiscal and social policy in Colombia was far from ideal. In this section, we will closely examine the average amounts transferred to households through each of the national cash transfer programmes. It is essential to remember that other in-kind programmes were also operating at the subnational level, which are not included in this analysis.

In Graph 18, we will observe the distribution of the average amount of transfers by decile in 2018, and in Graph 19, the distribution for 2020. It is evident that *Subsidio Familiar* was a regressive cash transfer, while the most progressive transfers were *Colombia Mayor* and, to some extent, *Ingreso Solidario* during 2020. Ingreso Solidario was specifically created to address the economic challenges posed by COVID-19.

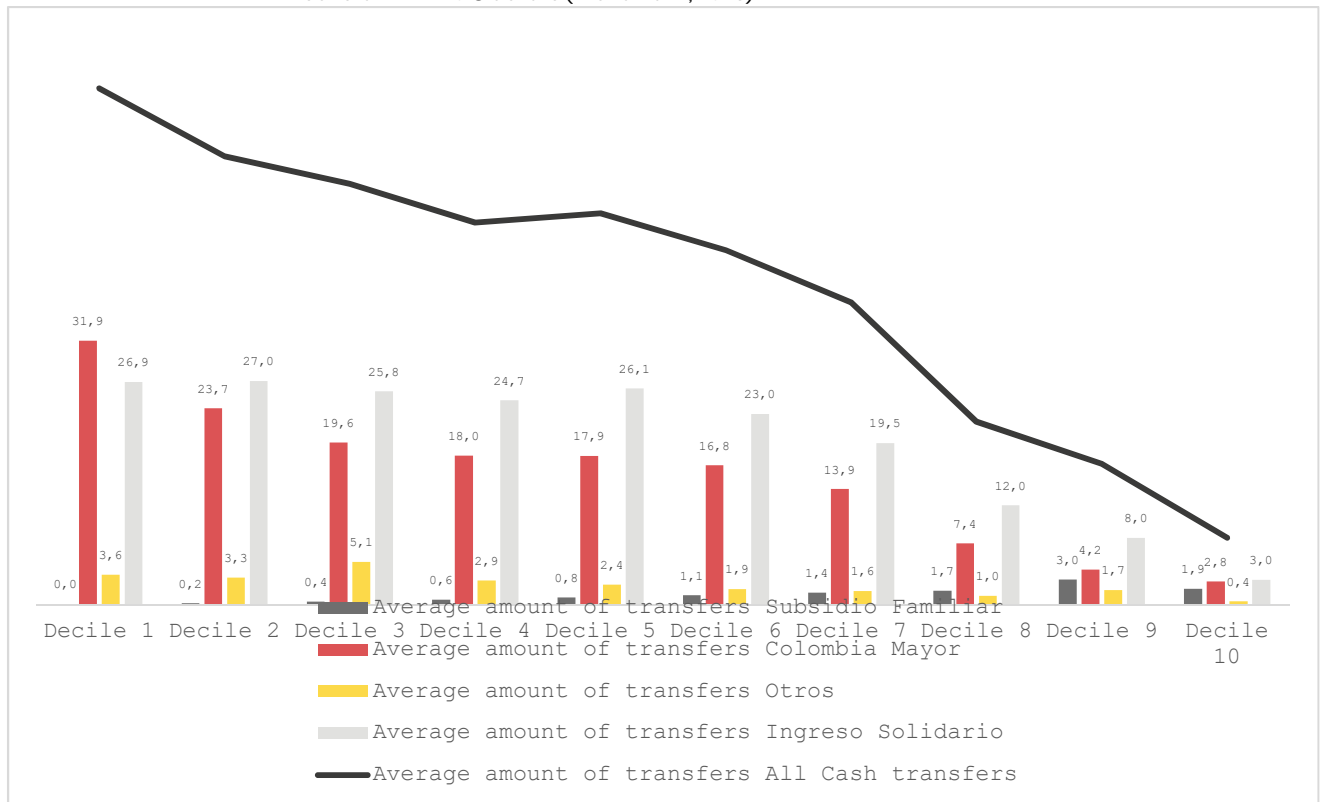
Graph 18. Average amount of monthly cash transfer by decile (2018)

Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



Graph 19. Average amount of monthly cash transfer by decile (2020)

Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



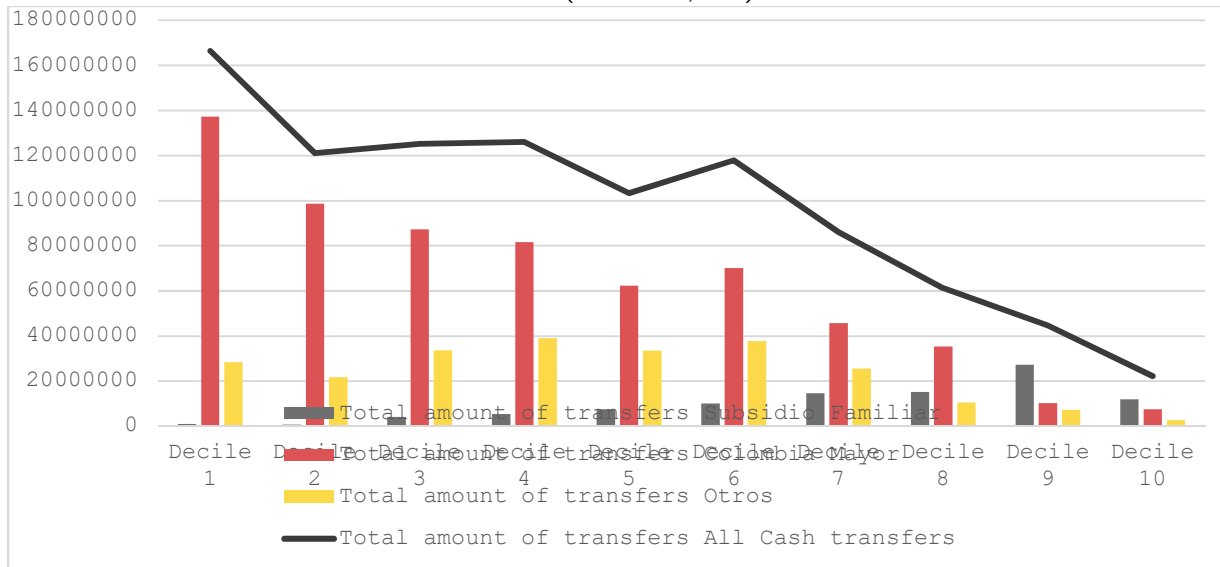
While Ingreso Solidario provided almost as much income as Colombia Mayor for the first decile, it had a greater impact on the rest of the deciles. Although it decreased for deciles 6 through 10, decile 9 still received an average of 8 dollars, and decile 5 received an amount nearly equal to that of decile 1.

We could also examine the total amount transferred to each of the income deciles to understand the overall progressivity or regressivity of the total investment in cash transfers. This analysis will provide a clearer picture of the distributional impact of these programs.

In Graph 20, we will see the total amount transferred by decile and type of transfer in 2018, and in Graph 21, the total amount transferred by decile and type of transfer in 2020. These graphs illustrate that the total amount transferred was higher for the lower deciles. However, because there were fewer recipients in the 10th decile, the average amount per household was higher for those households. This discrepancy highlights the need to analyze not just the total distribution but also the average impact on households within each decile.

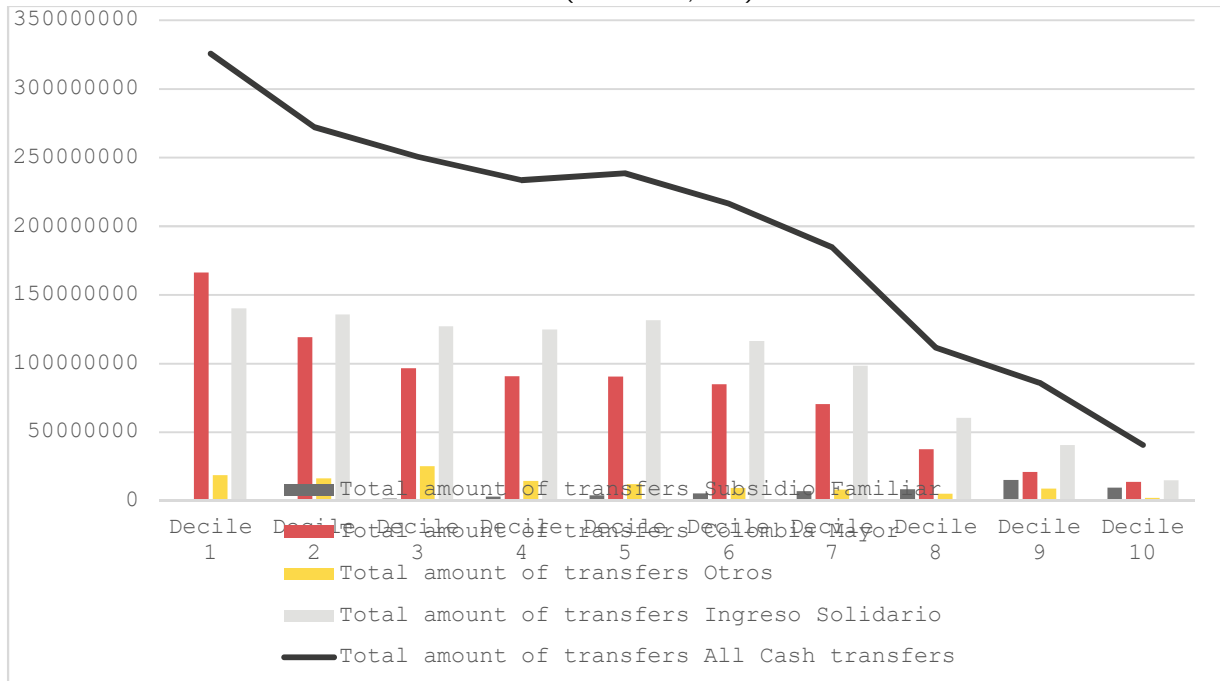
Graph 20. Total amount of monthly transfers by decile and type of cash transfer (2018)

Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



Graph 21. Total amount of monthly transfers by decile and type of cash transfer (2020)

Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



3. Were Mexico and Colombia's Fiscal and Social Policy Strategies More Progressive from 2018 to 2020?

From 2018 to 2020, both Mexico and Colombia faced significant socio-economic challenges that necessitated strategic fiscal and social policy interventions. However, the progressivity of these strategies shifted in contrasting directions for the two countries, reflecting their differing approaches to tackling inequality and poverty during this period.

3.1. Mexico: A Shift Towards Less Progressivity

In 2018, Mexico's fiscal policies and social programs demonstrated a relatively progressive stance. The country's cash transfer social programs, contributed significantly to reducing income inequality. The lowest income deciles benefited substantially from these transfers, which played a crucial role in improving the living conditions of the most vulnerable households.

However, by 2020, the progressivity of Mexico's fiscal and social policies had diminished. While the overall level of inequality remained high, the changes in income distribution after taxes and transfers became less pronounced. The impact of social programs on the lowest income deciles decreased, with the percentage increase in income for the first decile falling from 25.7% in 2018 to 20.6% in 2020. This reduction in progressivity can be attributed to several factors, including changes in the design and implementation of social programs, budget constraints, and the broader economic impact of the COVID-19 pandemic.

3.2. Colombia: A Move Towards Greater Progressivity

In contrast, Colombia's fiscal and social policies evolved in a more progressive direction from 2018 to 2020. In 2018, Colombia's social transfer programs had a limited impact on reducing income inequality. The redistributive impact of social programs was constrained, with only modest gains for the lowest income households.

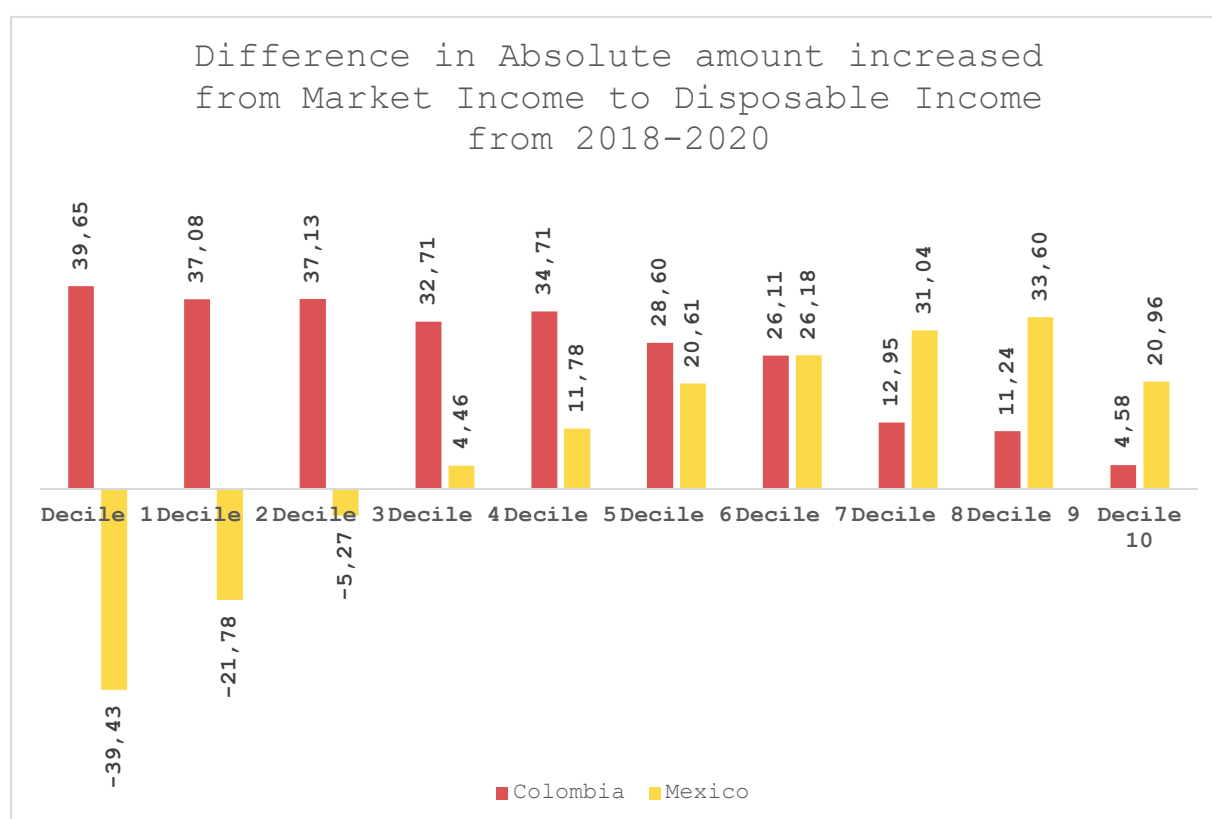
By 2020, however, Colombia had made significant strides in enhancing the progressivity of its fiscal and social policies. The introduction of the *Ingreso Solidario* program in response to the COVID-19 pandemic marked a critical intervention. This cash transfer program provided substantial support to the poorest households, leading to a more noticeable reduction in income inequality. The percentage increase in income for the first decile rose to 14.6%, compared to just 5% in 2018. While Colombia's social programs remained less progressive than Mexico's overall, the gap had narrowed considerably.

3.3. Comparative Analysis and Conclusions

Comparing the progressivity of fiscal and social policies in Mexico and Colombia from 2018 to 2020 reveals a nuanced picture. Mexico, which started with a more progressive framework in 2018, experienced a regression in the effectiveness of its social programs by 2020. Conversely, Colombia, initially less progressive, made significant improvements, albeit starting from a lower baseline, as can be consulted in Graph 22, where the changes in the absolute increase in income from Market Income to Disposable Income from 2018 to 2020 in Mexico and Colombia are illustrated.

Graph 22. Difference of the increase (or decrease) of the absolute amount increment from Market Income (monthly) to Disposable Income (monthly) for the Mexican and Colombian Households across deciles of income

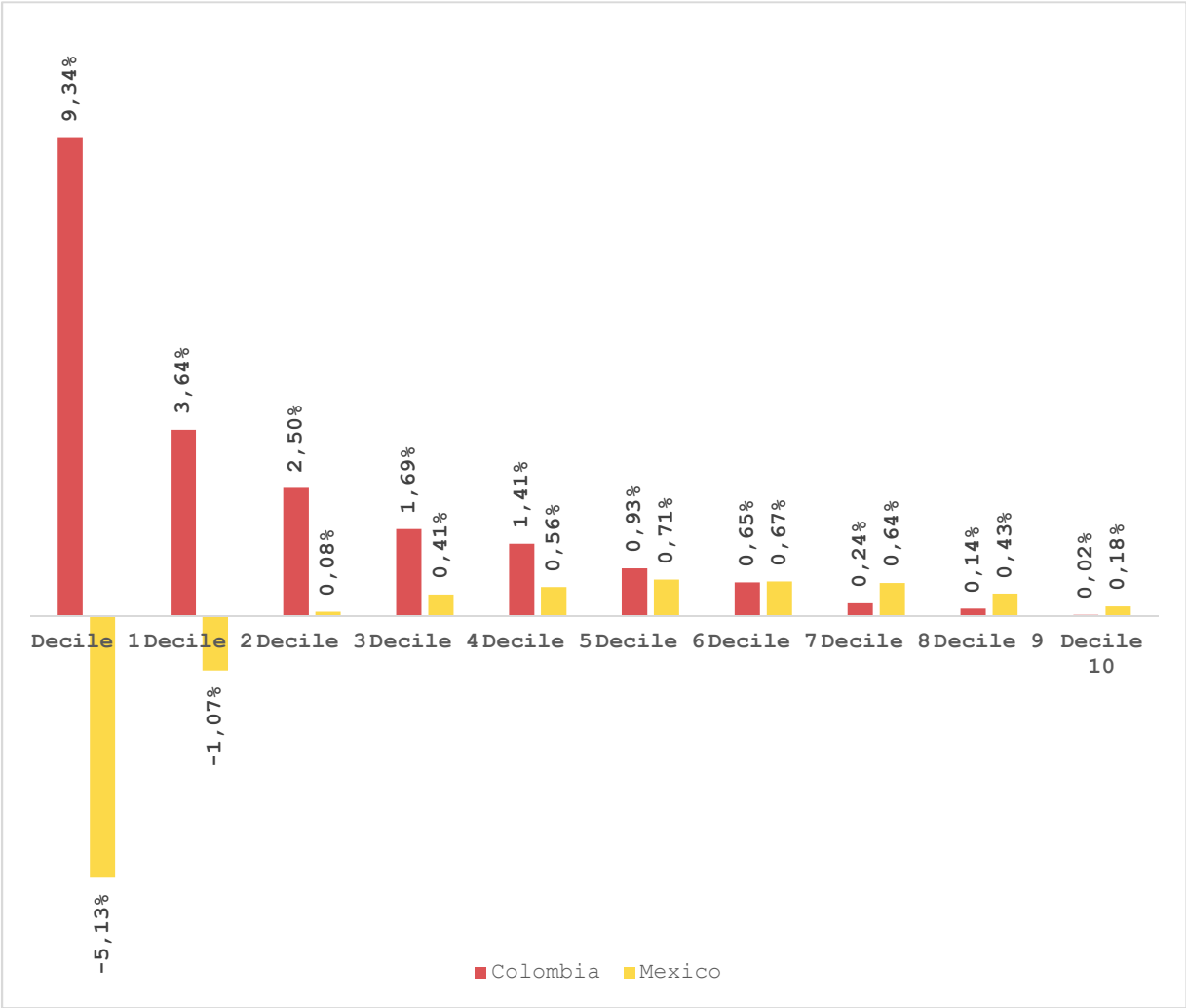
Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



The households of the first decile, that is, the lowest income decile, experienced an increase in 39 dollars more than in 2018 in Colombia, while the absolute income increased in Mexico was 39 dollars less than the increase in income the first decile households had in 2018.

As a percentage of their Market Income in Colombia that meant an increase of 9.34% relative to the increase they had in 2018, while in Mexico it meant an increase 5% lower than the increase they had in 2018, as illustrated in Graph 23.

Graph 23. Percentual difference in monthly income changes from Market to Disposable Income (2018–2020)
 Source: Own elaboration, following CEQ methodology with DANE data using constant PPP 2018 dollars (World Bank, 2023).



Despite these shifts, Mexico's social programs in 2020, although less progressive than in 2018, were still more effective at reducing inequality compared to Colombia's improved yet still less progressive policies. This highlights the importance of continuous assessment and adaptation of social and fiscal policies to ensure they effectively address inequality and support the most vulnerable populations.

In conclusion, the period from 2018 to 2020 saw Mexico and Colombia adopt different trajectories in the progressivity of their fiscal and social policies. While Mexico's strategies became less progressive, Colombia's efforts moved towards greater progressivity, reflecting their respective responses to socio-economic challenges and the impact of the COVID-19 pandemic. This analysis underscores the dynamic nature of policy effectiveness and the need for ongoing evaluation to enhance the social safety net and promote equitable growth.

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