



LUND UNIVERSITY

School of Economics and Management

Master in Economic Growth, Population, and Development

# **Poverty and Inequality Reduction in the Case of Bolivia: What Has Impacted the Reduction during Evo Morales's Administration Period?**

by

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*Abstract:* Bolivia has experienced a drastic decline in inequality and poverty since 2000. It coincided with the administrative period of Evo Morales between 2006 and 2019. Hence, it is debated whether poverty reduction was mainly driven by economic growth alongside the commodity boom in the 2000s or by policy implementations during Morales's presidency. This study addresses the research question: "How and why has the economic growth process in Bolivia from 2006 to 2019 benefitted the poor?" In this context, it is discussed which factors have contributed the most to the recent decline in inequality and poverty: economic growth in times of favorable terms of trade, public investments, conditional transfer schemes, or changes in salaries. The findings suggest that economic growth alongside favorable terms of trade have built the foundation for the pro-poor growth process. Higher revenues from natural resources made it possible to expand social spending. Apart from that, pro-poor growth was mainly driven by higher labor income at the lower end of the income distribution due to a rise in the minimum wage. To a smaller extent, the implementation of three distinct cash transfer schemes has contributed to a higher non-labor income. At last, a new land reform contributed as a minor factor to poverty reduction.

*Keywords:* Pro-poor growth, poverty, inequality, social spending, Bolivia

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## List of Abbreviations

|        |                                                             |
|--------|-------------------------------------------------------------|
| CEPAL  | Comisión Económica para América Latina y el Caribe          |
| GDP    | Gross Domestic Product                                      |
| GIC    | Growth Incidence Curve                                      |
| HPIC   | Heavily Indebted Poor Country Initiative                    |
| MAS    | Movimiento al Socialismo                                    |
| OECD   | Organisation for Economic Co-operation and Development      |
| SEDLAC | Socio-Economic Database for Latin America and the Caribbean |
| UDAPE  | Unidad de Análisis de Políticas Sociales y Económicas       |
| UN     | United Nations                                              |
| YPFB   | Yacimientos Petrolíferos Fiscales Bolivianos                |

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# 1 Introduction

## 1.1 Background Information

Even though Bolivia is one of the poorest countries in Latin America it has experienced a drastic decline in inequality and poverty since 2000 (Arauz, Weisbrot, Bunker & Johnston, 2019). The decline in inequality and poverty is consistent with the experience across Latin America in the 2000s, which stands in contrast to the trend in other regions. This recent decline has been associated with strong economic growth in times of favorable terms of trade. Researchers argue that other explanatory variables are changes in labor income, public policies, and conditional transfer schemes. It is agreed upon that those factors also influenced the reduction in inequality and poverty in Bolivia (Vargas & Garriga, 2015).

Indeed, Bolivia's economy has grown rapidly since Evo Morales took office in 2006 (Weisbrot, Ray & Johnston, 2009). Over the past five years, Bolivia has had the highest per capita growth in South America. The development strategy of Evo Morales and his Movimiento al Socialismo (MAS) has focused on the productive transformation of the economy and its income distribution. It formed a new constitution with a state-led plurinational economy and nationalized strategic sectors of the economy. High revenues during the commodity boom made it possible to distribute more income towards the poor, invest heavily in the economy, and to promote pro-poor growth (Arauz et al., 2019). However, some researchers argue that declining inequality and poverty were not due to Morales's policies. Commodity prices were rising, and Bolivia became part of a debt forgiveness program (Molero Simarro & Paz Antolín, 2012).

In addition, Morales as a policymaker has also been part of a controversial debate. In 2016 Morales called for a referendum to lift up his constitutional term limit. After the vote went against him, Evo Morales went to court and won, claiming that term limits violate his human rights (The New York Times, 2019). Subsequently, the fear of a turn towards autocracy rose (The Guardian, 2019). Nevertheless, Morales won the most recent elections on October 20th, 2019, according to electoral authorities. He surpassed Carlos Mesa by ten percentage points, but concerns arose regarding the counting process due to a change in the trend of preliminary results (Deutsche Welle, 2019). After weeks of protests, Morales fled to Mexico and Jeanine Añez Chavez is the current interim president, promising fair elections soon (The New York Times, 2019).



## 1.2 Aim and Research Question

This study aims to discuss how and why the economic growth process in Bolivia during the presidency of Evo Morales from 2006 to 2019 benefitted the poor. In this context, the thesis aims to give insights on factors that have impacted the pro-poor growth process in Bolivia in a period of declining inequality in whole Latin America.

Until now, no study has been conducted that examined the pro-poor growth process during the whole legislative period of Evo Morales since it only recently ended in October 2019. Arauz et al. (2019) and Weisbrot, Ray, and Johnston (2009) carried out research on the economic transformation under Morales but did not focus on the pro-poor growth debate. Vargas and Garriga (2015) explained inequality and poverty reduction in Bolivia between 2000 and 2015. However, their study did not cover the whole administrative period of Evo Morales. This also applies to a study by Molero Simarro and Paz Antolín (2012) which evaluated the development strategy of the Movimiento al Socialismo.

This thesis aims to contribute to the debate as it combines the study of the economic transformation under Morales with the reduction of inequality and poverty for the whole administration period of Evo Morales. Additionally, it provides advice to policymakers to learn from the Bolivian experience to promote pro-poor growth in the future. Thus, the study is interested to answer the main research question:

*How and why has the economic growth process in Bolivia from 2006 to 2019 benefitted the poor?*

In order to answer the main research question four sub research questions have been formulated:

- 1. How did inequality and poverty change?*
- 2. What has caused inequality in Bolivia?*
- 3. What policies were implemented during Morales's presidency?*
- 4. Which policy implementations and macro trends are factors that explain pro-poor growth?*

### 1.3 Outline of the Thesis

First, a theoretical framework is provided in the literature review. It begins by introducing the definition of inclusive growth to frame the pro-poor growth debate. It then contains a definition of pro-poor growth and introduces different measurements. Next, the interdependence between economic growth, inequality, and poverty is explored. The sectoral and regional distribution of pro-poor growth is explained and at last policies and institutions favoring pro-poor growth are introduced.

The first part of section three provides an overview of the recent decline in inequality in Latin America. In this context, the recent decline in inequality and poverty in Bolivia is described. It aims to answer the first research question: “How did inequality and poverty change?” Part four of the thesis deals with the causes of inequality and poverty in the Bolivian case. It gives an answer to the second research question: “What has caused inequality in Bolivia?” After providing established facts, section five aims to explain the reduction in inequality and poverty by looking at policy implementations and macro trends and their potential effect on pro-poor growth. The first part of this section intends to answer the third research question: “What policies were implemented during Morales’s presidency?” At last, the fourth research question: “Which policy implementations and macro trends are factors that explain pro-poor growth?”, is analyzed.

The main results are summarized in the discussion and related to existing literature. Moreover, practical implications and a future outlook are given in the conclusion. The methodology used in this study is of combined evidence from secondary literature and descriptive statistics.

## 2 Literature Review

### 2.1 Theoretical Framework

#### 2.1.1 Inclusive Growth

It is widely accepted that poverty reduction requires inclusive growth (Ianchovichina & Lundstrom, 2009). Compared to pro-poor growth the concept of inclusive growth is a broader framework and therefore encompasses pro-poor growth. Inclusive growth recognizes the importance of economic growth for poverty reduction and accepts that certain policy

implementations can support that outcome. It refers to the pace as well as to the pattern of economic growth and focuses on policies that remove factors which constrain growth (Saad-Filho, 2010). The inclusive growth framework argues that growth has to be broad and based across all sectors in order to be sustainable. Therefore, a structural transformation<sup>1</sup> is an important criterion. In addition, the growth process has to include a large part of society. Inclusiveness refers to the provision of equality of opportunity concerning the access to markets and resources. Another main feature is an unbiased regulatory environment for businesses and individuals (Ianchovichina & Lundstrom, 2009). In comparison, pro-poor growth is more focused on the welfare of the poor, while inclusive growth aims to provide equality of opportunity to the whole labor force (Saad-Filho, 2010).

The inclusive growth paradigm has several limitations. First, it omits that economic growth can lead to higher poverty. A transformation of the labor market can dispossess workers and they can face even higher poverty. Second, it assumes that countries failed to escape poverty due to the implementation of the “wrong” policies. It ignores that the “correct” policies might not have been implemented due to the lack of market access, or due to a balance of payment crisis. Third, the approach does not address previous limitations of World Bank strategies like the costs of a policy shift. Fourth, inclusive growth strategies do not focus on redistribution but rather only on growth (Saad-Filho, 2010).

The following section provides several definitions and measurements of pro-poor growth. In that context, it is compared whether the definitions are in accordance with the inclusive growth paradigm or not.

### 2.1.2 Defining and Measuring Pro-Poor Growth

The focus on poverty reduction as the main goal of development has led to an increased interest in the concept of pro-poor growth. The start of this debate can be traced back to the 1950s. Back then, the concept of pro-poor growth was seen as a major departure from the trickle-down hypothesis which was the dominant thinking in the 1950s and 1960s. Proponents of the trickle-down hypothesis argued that the poor benefit indirectly from economic growth through a vertical flow from the rich. First, the rich gain from economic growth and when they start to

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<sup>1</sup> Structural change is composed by the long-term changes in the composition of output and employment in an economy with implications for its income distribution (Timmer, 1988, 2007).

spend their gains, the poor will benefit. It implies that the poor will always benefit less than the rich from economic growth (Kakwani & Pernia, 2000). In that context, a study by Dollar and Kray (2002) has estimated that the income of the poor rises one-for-one with overall growth (Kakwani, Khandker & Son, 2004). Therefore, the authors claim that pro-poor growth policies are not needed, and only economic growth has to be maximized. However, some authors claim that their results are not robust, since the concepts and measurements of inequality, poverty, and growth differ across countries (Kakwani & Pernia, 2000).

Derived from that debate, it is nowadays widely agreed upon that pro-poor growth is important to achieve poverty reduction in developing countries (Klasen, Grosse, Thiele, Lay, Spatz & Wiebelt, 2004). However, there exist several empirical approaches on how pro-poor growth is defined and how it can be measured (Kakwani & Pernia, 2000; McCulloch & Baulch, 1999; Ravallion & Chen, 2003). Moreover, there is no consensus among researchers on the definition of pro-poor growth.

The UN (2000) and the OECD (2001) are proponents of an absolute definition of pro-poor growth. The absolute definition considers economic growth as pro-poor if it reduces poverty. That definition is accused to be a weaker approach, since growth is always considered to be pro-poor unless the incomes of the poor are stagnant. The inclusive growth definition is in accordance with the absolute definition of pro-poor growth. However, to some extent it also differs from the absolute definition. First, for a growth process to be inclusive, productivity has to improve, and new employment opportunities have to be generated. The economy has to become larger and the pace of growth has to rise. On the other side, an economic growth process can be considered as pro-poor due to direct redistribution schemes. The absolute definition of pro-poor growth focuses rather on the income distribution than on productive employment. The second distinction is that pro-poor growth focuses on growth and poverty measurements whereas inclusive growth concentrates on the ex-ante analysis of the sources and constraints of economic growth (Ianchovichina & Lundstrom, 2009).

Proponents of the relative approach define economic growth as pro-poor if the growth rate among the poor people in an economy is higher than in the rest of the economy (Kakwani & Pernia, 2000; McCulloch & Baulch, 1999; Ravallion & Chen, 2003). The relative approach is proclaimed to be stronger since it takes inequality into account (Kakwani, Khandker & Son, 2004). However, the relative definition is not in accordance with the definition of inclusive

growth since the growth process does not have to be broad based across the whole society (Ianchovichina & Lundstrom, 2009).

Following the relative approach, several different ways to measure it can be found. Ravallion and Chen (2003) use a Growth Incidence Curve (GIC) to measure pro-poor growth. It charts the annual growth rate of per capita income for every percentile of the income distribution between two years. If the GIC is downward sloping it implies that the economic growth process has an equalizing effect on the income distribution and can be considered as pro-poor (Lakner & Milanovic, 2013). If the pro-poor growth rate is higher than the growth rate in the mean, then the growth process is accompanied by falling inequality (Klasen et al., 2004). McCulloch and Baulch (1999) measure pro-poor growth by the poverty bias of growth. They compare the actual income distribution with one they would get in the case of distribution-neutral growth (Klasen, 2003). Kakwani & Perina (2000) implemented a pro-poor growth index. It reflects the ratio between total poverty reduction and poverty reduction if growth would be distributional-neutral (Klasen, 2003).

By focusing on inequality, the relative approach could lead to a sub-optimal outcome for poor as well as non-poor households (Ianchovichina & Lundstrom, 2009). For example, policymakers who favor the relative approach would prefer a rate of per capita income growth of two percent, if the income of the poor grew by an average of three percent, over a rate of per capita income growth of six percent and an income growth of four percent of the poor (Cord, Humberto Lopez & Page, 2003). Another weakness of both approaches is that they do not address the multidimensionality of poverty and do not incorporate non-income dimensions of poverty (Klasen, 2003). Alkire and Foster (2011) provide in a series of studies a multidimensional poverty measurement. Their method involves counting the different types of deprivation that individuals face at once, like the shortfall in education or poor health standards. Those deprivation profiles are used to identify the poor and are then taken to construct a multidimensional index of poverty. Instead of using poverty lines, they use multiple variables that go beyond the simple headcount ratio (Oxford Poverty & Human Development Initiative, 2020).

To measure the overall impact of growth on poverty reduction Datt and Ravallion (1992) developed a decomposition method of growth. The authors estimate how much of the observed poverty reduction is due to economic growth and redistribution policies (Klasen et al., 2004).

### 2.1.3 Economic Growth, Inequality, and Poverty

The relationship between economic growth and poverty is complex. It is also determined by the level and changes in inequality. Pro-poor growth is concerned with the interrelation of those three factors: growth, inequality, and poverty (Kakwani, Khandker & Son, 2004). The relationship between growth and inequality has been debated in a well-known article by Simon Kuznets (1995). Kuznets found an inverted U-curve between per capita income and inequality. Kuznets claims that when per capita income rises, inequality first gets worse and then improves (Kuznets, 1995). That theory was confirmed by a series of studies including Ahluwalia (1974,1976) and Adelman and Morris (1971). Another dominant view on inequality, poverty, and growth between the late 1950s and early 1970s drew on the Solow growth model. Solow suggested that poor countries will grow faster and converge with the developed countries through the equalization of the marginal returns to the factors of production (Solow, 1956). However, their hypotheses have been challenged by researchers since the mid 1970s. Many developing countries failed to converge with western economies and the distribution of income has worsen in several parts of the world (Saad-Filho, 2010; Piketty, 2006).

More recently, the relationship between economic growth and inequality has been studied by Milanovic and Lakner (2013) whose elephant-chart received considerable attention within academia. Their graph depicts changes in the income distribution across the world between 1988 and 2008. It mainly concludes that the top one percent of the income distribution experienced strong income growth over the past decades. The income of the upper middle class between the 80<sup>th</sup> and 90<sup>th</sup> percentile has been stagnant, and the extreme poor have been left behind. The global middle class has risen rapidly, and some developing countries have started to converge towards the richer countries (Lakner & Milanovic, 2013). However, those findings have been challenged by the well-known inequality researcher Thomas Piketty and other economists. The authors extended the investigated period until 2016 and found that the rich experienced much higher income growth. Moreover, the researchers found a rise of emerging economies and the income growth for the middle-income class has been lower than in the previous research. Their main conclusion is that high-end inequality<sup>2</sup> is growing, and poverty is declining (Alvaredo, Chancel, Piketty, Saez & Zucman, 2018).

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<sup>2</sup> High-end inequality is the concentration of wealth at the high end of the income distribution (Shaviro, 2016).

More theoretical insights on the interdependence of economic growth, poverty, and inequality are provided by the growth, poverty, and inequality triangle by Bourguignon (2004). First, Bourguignon claims that economic growth affects poverty directly. Second, economic growth affects poverty indirectly through its impact on inequality. Third, inequality also affects economic growth directly. Bourguignon overall states that growth leads to more equality, which is good for the poor. In addition, the introduced interdependences can lead to pro-poor growth under certain criteria (Bourguignon, 2004).

Concerning the effects of inequality on economic growth, there is a debate on whether inequality is good or bad for economic growth. Research has shown that the pace of absolute poverty reduction and pro-poor growth depends on the rate of average income growth, initial inequality, and changing inequality (Klasen, 2008). Proponents of the old view claim that inequality is good for growth and not bad for reducing poverty in the medium or long run. One main argument is that if a society is too equal, no one has incentives to work harder and inequality provides incentives for innovation. Inequality can also influence growth by raising savings and investments if rich people save more of their income (Ostry, Berg & Tsangarides, 2014). On the other side, proponents of the new view argue that inequality undercuts the sustainability of economic growth and that redistribution does not hurt growth. According to them, greater equity results in greater economic efficiency and higher economic growth (Ostry, Loungani & Berg, 2019). Researchers like Deininger and Squire (1998) concluded that inequality is bad for growth. Their results were based on testing the Kuznets curve and using land inequality as a proxy for asset inequality (Saad-Filho, 2010). Furthermore, cross-country studies have shown that lower initial inequality results in higher growth. Higher inequality lowers the poverty impact of growth as the absolute additional increase in the income of the poor is lower when inequality is higher (Klasen, 2003). Inequality may also harm growth because the poor cannot accumulate human capital and receive health care. Inequality also leads to economic and political instability and reduces investments (Ostry, Berg & Tsangarides, 2014). Besides that, it is harder to achieve pro-poor growth in societies with high initial inequality, since the overall poverty reduction elasticity is lower (Hanmer & Booth, 2001).

#### 2.1.4 The Sectoral and Regional Distribution of Pro-Poor Growth

The poor are not evenly spread throughout the economy. The sectoral, as well as the regional, bias of growth matters to achieve pro-poor growth (Klasen, 2003). To overcome that bias, a growth process has to favor sectors and regions where the poor are and make use of the factors

of production they possess. Since the poor are mainly in rural areas, work in the agricultural sector, and possess labor as a factor of production, pro-poor growth has to concentrate on the agricultural sector and the rural area (Andersson & Palacio, 2016; Perkins, Radelet, Lindauer & Block, 2013, p. 214). The agricultural sector is characterized by a high surplus of labor and low labor productivity, which is a sign of its growth potential (Andersson & Palacio, 2016). Growth in that sector is also closely tied to poverty reduction due to strong linkages to non-agricultural growth (The World Bank, 2005a). Furthermore, the poverty reduction elasticity in the agricultural sector is high (Hanmer & Booth, 2001). Datt and Ravallion found in a series of studies that growth in rural areas reduces poverty in rural and urban areas. Contrariwise, urban growth only has an impact on urban poverty (Klasen, 2003). As an economy grows and undergoes structural change, the value-added by agriculture declines. Productivity growth in the agricultural sector reduces inequality in the long run, although the income distribution can worsen during the initial stages. The average income in the agricultural sector is lower than in the non-agricultural sector. This implies that the income distribution depends on the share of the total labor force in each of these sectors. As agricultural productivity rises, agricultural labor is reallocated to the non-agricultural sector. This reallocation changes the variance of the overall income distribution due to the different sizes of the sectors. This process ends when the employment and the value-added by the agricultural sector are small and the productivity is as high as in the non-agricultural sector (Kuznets, 1955; Kuznets & Murphy, 1966).

Many countries in Latin America still depend on products related to high levels of income inequality. Their productive structure constrains their level of pro-poor growth and income inequality. In 1990, market liberalization and structural reforms in Latin America generated economic growth, but the poorest were not integrated. Most countries still depend on commodity products, mostly agricultural products, and to some extent non-agricultural products. Therefore, the region is dependent on commodity prices (Hartmann, Jara-Figueroa, Guevara, Simoes & Hidalgo, 2016). Increasing commodity prices in the 2000s led to a period of strong economic growth. However, the commodity boom did not lead to an increase in the capacity of countries in Latin America to produce more sophisticated products and significant structural change was not achieved (The World Bank, 2015; Gasparini, Cruces & Tornarolli, 2011). In fact, many economies in the region fell behind in their economic complexity during the commodity boom (Hartmann et al., 2016).



### 2.1.5 Policies and Institutions Favoring Pro-Poor Growth

It is widely accepted that economic growth is crucial for poverty reduction. Economic growth can give new opportunities to the poor. However, poverty will only decline if certain conditions are in place (OECD, 2001). Within academia, there is to some extent consensus on which policies can reduce inequality and promote pro-poor growth. But it has to be taken cautiously since national experiences differ and policies have to be country-specific (Hanmer & Booth, 2001). However, some generalizations can be made to get a deeper understanding of the concept of pro-poor growth.

In the context of inequality and policies, Anthony Atkinson has drawn attention to a set of policies that could lead to a shift in the income distribution. The author states that new policies have to focus on technology, employment, social security, the sharing of capital, and taxation. Atkinson neglects that the economy will shrink due to interventions and that the new policies cannot be afforded (Atkinson, 2015). Piketty (2014) supports this claim by stating that inequality can only be confronted through state interventions. The author mainly argues for a global system of progressive wealth taxes to reduce inequality. Piketty's main hypothesis is that when the return to capital is higher than the rate of economic growth, this process leads to a concentration of wealth and causes social and economic instability (Piketty, 2014).

Concerning the promotion of pro-poor growth, the agricultural sector plays a central role. Therefore, policies need to increase agricultural productivity and income. In general, public spending in rural areas needs to increase (Kakwani & Pernia, 2000). First, it needs public investments in research and development. That is needed to produce technology that can foster agricultural growth (Hanmer & Booth, 2001). Second, rural infrastructure has to be developed, since it reduces production and transportation costs (OECD, 2007). Third, the assets of the poor have to be built up and the returns have to be increased by asset redistribution (Hanmer & Booth, 2001). Assets can be built up by providing credits to the rural population (Klasen, 2003). Access to credits through microfinance schemes can build up human capital. Furthermore, cash-transfers can help to stabilize the income of the poor and increase their educational attainment. A progressive tax-system supports those interventions (Hanmer & Booth, 2001). The protection of property rights is important to increase the returns of assets of the poor. Secure property rights provide incentives for farmers to invest in their land since they have the certainty to obtain the returns of their investments. Secure property rights also allow farmers to receive credits from financial institutions, since land is taken as collateral (Sen, Te Velde, Wiggins &

Cali, 2006). Fourth, industrial policies need to be implemented to move away from the export of raw materials towards more sophisticated products to increase the economic complexity (Hartmann et al., 2016). Since many developing countries depend on natural resources they must ensure that they do not get exploited and implement policies addressing environmental sustainability. Fifth, the informal sector has to be addressed to foster the development of the private sector (OECD, 2007). One step can be to implement incentives for small firms to become part of the formal sector and to lower labor regulations. Barriers for firms to modernize have to be removed, and small and medium firms have to be integrated into the world economy. This can be done by lowering costs for business registration and the support of free trade agreements (Klasen, 2003).

All the pro-poor growth strategies named above aim to remove biases against the poor. At last, ethnic, gender, and religious discrimination hurts the poor more than the rich. For example, poverty is mostly concentrated among the indigenous population of a country and the indigenous people face barriers to entry into the formal market in general, or into certain professions. Therefore, pro-poor growth policies also have to address that bias (Kakwani & Pernia, 2000). Overall, a functioning state is most important to implement those policies (Klasen, 2003).

### 3 Declining Inequality and Poverty Reduction in Latin America and Bolivia

#### 3.1 Declining Inequality in Latin America

Latin America has experienced a recent decline in inequality (Lustig, 2009). Inequality has fallen in 14 out of 18 countries between 2003 and 2012. The Gini coefficient for the whole region has dropped from 0.53 to 0.47 within the given timeframe (Sánchez-Ancochea, 2019). During that period most countries in South America experienced a political change towards the left (Aristizábal-Ramírez, Canavire-Bacarreza & Jetter, 2015). By 2009, ten countries, accounting for two-thirds of the region's population, had left-leaning governments. The rise of left governments coincided with falling inequality. Questions arose whether left-leaning regimes can reduce inequality faster. However, many authors argue that the decline in inequality was rather due to the boom in commodity prices from 2003-2013 than to the rise of

left-leaning governments (Balch, 2019; Lustig, 2009). The prices of oil and mining products, and to some extent of agricultural products, rose significantly between 2003 and 2013. The price of energy-based commodities increased by a factor of four, while the price for other commodities doubled. As a consequence, terms of trade for commodity exporters improved. Terms of trade rose by more than 50 percent in the oil and mining exporting countries: Ecuador, Peru, Colombia, Chile, Venezuela, and, especially, Bolivia (Sánchez-Ancochea, 2019). However, macroeconomic success does not always have to translate to the reduction of inequality and poverty (Balch, 2019). Past experience has shown a positive relationship between income inequality and commodity booms. Historical evidence demonstrated that an expansion of the mining and oil sector leads to a higher concentration of wealth, due to a high concentration of land and mining ownership (Williamson, 2009; Prados de la Escosura, 2007). However, since the recent decline in inequality happened at the same time as the commodity boom it draws attention to the importance of redistributive policies. Research has shown that the income of the elite remained stable during that period while the income of the middle class was redistributed towards the poor. Those improvements were accomplished because states were able to distribute more income towards the poor. Furthermore, the commodity boom was better managed than in the past (Sánchez-Ancochea, 2019).

Within academia, there is consent that the boom had a positive effect on the income distribution through economic growth and employment creation. Changes in labor income account for two-thirds of the improvements in the income distribution in the 2000s, but with differences across countries. Despite cross-country differences, the skill premium<sup>3</sup> decreased across all countries (Bértola & Williamson, 2017). An increase in public spending on education and a decrease in the Gini coefficient for years of schooling are two major explanations for the observed decline (Sánchez-Ancochea, 2019). Another explanation is the increasing minimum wage and the fall in unemployment for those with only primary education (Bértola & Williamson, 2017). Furthermore, formalization was promoted, and the share of informal jobs fell from 61 percent in 2000 to 51 percent in 2010.

It is widely agreed upon that changes in redistribution through taxes and social spending have driven the reduction of inequality and poverty as well. The degree of progressivity<sup>4</sup> has increased by ten percentage points between 2003 and 2013. This is especially the case for

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<sup>3</sup> Skill premium is the gap between wages received by skilled and unskilled workers (Sánchez-Ancochea, 2019).

<sup>4</sup> Ratio between income and consumption tax (Sánchez-Ancochea, 2019).

hydrocarbons where the share of public revenues as a percentage of the Gross Domestic Product (GDP) rose from 4.4 percent in 2001 to 6.7 percent in 2012. Thus, higher revenues allowed social spending to increase. Social spending per capita by the central governments increased by almost 50 percent between 2003 and 2013. The resource-rich Andean countries experienced an even greater increase. Per capita spending in Bolivia increased by 81 percent within the given timeframe. However, historical experience has shown that an increase in social spending does not always have to translate in more redistribution. But within the given timeframe it was different across Latin America. Governments implemented radical social democratic policies that benefited the poor more than other income groups. Conditional cash transfer programs were implemented across most countries, which had a positive impact on the population at the lower end of the income distribution. The funding of programs with general taxes had another positive impact. Those programs mostly involved non-contributory pension systems and improved access to health care services (Sánchez-Ancochea, 2019).

### 3.2 Poverty Reduction and Declining Inequality in Bolivia

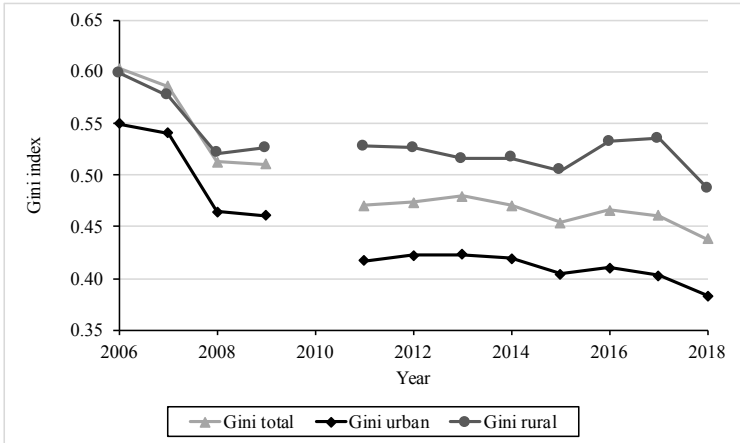
Bolivia, as one of the poorest countries in Latin America, has experienced a drastic decrease in its income inequality (Vargas & Garriga, 2015). This is in line with the downward trend since 2000 of inequality in Latin America (Lustig, 2009). That change happened after a period of increasing inequality in Bolivia between 1997 and 2002 (The World Bank, 2005b). This part of the thesis provides insights into the development of inequality and poverty in Bolivia between 2006 and 2019 with the aim to answer the first research question: “How did inequality and poverty change?” All the tables and figures used in this study are based on four different databases. The Comisión Económica para América Latina y el Caribe (CEPAL), the Socio-Economic Database for Latin America and the Caribbean (SEDLAC), the Unidad de Análisis de Políticas Sociales y Económicas (UDAPE), and the World Bank database. Due to missing data for 2019, the timeframe of the analysis has been adjusted from 2006-2019 to 2006-2018. Furthermore, some parts of the analysis can only consider the timeframe from 2006-2017 due to the lack of recent data.

The section starts with an examination of the Gini coefficient at the national, urban, and rural level between 2006 and 2018. The geographical differentiation is important, since inequality is higher in rural areas and has to decrease so that an economic growth process can become pro-poor (Klasen, 2003). The Gini coefficient is the most widely used inequality measure. The index varies between zero and one, where zero indicates absolute equality and one absolute inequality.

However, the Gini coefficient has its limitations too. One disadvantage is that it gives arbitrary weights to income transfers that take place in different parts of the income distribution (Klasen et al., 2004). It does not consider income transfers on the low and high side of the income distribution as much as income transfers in the middle of the income distribution (United Nations, 2015). An alternative measurement could be the Atkinson index. It is useful to determine which end of the income distribution contributed most to the observed inequality (Atkinson, 1970). However, for the aim of this study, the Gini coefficient is sufficient.

A comparison of the Gini coefficient at national, urban, and rural levels between 2006 and 2018 demonstrates that inequality overall decreased but with differences across areas. The total and rural Gini coefficient started off at similarly high levels in 2006 but diverged towards 2018. The total Gini coefficient fell from 0.59 in 2006 to 0.43 in 2018. The Gini coefficient for the urban area decreased from 0.55 in 2006 to 0.38 in 2018. The rural Gini fell from 0.59 in 2006 to 0.48 in 2018 and remains higher than the total and urban Gini coefficient. The most drastic decline happened at the beginning of Evo Morales administration period between 2007 and 2008 at all levels. Again, the decline was the smallest for rural areas. Between 2015 and 2016 the Gini coefficient at all levels increased slightly, but to the largest extent in rural areas. This points towards the vulnerability of the poorest in times of economic downward trends. Nevertheless, inequality decreased in rural areas, which is an indication of pro-poor growth (Klasen, 2003).

**Figure 1:** Gini indices for Bolivia, 2006-2018

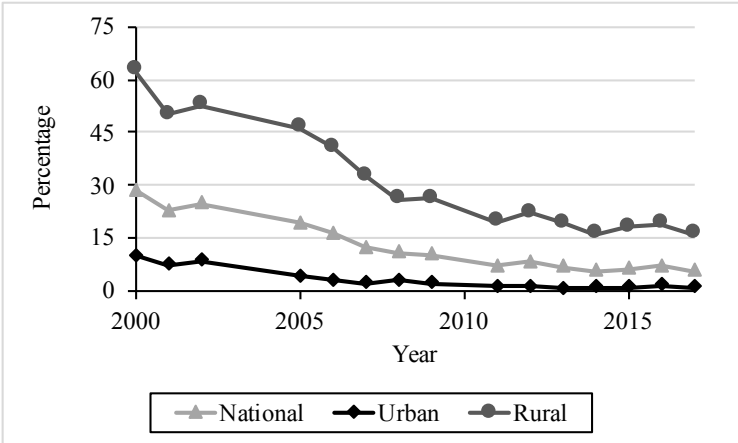


Source: based on CEPAL (2019a)

Bolivia has been one of the weakest performers of poverty reduction in Latin America (Fortun Vargas, 2012). However, the recent data shows that poverty levels have decreased since 2002

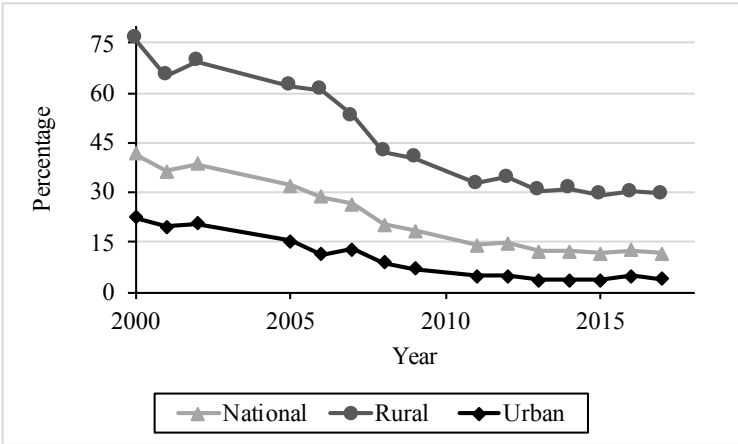
and even more drastically since 2006 when Evo Morales became president. Using international poverty lines for comparison, the poverty headcount ratio for rural areas at \$1.90 (2011 PPP) a day has fallen from 40.9% in 2006 to 16.3% in 2017. Hence, it was almost halved. Similarly, the poverty headcount ratio for rural areas at the \$3.20 (2011 PPP) a day poverty line has decreased from 60.8% in 2006 to 29.6% in 2017. The percentage of people living below the chosen thresholds has also been reduced by more than half in urban areas. The percentage of people living on \$3.20 (2011 PPP) a day or less in urban areas decreased from 11.2% in 2006 to 3.8% in 2017. At the national level, the percentage of the population living on \$3.20 (2011 PPP) a day or less has fallen from 28.6% in 2006 to 11.7% in 2017. Considering the \$1.90 (2011 PPP) a day threshold, the number at the national level has decreased from 16.4% in 2006 to 5.7% in 2017.

**Figure 2:** Poverty headcount ratio \$1.90 (2011 PPP) at national, urban, and rural level, 2000-2017



Source: based on SEDLAC (2018)

**Figure 3:** Poverty headcount ratio \$3.20 (2011 PPP) at national, urban, and rural level, 2000-2017



Source: based on SEDLAC (2018)

Nevertheless, poverty in Bolivia remains above the average in a Latin American comparison (Vargas & Garriga, 2015). Poverty in rural areas stays higher compared to the national and urban level. This is consistent with the historical precedent. Bolivia has always been marked by higher levels of rural poverty. But now, as the figures have shown, the country is experiencing poverty reduction in rural areas after no poverty reduction at all between 1989 and 1994, significant poverty reduction between 1994 and 1999, and years of stagnation between 1999 and 2002 (Klasen et al., 2004). However, poverty lines assume that every individual below a certain threshold suffers the same amount of deprivation. This results in poverty lines that do not consider the intensity of deprivation (Kakwani, Khandker & Son, 2004). To overcome these challenges the poverty gaps at national, urban, and rural levels using the \$3.20 and \$1.90 poverty thresholds are also investigated. The poverty gap index provides information on the degree to which individuals fall below the poverty line as a proportion of the poverty line (Perkins et al., 2013, p.185).

**Table 1:** Poverty gap, \$3.20 (2011PPP)

| Year | National | Urban | Rural |
|------|----------|-------|-------|
| 2000 | 24.9     | 9.3   | 53.4  |
| 2002 | 20.8     | 7.4   | 44.1  |
| 2006 | 13.9     | 3.5   | 33.2  |
| 2009 | 8.8      | 2.3   | 21.3  |
| 2012 | 6.9      | 1.5   | 18.1  |
| 2015 | 5.3      | 1.1   | 14.4  |
| 2017 | 4.9      | 1.1   | 13.4  |

**Table 2:** Poverty gap, \$1.90 (2011PPP)

| Year | National | Urban | Rural |
|------|----------|-------|-------|
| 2000 | 17.6     | 4.4   | 41.7  |
| 2002 | 13.4     | 2.8   | 31.9  |
| 2006 | 8.1      | 1.1   | 20.9  |
| 2009 | 5.0      | 0.9   | 13.0  |
| 2012 | 4.0      | 0.5   | 11.1  |
| 2015 | 2.8      | 0.3   | 8.2   |
| 2017 | 2.5      | 0.4   | 7.0   |

Note: values for all years between 2000 and 2017 can be found in the appendix.  
 Source: based on SEDLAC (2018)

The data also shows that the poverty gap at all levels, using the \$3.20 and \$1.90 (2011 PPP) threshold, has decreased from 2006 to 2017. The rural poverty gap, using the \$3.20 (2011 PPP) threshold, has fallen from 33.2 in 2006 to 13.4 in 2017. It has also fallen from 20.9 in 2006 to 7.0 in 2017 using the \$1.90 (2011 PPP) threshold. But again, the rural population is on average the farthest away from the \$3.20 and \$1.90 (2011 PPP) poverty line, implying that the intensity of poverty in rural areas is greater than in urban areas and at the national level.

To examine further the change in poverty it is useful to look at household characteristics following the method by Klasen et al. (2004). Klasen et al. (2004) focus on three variables: the geographical area, years of schooling, and ethnicity. After investigating the change in poverty lines for different geographical levels, the change in the percentage of the population living in poverty and extreme poverty by years of schooling is investigated. It is focused on people with 0-5, 6-9, 10-12, and more than 13 years of schooling. As a third variable Klasen et al. (2004) look at people with indigenous roots. The change in the percentage of indigenous and non-indigenous people living in poverty and extreme poverty is analyzed. This is of particular interest since the poorest people of a society are those with only a few years of schooling and with indigenous roots (The World Bank, 2005a). The data for years of schooling and ethnicity is taken from the CEPAL database. It does not use the \$3.20 and \$1.90 a day (2011 PPP) poverty lines but the classification of extreme poverty and poverty. The weaknesses of poverty lines mentioned above also apply to that classification. Furthermore, years of schooling ignores educational quality. However, this problem can only be solved with better data which is not available (Klasen, 2008).

**Table 3:** Disaggregation of the poverty line by household characteristics (total Bolivia), 2006-2018

|                                                                            | Poverty |      |      |      | Extreme poverty |      |      |      |
|----------------------------------------------------------------------------|---------|------|------|------|-----------------|------|------|------|
|                                                                            | 2006    | 2011 | 2014 | 2018 | 2006            | 2011 | 2014 | 2018 |
| Population living in poverty and extreme poverty by years of schooling (%) |         |      |      |      |                 |      |      |      |
| <=5                                                                        | 71.4    | 45.7 | 44.4 | 44.9 | 43.9            | 23.6 | 23.6 | 23.6 |
| 6-9                                                                        | 64.9    | 32.4 | 31.2 | 29.6 | 27.7            | 12.4 | 12.8 | 12.6 |
| 10-12                                                                      | 50.9    | 25.5 | 22.4 | 23.6 | 20.3            | 6.5  | 5.3  | 7.9  |
| >=13                                                                       | 17.0    | 9.3  | 7.2  | 7.7  | 5.3             | 1.9  | 1.6  | 1.9  |
| Population living in poverty and extreme poverty by ethnicity (%)          |         |      |      |      |                 |      |      |      |
| Non-indigenous                                                             | 49.3    | 27.2 | 27.1 | 28.4 | 20.3            | 8.1  | 9.3  | 10.5 |
| Indigenous                                                                 | 67.4    | 51.7 | 47.0 | 47.7 | 40.4            | 29.6 | 26.3 | 27.5 |

Note: values for all years between 2006 and 2018 can be found in the appendix.

Source: based on CEPAL (2020c; 2020d)

Poverty was highest among those with less than five years of schooling. However, the percentage of the population with less than five years of schooling living in poverty has fallen significantly from 71.4% in 2006 to 44.9% in 2018. Poverty and extreme poverty among people with 6-9, 10-12, and more than 13 years of schooling has fallen as well. Using the extreme poverty line, Klasen et al. (2004) found that the poverty gap for those speaking an indigenous language at home is three times as large as for non-indigenous people. The data provided here shows a new development: the percentage of indigenous people living in poverty and extreme poverty has fallen between 2006 and 2017. In 2006, 67.4% of the indigenous population lived



in poverty. In 2017, only 47.7% lived in poverty. However, the data implies that the population with less than five years of schooling, which lives in poverty, started to slightly increase again after 2014. This applies to the indigenous population living in poverty as well. This could point out the vulnerability of the poor towards the lower annual GDP growth rates since 2014.

The provided poverty lines above consider the reduction of non-income poverty very little, although it is widely agreed upon that poverty is a multidimensional issue (The World Bank & CEDLAS, 2014). In the past years, Bolivia has performed better in the reduction of non-income poverty. The index of unsatisfied basic needs has already shown strong improvements between 1992 and 2002. For example, the number of households without water and sanitation fell from 50% to 30% (The World Bank, 2005b). But again, with smaller improvements in rural areas (Klasen et al., 2004). To measure non-income poverty, the change in illiteracy and the change in the percentage of the population which completed primary and secondary education is examined as an indicator for education. Furthermore, the infant mortality rate is taken as an indicator of health. The indicators are chosen based on a study by Klasen (2008) who pledges for the inclusion of non-income dimensions of poverty in the debate on pro-poor growth.

**Table 4:** Measurement of non-income poverty, 2000-2018

Education

Illiteracy rate of the population aged 15 and over, by geographical area, % of population.

|          | 2000 | 2002 | 2006 | 2009 | 2012 | 2015 | 2018 |
|----------|------|------|------|------|------|------|------|
| National | 13.8 | 12.7 | 10.6 | 8.8  | 7.9  | 7.5  | 7.2  |
| Rural    | 29.0 | 25.5 | 22.1 | 17.8 | 17.9 | 16.4 | 17.6 |

Percentage of population between ages 15 to 19 that completed primary education, by geographical area, % of population.

|          | 2000 | 2002 | 2006 | 2009 | 2012 | 2015 | 2018 |
|----------|------|------|------|------|------|------|------|
| National | 80.8 | 80.8 | 90.7 | 93.8 | 95.0 | 96.4 | 98.0 |
| Rural    | 57.5 | 61.8 | 83.4 | 88.7 | 91.4 | 93.8 | 96.5 |

Percentage of population between ages 20 to 24 that completed secondary education, by geographical area, % of population.

|          | 2000 | 2002 | 2006 | 2009 | 2012 | 2015 | 2018 |
|----------|------|------|------|------|------|------|------|
| National | 46.1 | 48.2 | 58.1 | 64.3 | 69.8 | 70.3 | 76.2 |
| Rural    | 12.4 | 13.0 | 22.2 | 38.1 | 44.2 | 47.5 | 53.6 |

## Health

Infant mortality rate, deaths per 1,000 live births.

|          | 2000 | 2002 | 2006 | 2009 | 2012 | 2015 | 2018 |
|----------|------|------|------|------|------|------|------|
| National | 55.7 | 50.2 | 40.6 | 34.4 | 29.2 | 24.9 | 21.8 |

Note: values for all years between 2000 and 2018 can be found in the appendix.

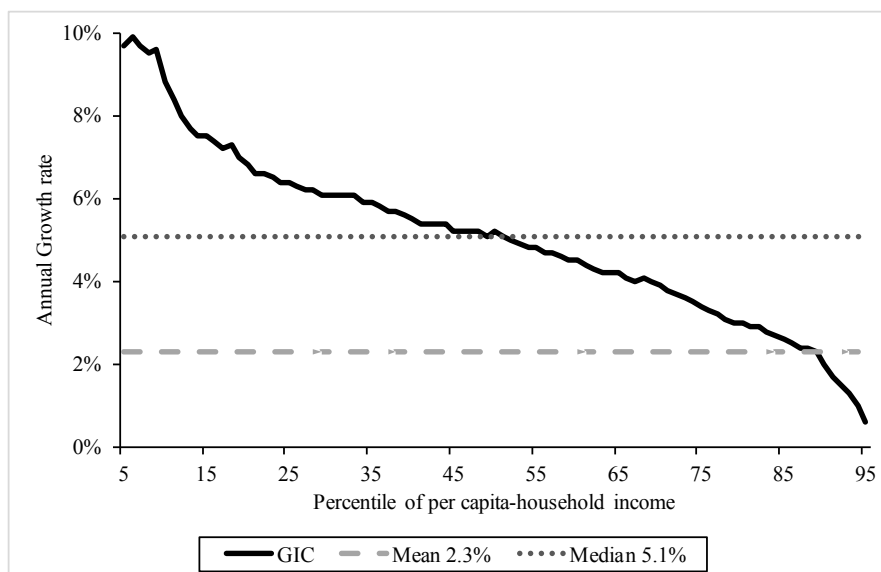
Source: based on CEPAL (2019b; 2019c; 2020a; 2020b)

Between 2006 and 2017 the illiteracy rate in rural areas has fallen from 22.1% to 17.6%. Full primary education in rural areas was almost reached in 2018. The percentage of the population aged 20 to 24 that completed secondary education has increased most significantly. In rural areas the number increased from 22.2% in 2006 to 53.6% in 2018. Furthermore, the infant mortality rate has fallen by half from 40.6% in 2006 to 21.8% in 2018.

At last, the question of whether the economic growth process between 2006 and 2019 has been pro-poor or not is answered. The relative approach from the theoretical framework is taken and a GIC, implemented by Ravallion and Chen (2003), is applied. The GIC also implies some challenges as it only reflects averages. The income of the poor might rise in general, but some households might still be worse off (Haughton & Khandker, 2009). However, the study of poverty dynamics with panel data to overcome those challenges is not within the scope of this thesis.

Between 1989 and 2002 the pro-poor growth rate in Bolivia has been 1.9-2.2% and was concentrated in urban areas. This was not true for the population below the 10<sup>th</sup> percentile and above the 90<sup>th</sup> percentile, suggesting that the poorest did not benefit as much as the richest. The small fall in the rural poverty rate can be traced back to the initial high levels of poverty in rural areas. Due to the depth of poverty, the pro-poor growth process did not lift many people out of absolute poverty. Overall, growth was too low to have a significant impact on poverty reduction (Klasen et al., 2004). However, this has changed in recent years. Figure 4 shows strong pro-poor growth for Bolivia between 2006 and 2017, since it is downward sloping from the 5<sup>th</sup> to the 95<sup>th</sup> percentile. Furthermore, growth was accompanied by falling inequality, since the pro-poor growth rate exceeds the growth rate in the mean. Below the 10<sup>th</sup> percentile, the people benefited the most from economic growth. The upper percentiles of the income distribution benefited significantly less.

**Figure 4:** Growth incidence curve for Bolivia, 2006-2017



Source: based on The World Bank (2019)

Therefore, it can be said that the economic growth process during the administration period of Evo Morales between 2006 and 2017 has been pro-poor. Since data for the calculation of the GIC is only available until 2017, the analysis is weakened. It cannot be claimed whether the economic growth process during the whole period of Evo Morales’s presidency has been pro-poor or not. However, this section has overall shown that a drastic decline in inequality and poverty occurred between 2006 and 2018.

## 4 Causes for Inequality and Poverty in the Bolivian Case

Despite the recent decline in inequality in Latin America and Bolivia, the region and the country has been characterized by high levels of inequality in the past, and inequality remains high compared to other regions (Bértola & Williamson, 2017). This section aims to answer the second research question: “What has caused inequality in Bolivia?”

### 4.1 Colonialization

Some authors claim that high inequality in Latin America and Bolivia has its historical roots in the formation of institutions during the colonial period (Acemoglu, Johnson & Robinson, 2001; Sokoloff & Engerman, 2000). Acemoglu, Johnson, and Robinson (2001) argue that in areas with high settler mortality Europeans did not settle down permanently and only set up extractive institutions. In colonies where they settled down permanently, they enforced good institutions

like the rule of law. These institutions have lasted until the present day and contribute to the different levels of inequality (Acemoglu, Johnson & Robinson, 2001). Sokoloff and Engerman (2000) claim that geography caused differences in institutions which led to differences in development. The authors state that when it was possible to extract natural resources, using indigenous labor, then natural resource-based economies developed, which were characterized by high inequality that have lasted until today (Sokoloff & Engerman, 2000). In this context, it is argued that Bolivia was more developed and less unequal before the colonialization period (Bértola, 2016). However, some opponents argue that the colonial inequality burden is a myth and that inequality is the outcome of a more recent process (Williamson, 2015).

## 4.2 Demography

Bolivia is one of the most ethnically diverse countries in Latin America<sup>5</sup> (Klasen et al., 2004). More than half of the country's population identifies themselves as a member of one of the 36 indigenous groups in the country (Hicks, Maldonado, Piper & Goytia Rios, 2018). Some researchers argue that ethnic diversity causes great social inequalities (Klasen et al., 2004). The indigenous population of the Aymara is concentrated in the rural areas of the altiplano whereas the indigenous population of the Quechuas is concentrated in the valleys. The majority of the other groups are located in the eastern lowlands and the rainforest (Hicks et al., 2018). The concentration of indigenous populations in rural areas contributes to higher rural poverty and inequality and widens the rural-urban divide. Extreme poverty is high in the altiplano, especially in the departments of northern Potosí, Chuquisaca, Oruro, and La Paz (O'Hare & Rivas, 2007). Poverty is much lower in the lowland departments of Santa Cruz, Beni, Pando, and Tarija (Klasen et al., 2004). Poverty within the indigenous group mostly affects young people, women, and older generations (O'Hare & Rivas, 2007).

Differences between the educational attainment of the indigenous and the non-indigenous population are a major source of high inequality (Klasen et al., 2004). The poor often do not have the chance to improve their human capital and due to a lack of social protection they have to leave school early (Fortun Vargas, 2012). The opportunity costs to send children to school are high and the returns to education are low. According to a study by the World Bank (2005b) non-indigenous people attained 9.5 years of schooling whereas indigenous people had 5.9 years

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<sup>5</sup> Index of ethnic fractionalization for Bolivia in 2013: 0,572; average Latin America and the Caribbean in 2013: 0,44 (Drazanova, 2019)

of schooling. The illiteracy rate in urban areas was 8% whereas it was 25% in rural areas. In 2002, 31% of indigenous children between 9-11 years were working, which was four times higher than the children of non-indigenous groups (The World Bank, 2005b).

#### 4.3 Unequal Distribution of Land

The unequal distribution of land is another reason for high inequality. Before Evo Morales came into power the government estimated there existed 110 million hectares of productive land. The government conjectured that 70% of this land was in the hands of 400 individuals who claimed 100,000 hectares each. Only 5% of the agricultural land was in the hands of the poor, mostly indigenous and rural inhabitants (Hertzler & Ledebur, 2007). 68% of those indigenous and rural farmers in the highlands owned farms with five hectares or less (O'Hare & Rivas, 2007). At last, the lack of fertile land, modern inputs, and worse climate conditions in the highlands contributed to lower productivity, lower earnings, and is therefore associated with higher poverty and inequality (Klasen et al., 2004).

#### 4.4 Geographical Location

The economist Paul Collier argues that the least developed countries are caught in poverty because of four development traps. Being landlocked with bad neighbors is one of them. Landlocked countries need good neighbors to enter the world market (Collier, 2007, pp. 54-58). Authors like Faye, McArthur, Sachs, and Snow (2004) support Collier's claim by also attributing the poor performance of landlocked countries to the dependence on its transit neighbors. So far, many authors claimed that the distance to the coast is the most important factor which constrains development. Those approaches amplify that debate (Faye et al., 2004; Collier, 2007).

Moving on to the case of Bolivia, some researchers argue that being a landlocked country is the major factor causing high poverty and inequality (Klasen et al., 2004). Even though Bolivia is surrounded by well-maintained transport corridors, it suffers from political tensions with its transit neighbors. The tension between Bolivia and Chile has its roots in the war of 1878-1883 when Bolivia lost control of the coastal province of Atacama. Because of this, many Bolivians protest until the present day against the use of the Chilean corridors (Faye et al., 2004).

Moreover, landlocked countries face higher trade and transportation costs. Transportation costs in Bolivia are not only high due to the geographical location, but even higher due to a poorly developed infrastructure within the country (Klasen et al., 2004). Compared to Brazil, the transportation costs in Bolivia are twenty times as high (The World Bank, 2005b). The following map depicts the geographical location of Bolivia in Latin America. It can be seen that it is, besides Paraguay, the only landlocked country in the region.

**Figure 5:** Geographical location of Bolivia



Source: ENCYCLOPÆDIA BRITANNICA (2020)

#### 4.5 Economic Structure

At last, Latin American structuralists argued in the 1950s and 1960s that the economic structure of a country constrains its capacity to create and redistribute income. This approach was recently reaffirmed by a series of studies by Hartman et al.. The authors found that the products a country is exporting determine its economic growth, pattern of diversification, and income inequality in the future (Hartman et al., 2016).

In the case of Bolivia, it is widely accepted that the economic structure causes high inequality. The Bolivian economy lacks economic diversification and is concentrated on the export of natural resources and agricultural products (Klasen et al., 2004). As a result of its concentration on the extractive sector, the Bolivian economy is highly dependent on commodity prices (Molero Simarro & Paz Antolín, 2012). Another weakness is that the extractive sector has small linkages to other sectors and creates inequalities between regions and social classes. Those inequalities are caused by high returns to capital on the one hand, and low returns to labor on the other hand (The World Bank, 2005b). As a consequence of its economic structure, Bolivia

has experienced a rise in its income inequality during the Lost-Decade in the 1980s. Commodity prices for tin and silver fell and international interest rates rose, resulting in a public deficit of 22.1% in 1984, followed by hyperinflation (Fortun Vargas, 2012).

The formation of the labor market is another cause for high inequality. Bolivia is marked by a big informal sector which is characterized by low wages. The informal sector accounted for 63.4% of the labor force in 2002 (Molero Simarro & Paz Antolín, 2012). Indigenous people make up the majority of this workforce, along with the agricultural sector. The fact that 40% of the indigenous population cannot speak Spanish limits their possibility to participate in the formal economy (Hicks et al., 2018). Firms in the informal sector lack access to formal institutions like credit and are characterized by low productivity. Labor market regulations failed to encourage the participation of small firms in the formal economy and innovation was not promoted. Missing property rights also form a constraint on employment creation and hold back poverty reduction (The World Bank, 2005b).

Other structural weaknesses of the economy before the administration period of Evo Morales were a high degree of dollarization and a low domestic saving rate (The World Bank, 2005b).

## 5 Economic Policies and Macro Trends during the Morales Administration and Their Effect on Poverty and Inequality in Bolivia

### 5.1 Policy Implementations during Morales's Presidency

Evo Morales and his Movimiento al Socialismo came into power in 2006 (Molero Simarro & Paz Antolín, 2012). As most countries in South America, Bolivia experienced a political change towards the left (Aristizábal-Ramírez, Canavire-Bacarreza & Jetter, 2015). Bolivia benefited at that time from the commodity boom accompanied by higher revenues. Those revenues made it possible to implement policies and social programs to redistribute more income towards the poor and to foster pro-poor growth (Sánchez-Ancochea, 2019). Bolivia was at the same time part of a debt forgiveness program (HPIC). Its foreign debt was more than halved when Evo Morales came into office (Balch, 2019). This coincidence gives rise to the question of whether the reduction of poverty can be attributed to Morales or to favorable conditions. However, it is

agreed that the changes in inequality and poverty are due to political decisions whereas the economic results are due to the commodity boom (Molero Simarro & Paz Antolín, 2012). The economic results and macro trends are studied in depth in the next section whereas this section aims to answer the third research question: “What policies were implemented during Morales’s presidency?”

First of all, the development strategy and policies of the MAS addressed the inclusion of the indigenous population. As an Aymara, Evo Morales was the first indigenous president in the history of the country, strengthening the political representation of the indigenous population (Hicks et al., 2018).

One of the main policy actions of Evo Morales was the nationalization and public ownership of natural resources written down in the new constitution. The social transformation and the redistributive policies are grounded in that political decision. The hydrocarbon sector was renationalized in 2006 and the state-owned gas company Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) was rebuilt. In the first eight years of Morales’s presidency, the revenues from hydrocarbons increased from US\$731 million to US\$4.95 billion. Those revenues allowed the government to achieve macro-economic stability (Arauz et al., 2019). Other main companies in strategic sectors, such as telecommunication and electricity, were also nationalized (Kehoe, Machicado & Peres-Cajías, 2019). The new strategy concentrated on moving away from primary exports and supported the diversification into higher value-added activities (Molero Simarro & Paz Antolín, 2012). Moreover, the government implemented exchange rate and monetary policies that have been the key to a de-dollarization of the financial system. The proportion of dollar deposits kept in the financial system went from 34% in 2008 down to 1% in 2019 (Arauz et al., 2019). Morales also pushed ahead a decentralization towards a municipal level of government. The municipals got administrative, political, as well as fiscal rights (O’Hare & Rivas, 2007).

Addressing public policies, Bolivia has had one of the highest rates of public investment as a share of GDP in the region (Arauz et al., 2019). Morales invested heavily in basic infrastructure and in the transformation of the economy (Balch, 2019). Social spending increased, with the aim to strengthen the social protection of the poor. Those expenditures affected labor in addition



to non-labor income<sup>6</sup>. Morales enacted two conditional and one unconditional cash transfer to specific vulnerable groups. The program Juancito Pinto was implemented in 2006 to raise educational attainment and address inequality and poverty caused by the missing chance of the poor to improve their human capital. A transfer per student of US\$28.50 is paid. Students between first and eighth grade receive the loan at the end of every school year after fulfilling the condition of not dropping out (Vos & Cabezas, 2006). The Bono Juana Azurduy provides incentives and funds to mothers to seek pre- and post-maternal medical care (Arauz et al., 2019). The total fund for each pregnancy is around US\$40 and if children under two are taken to all their health checkups, additionally US\$187 are received (Hicks et al., 2018). Renta Dignidad is an unconditional cash transfer program implemented in 2008. It is a monthly, non-contributory, social security system for all people above 60 years (Vargas & Garriga, 2015). It gives approximately US\$258 per year to all residents above 60 who also receive social security payments, and approximately US\$344 per year to those who do not (Weisbrot, Ray & Johnston, 2009).

Furthermore, pro-poor labor policies have played an important role in the reduction of poverty and inequality. Bolivia's constitution as part of a social productive communitarian model recognizes different ways of production. For example, cooperative, associative, and communitarian enterprises. Hence, labor formalization was promoted and companies in the formal sector grew. Morales also initiated an increase in the minimum wage (Arauz et al., 2019). Although it only affected workers in the formal sector it reduced the skill premium which reduced wage inequality (Sánchez-Ancochea, 2019).

Addressing inequality caused by the agricultural sector and the unequal distribution of land, Morales implemented a land reform in 2006. It formalized land gains through titling efforts (Arauz et al., 2019). The government gave land titles of three million hectares to sixty indigenous communities in November 2006 (Hertzler & Ledebur, 2007). Since 2006, over seventy-five million hectares of land have been additionally issued with 935 thousand titles (Arauz et al., 2019). Furthermore, the reform included that small properties, Campesino farms, and indigenous communities, are free from taxes and expropriation. The new land reform states that land without economic, social, or ecological function may be allocated to indigenous communities without sufficient land. In return, full monetary compensation based on market

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<sup>6</sup> Income from any other source than the supply of labor. It includes capital gains, dividends, interest, and transfer payments (Black, Hashimazde & Myles, 2009, p.102).

prices is paid. However, the land reform has been part of a controversial debate. The reform was seen as “radical” and the MAS has made statements attacking the landholding elite. However, the redistribution focusses only on large-scale landowners with properties larger than 120 acres. Moreover, some authors claim that the measures are necessary to end corruption and to end the favoritism that has forced many low-earning farming families off their land (Hertzler & Ledebur, 2007).

The elaborated policies and their impact on poverty and inequality, and the consequences of those policies on the structure of the economy, are analyzed in depth in the next part of the study.

## 5.2 Macro Trends and Policies and Their Potential Impact on Pro-Poor Growth

In this section, macro trends and specific policies are looked upon that could explain the pro-poor growth process and the reduction of inequality and poverty. The main explanatory variables which are analyzed are economic growth, favorable terms of trade, public investment, conditional transfer schemes, and changes in salaries. These variables are chosen based on a study by Vargas and Garriga (2015). The aim of this part is to answer the fourth research question: “Which policy implementations and macro trends are factors that explain pro-poor growth?” Following the approach of Vargas and Garriga (2015), the empirical analysis starts with the examination of two variables: economic growth and favorable terms of trade.

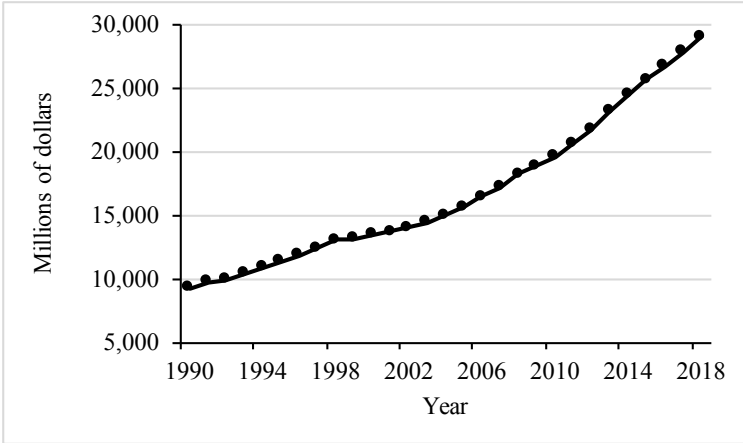
### 5.2.1 Economic Growth and Favorable Terms of Trade

Since Evo Morales took office, the Bolivian economy has experienced strong GDP growth. Before his administration period the economy has been stagnant for a quarter of a century and in 2005 GDP per capita was below what it has been in 1980 (Arauz et al., 2019). The first part of this section looks at overall growth and the sources of growth in the context of the main policy decisions made by the Morales administration.

As the data in Figure 6 and 7 shows, GDP and GDP per capita have been growing since the 1990s, but stronger since 2006. According to the presented data GDP grew from 16,449.70 million dollars (constant 2010 US\$) in 2006 to 29,058.60 million dollars (constant 2010 US\$) in 2018. GDP per capita grew from 1,776.90 dollars per inhabitant (constant 2010 US\$) in 2006 to 2,586.30 dollars per inhabitant (constant 2010 US\$) in 2018. By 2019, real GDP per capita

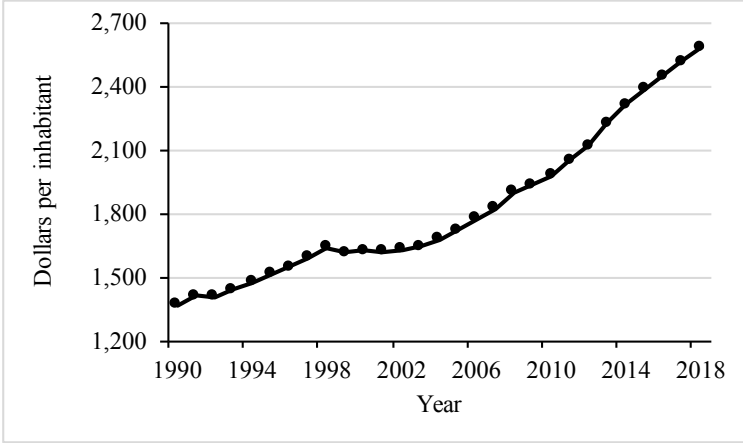
has increased by 50% above its level from 2005. This is twice the growth rate compared to Latin America and the Caribbean region. Even though the region has experienced a slowdown in recent years, Bolivia had the highest per capita GDP growth in South America in the last five years (Arauz et al., 2019).

**Figure 6: GDP (constant 2010 US\$), 1990-2018**



Source: based on CEPAL (2020g)

**Figure 7: GDP per capita (constant 2010 US\$), 1990-2018**



Source: based on CEPAL (2020h)

Between 2006 and 2018, GDP has grown at an average of 4.9% as can be seen in Table 5 below. In 2000, the average annual GDP growth was only 2.5%, but then increased significantly after 2006. The highest annual GDP growth rates were reached in 2008 and again in 2013. Since the end of the commodity boom in 2014, the annual growth rate has begun to decrease.

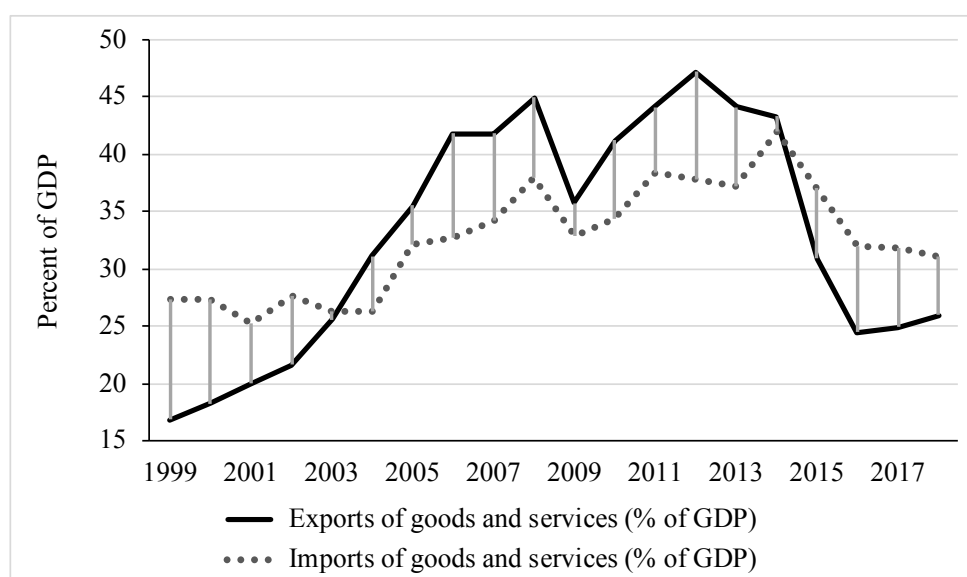
**Table 5:** Annual GDP growth at constant prices, in percentage, 2006-2018

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Ø   |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| 4.8  | 4.6  | 6.1  | 3.4  | 4.1  | 5.2  | 5.1  | 6.8  | 5.5  | 4.9  | 4.3  | 4.2  | 4.2  | 4.9 |

Source: based on CEPAL (2020e)

The economy performed similarly to other countries that have their sources of growth in the commodity boom. As the data in Figure 8 illustrates, since 2004 the exports as a share of the GDP have risen significantly. As a negative result, Bolivia became more dependent on foreign demand (Molero Simarro & Paz Antolín, 2012). As Figure 8 shows, Bolivia experienced a widening trade surplus between 2003 and 2008, mostly due to an increase in prices for its primary exports (Weisbrot, Ray & Johnston, 2009). Exports increased from 35.5% of GDP in 2005 to 44.9% of GDP in 2008, while imports rose from 32.1% to 38% of GDP. Thus, a trade surplus was created which reached an average of 2.7% of the GDP between 2006 and 2018. In the first eight years of Morales’s presidency, it was the largest, accounting on average for 6.4% of GDP between 2006 and 2014 (Arauz et al., 2019). In 2009, there was a sharp fall in exports mostly due to declining prices and, as imports fell not as sharply, the trade surplus got smaller. When commodity prices increased again, the trade surplus increased again. However, since 2015 imports exceed exports again, leading to a trade deficit.

**Figure 8:** Trade in goods and services, 1999-2017



Source: based on The World Bank (2020a; 2020b)

At the first peak of exports in 2008, almost 80% of exports were linked to the extractive sector. This can be explained by the rise in prices of raw materials (Molero Simarro & Paz Antolín, 2012). The rise and fall of prices of Bolivia's major exports can be seen below in Table 6.

**Table 6:** Commodity price index, 2000-2018

(Base year 2010=100)

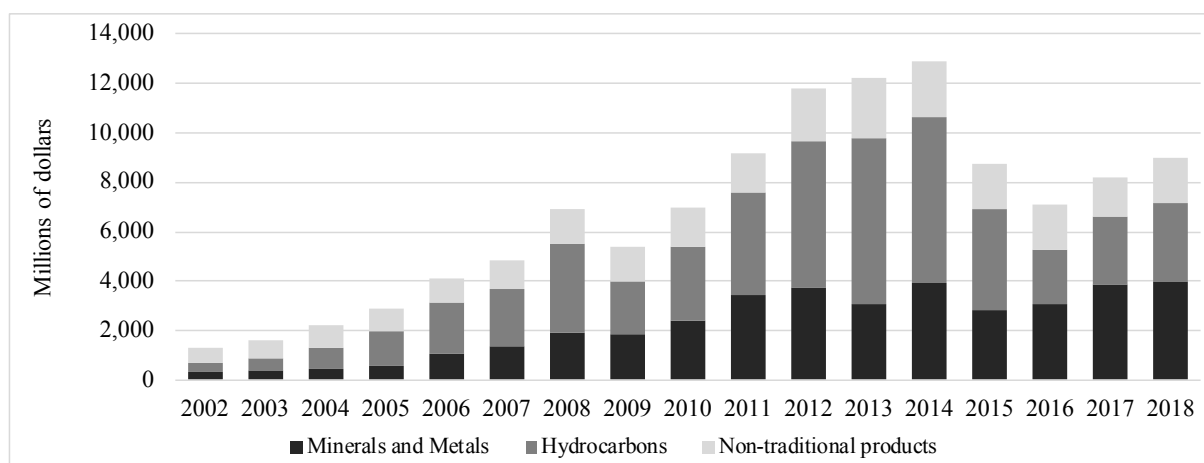
|                              | 2000         | 2003         | 2006         | 2008          | 2009         | 2012          | 2013          | 2015         | 2018         |
|------------------------------|--------------|--------------|--------------|---------------|--------------|---------------|---------------|--------------|--------------|
| <b>Total commodity price</b> | <b>40.16</b> | <b>41.56</b> | <b>76.71</b> | <b>107.41</b> | <b>78.50</b> | <b>116.40</b> | <b>112.61</b> | <b>73.96</b> | <b>86.24</b> |
| Agricultural products        | 52.21        | 52.88        | 68.97        | 95.28         | 86.69        | 112.35        | 107.61        | 89.14        | 91.33        |
| Minerals and metals          | 27.53        | 28.44        | 73.14        | 96.67         | 70.32        | 105.91        | 100.03        | 65.63        | 78.03        |
| Energy products              | 41.93        | 44.29        | 85.72        | 126.01        | 79.35        | 128.62        | 127.38        | 69.59        | 89.49        |
| Petroleum products           | 54.19        | 57.39        | 93.45        | 122.49        | 82.42        | 132.01        | 128.05        | 90.29        | 99.34        |
| Natural gas                  | 98.25        | 125.24       | 153.23       | 201.98        | 90.08        | 62.76         | 84.92         | 59.60        | 71.95        |

Note: values for all years between 2000 and 2018 can be found in the appendix.

Source: based on CEPAL (2019e)

Figure 9 shows an increase in exports (millions of dollars) in minerals, metals, and especially in hydrocarbons. The export of hydrocarbons as a share of GDP increased from 14.7% to 20.9% of GDP between 2005 and 2008. The export of minerals increased from 3.7% to 9.2% of GDP within this timeframe (Weisbrot, Ray & Johnston, 2009). As exports as a share of GDP increased, Bolivia became more dependent on them. In 1990, exports made up 23% of the GDP, while in 2012 exports made up 47% of the GDP (Vargas & Garriga, 2015). In recent years, one-third of Bolivia's income is from the export of hydrocarbons (Arauz et al., 2019). Furthermore, the export of non-traditional products in millions of dollars has changed to a smaller extent and remained all over stable. After the end of the commodity boom in 2014, the export of hydrocarbons in millions of dollars decreased most significantly.

**Figure 9:** Composition of Bolivia's exports, in millions of dollars, 2002-2018



Note: the corresponding exact values can be found in the appendix; non-traditional products are composed by mostly agricultural products and manufactured goods.

Source: based on UDAPE (2020a)

So far, the macroeconomic foundation on which the pro-poor growth process has been built up has been analyzed. This foundation is the process of GDP growth linked to favorable terms of trade, especially the rise in exports in the time of a commodity boom. It is one factor that has had an impact on pro-poor growth since it generated higher revenues and more income to distribute towards the poor.

Next, it is studied if that growth process was accompanied by a structural change. As was discussed in section 5.1, Morales has implemented policies to move away from primary exports and to reach a diversification of the economy (Molero Simarro & Paz Antolín, 2012). Table 7 gives an overview of the sectoral composition of GDP and its growth between 2006 and 2018.

**Table 7:** Sectoral composition of GDP and its growth, in percentage, 2006-2018

|                                            | 2006  |        | 2009  |        | 2013  |        | 2016 (p) |        | 2018 (p) |        |
|--------------------------------------------|-------|--------|-------|--------|-------|--------|----------|--------|----------|--------|
|                                            | Share | Growth | Share | Growth | Share | Growth | Share    | Growth | Share    | Growth |
| <i>A. Private Sector</i>                   |       |        |       |        |       |        |          |        |          |        |
| Agriculture, Forestry, Hunting and Fishing | 14.44 | 4.26   | 13.33 | 3.68   | 12.03 | 4.69   | 11.75    | 3.13   | 12.44    | 6.91   |
| Minerals (Metal and non-metal)             | 4.08  | 6.67   | 6.71  | 9.90   | 5.29  | 2.89   | 5.02     | 4.72   | 4.79     | 1.87   |
| Crude Petroleum and Natural Gas            | 6.79  | 4.60   | 5.50  | -13.48 | 7.13  | 13.97  | 6.17     | -4.37  | 5.11     | -7.82  |
| Manufacturing                              | 17.03 | 8.09   | 17.11 | 4.81   | 16.45 | 6.09   | 16.48    | 6.18   | 16.54    | 5.52   |
| Electricity, Gas and Water                 | 1.97  | 4.03   | 1.97  | 6.11   | 2.05  | 5.12   | 2.11     | 5.28   | 2.09     | 3.38   |
| Construction                               | 2.79  | 8.25   | 3.37  | 10.82  | 3.80  | 10.64  | 4.03     | 7.84   | 4.04     | 3.54   |
| Commerce                                   | 8.12  | 3.85   | 8.21  | 4.90   | 7.76  | 3.93   | 7.62     | 4.43   | 7.75     | 5.15   |
| Transportation and Communication           | 10.86 | 3.92   | 10.76 | 5.58   | 10.98 | 6.69   | 11.13    | 5.67   | 11.26    | 4.39   |
| Finance, Insurance, and Real Estate        | 11.26 | 5.39   | 11.37 | 4.15   | 11.87 | 6.83   | 12.48    | 7.85   | 12.68    | 5.30   |
| Personal services                          | 4.29  | 2.46   | 4.10  | 3.59   | 3.78  | 3.17   | 3.70     | 4.34   | 3.70     | 4.43   |
| Restaurants and Hotels                     | 2.84  | 2.21   | 2.64  | 2.31   | 2.43  | 3.31   | 2.38     | 4.26   | 2.41     | 4.49   |
| Imputed Bank Services                      | -3.17 | 16.25  | -3.51 | 5.11   | -4.47 | 11.66  | -5.03    | 12.36  | -5.20    | 5.95   |
| <i>B. Public Sector</i>                    |       |        |       |        |       |        |          |        |          |        |
| Public Administration Services             | 9.02  | 3.65   | 9.04  | 6.48   | 9.38  | 9.54   | 9.92     | 4.33   | 10.22    | 6.78   |

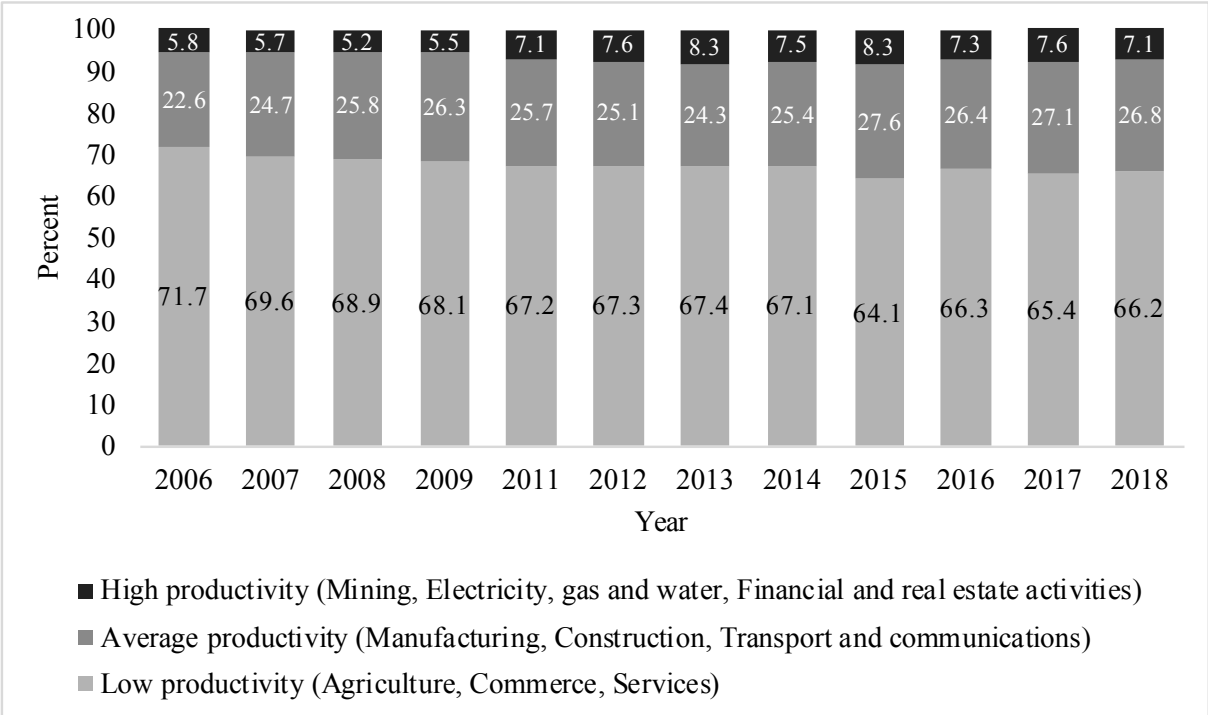
Note: (p): preliminary; values for all years between 2006 and 2018 can be found in the appendix.

Source: based on UDAPE (2020c)

Table 7 shows that the sectoral composition of the economy has not changed much in recent years. According to the sectoral composition, about 10% of the GDP is generated by mines, oil, and gas. One of the biggest expansions has been in the mineral sector, which went from 4.08% in 2006 to 6.71% of GDP in 2009. The natural gas sector fell from 6.79% to 5.50% in that period, but again reached a peak of 7.13% of GDP in 2013. The recovery of demand and prices in 2010 resulted in a return to the pre-2009 trend. However, in recent years it started to decline again. Manufacturing accounts for 16% of the GDP in 2018 and mostly consists of the processing of raw materials. Yet, there is no clear evidence for any industrialization and development of the manufacturing sector (Molero Simarro & Paz Antolín, 2012). Concerning the agricultural sector, it generated 14.44% of the GDP in 2006. During Morales’s presidency the sector has experienced a decline, even though to a relatively small extend. In 2018, the agricultural sector contributed 12.44% to the GDP.

Next, changes in the employment shares per sector between 2006 and 2018 are presented in Figure 10.

**Figure 10:** Employment shares per sector of economic activity by productivity, in percentage of total employed population, 2006-2018



Source: based on CEPAL (2020f)



The employment shares per sector by productivity have not changed significantly either. The low productivity sector employs 66.2% of the workforce, while the average and high productivity sectors only employ a small fraction of the workforce. Therefore, Bolivia is a dualistic economy with most employment in the agricultural sector, a small service sector, and little employment in the manufacturing sector. Nevertheless, a small decline in employment could be observed in the low productivity sector from 71.7% in 2006 to 66.2% in 2018 accompanied by a rise in employment in the higher productivity sectors. It should also be noted that the oil, gas, and mining sector accounts for 10% of the GDP and more than 40% of the country's exports, but only for around 1% of the employment (Klasen et al., 2004). This reinforces the claim that Bolivia is a dualistic economy.

Overall, it has been analyzed that the pro-poor growth process was not accompanied by structural change. This stands in contrast to the policy implementations which targeted the transformation of the economic structure. Nevertheless, this section has shown strong economic growth in the context of the commodity boom. Those factors are seen as explanatory variables for pro-poor growth between 2006 and 2019, since they provided conditions for the Morales administration to redistribute more. The impact of those distributional policies is analyzed in detail in the following section.

### 5.2.2 Public Investment

Bolivia has had the highest rate of public investment as a share of GDP in the region since 2006. The investment rate has been on average 21.8% of the annual GDP between 2014 and 2018 (Arauz et al., 2019). The high public investment may have contributed to a stronger impact of growth on inequality, for instance via investment in infrastructure (Vargas & Garriga, 2015). Public investment is therefore another explanatory variable for the reduction in inequality and poverty. Public investments by sectors between 2006 and 2018 are shown in Table 8.

**Table 8:** Public investments by sectors, in thousands of dollars, 2006-2018

|                                   | 2006              | 2009 (a)            | 2013                | 2016                | 2018 (p)            |
|-----------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|
| <b>Extractive</b>                 | <b>10,400.50</b>  | <b>79,166.60</b>    | <b>692,158.30</b>   | <b>627,843.90</b>   | <b>353,458.70</b>   |
| Mining                            | 3,062.10          | 47,969.20           | 113,667.00          | 98,165.20           | 191,442.20          |
| Oil and Gas                       | 7,338.50          | 31,197.40           | 578,491.30          | 529,678.70          | 162,016.50          |
| <b>Production</b>                 | <b>124,870.30</b> | <b>169,876.90</b>   | <b>415,408.40</b>   | <b>402,325.30</b>   | <b>498,256.10</b>   |
| Agriculture                       | 75,989.70         | 90,096.50           | 222,642.90          | 236,356.50          | 273,785.60          |
| Manufacturing and Tourism         | 11,396.40         | 15,155.00           | 101,343.40          | 126,764.10          | 191,086.70          |
| Multisectoral                     | 37,484.20         | 64,625.40           | 91,422.20           | 39,204.70           | 33,383.80           |
| <b>Infrastructure</b>             | <b>481,468.30</b> | <b>694,342.20</b>   | <b>1,502,590.70</b> | <b>2,697,670.50</b> | <b>2,120,169.90</b> |
| Transport                         | 409,475.00        | 537,196.40          | 1,082,893.10        | 1,692,185.60        | 1,403,697.20        |
| Energy                            | 44,118.50         | 82,728.80           | 173,496.00          | 875,327.90          | 601,948.50          |
| Communications                    | 1,283.70          | 36,507.10           | 137,926.40          | 82,748.00           | 91,124.10           |
| Water                             | 26,591.20         | 37,909.90           | 108,275.20          | 47,409.60           | 23,400.10           |
| <b>Social Services</b>            | <b>262,729.60</b> | <b>475,328.50</b>   | <b>1,084,300.10</b> | <b>1,191,590.90</b> | <b>1,277,997.40</b> |
| Health                            | 61,150.60         | 91,366.10           | 151,303.50          | 221,878.60          | 264,035.90          |
| Education                         | 75,191.40         | 151,311.40          | 326,377.40          | 323,083.00          | 314,180.00          |
| Sanitation                        | 56,452.10         | 79,433.30           | 201,876.10          | 185,425.40          | 273,899.40          |
| Urban planning and housing        | 69,935.40         | 153,217.80          | 404,743.10          | 337,716.70          | 280,402.60          |
| Other social services             | -                 | -                   | -                   | 123,487.20          | 145,479.50          |
| <b>Others</b>                     | <b>-</b>          | <b>20,688.00</b>    | <b>86,271.40</b>    | <b>145,799.50</b>   | <b>208,066.60</b>   |
| Trade and Finance                 | -                 | 1,021.20            | 11,136.40           | 5,946.60            | 6,177.40            |
| Justice and Police                | -                 | 6,625.00            | 26,705.00           | 17,925.80           | 47,352.90           |
| National Defense                  | -                 | 13,041.80           | 15,335.10           | 67,282.10           | 78,286.80           |
| General Administration            | -                 | -                   | 33,094.90           | 35,889.60           | 52,888.50           |
| Natural Resources and Environment | -                 | -                   | -                   | 18,755.40           | 23,361.00           |
| <b>Total</b>                      | <b>879,468.70</b> | <b>1,439,402.00</b> | <b>3,780,729.00</b> | <b>5,065,230.90</b> | <b>4,457,948.60</b> |

Note: (a): includes projected delivery of municipal governments; (p): preliminarily; values for all years between 2006 and 2017 can be found in the appendix.

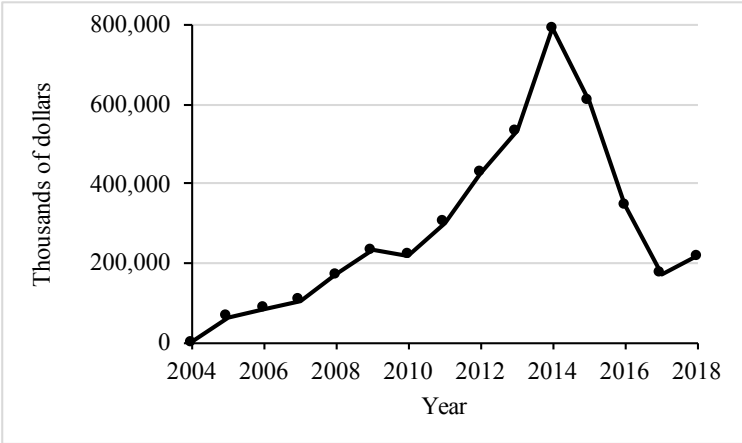
Source: based on UDAPE (2020b)

As seen in Table 8, public spending increased from 879,468.70 thousand dollars in 2006 to 4,457,948.60 thousand dollars in 2018. Investments in social services increased from 262,729.60 thousand dollars in 2006 to 1,277,997.40 thousand dollars in 2018. Infrastructure accounts, throughout the period, for the highest share of investment.

The increase in public spending can be traced back to the increase in revenues from hydrocarbons. More than 50% of the financing of the public investment depends on the

revenues from hydrocarbons, as a result of the high share of tax revenues from oil and gas compared to the total tax revenues. This implies that Bolivia is less dependent on external forces through foreign financing, but is now more vulnerable to external variables like gas prices (Molero Simarro & Paz Antolín, 2012). Figure 11 shows the increase in the contribution of revenues from taxes on hydrocarbons on the financing of the total public investment between 2004 and 2018.

**Figure 11:** Public investment by source of financing, direct tax on hydrocarbons, in thousands of dollars, 2004-2018



Source: based on UDAPE (2020b)

In the first eight years after Evo Morales came into office, the revenues from hydrocarbons increased from \$731 million to \$4.95 billion. Tax revenues as a percentage of GDP followed the pace of economic growth. Tax revenues made up 21% of GDP in 2005, 28% in 2014, and 20% of GDP in 2018 (Arauz et al., 2019). Since spending increased less than revenues, a fiscal surplus was created between 2006 and 2009 (Weisbrot, Ray & Johnston, 2009). However, the surplus of 5% of GDP in 2008 fell to a deficit of 0.7% in the first quarter of 2009 due to a fall in prices of hydrocarbons. After a short increase, it dropped again to an account deficit of 7.8% of GDP in 2017.

### 5.2.3 Conditional Transfer Schemes

The Bolivian government has directed large amounts of resources to social spending during Morales’s presidency (Arauz et al., 2019). Active social and economic policies have been crucial to redistribute wealth and have affected labor as well as non-labor income (Vargas & Garriga, 2015). The implementation of three cash transfer programs is another explanatory variable for poverty reduction and an increase in purchasing power. The cash transfer programs

have been developed with the help of the revenues from hydrocarbons. The main features of the three programs Juancito Pinto, Bono Juana Azurduy, and Renta Dignidad have been explained in section 5.1. In 2018, 3,468,203 Bolivianos, 30.5% of the population, received a cash transfer (Arauz et al., 2019). Table 9 below provides evidence on the coverage rates for the three programs between 2006 and 2018.

**Table 9:** Coverage rates for Juancito Pinto, Renta Dignidad, and Bono Juana Azurduy, 2006-2018

|             | Number of beneficiaries |                |                    | Beneficiaries as a % of total population |                |                    |
|-------------|-------------------------|----------------|--------------------|------------------------------------------|----------------|--------------------|
|             | Juancito Pinto          | Renta Dignidad | Bono Juana Azurduy | Juancito Pinto                           | Renta Dignidad | Bono Juana Azurduy |
| <b>2006</b> | 1,084,967               | -              | -                  | 11.5                                     | -              | -                  |
| <b>2008</b> | 1,677,660               | 752,347        | -                  | 17.3                                     | 7.7            | -                  |
| <b>2010</b> | 1,647,958               | 801,875        | 196,545            | 16.4                                     | 8.0            | 2.0                |
| <b>2012</b> | 1,762,291               | 855,424        | 182,992            | 17.0                                     | 8.2            | 1.8                |
| <b>2014</b> | 2,132,393               | 919,362        | 244,155            | 19.9                                     | 8.6            | 2.3                |
| <b>2016</b> | 2,156,464               | 989,068        | 228,802            | 19.5                                     | 9.0            | 2.1                |
| <b>2018</b> | 2,182,792               | 1,055,996      | 229,415            | 19.2                                     | 9.3            | 2.0                |

Note: data for Renta Dignidad is not available prior to 2008, since the program was established in 2008; data for Bono Juana Azurduy is not available prior to its implementation in 2009; values for all years between 2006 and 2018 can be found in the appendix.

Source: based on UDAPE (2020e) and CEPAL (2019d)

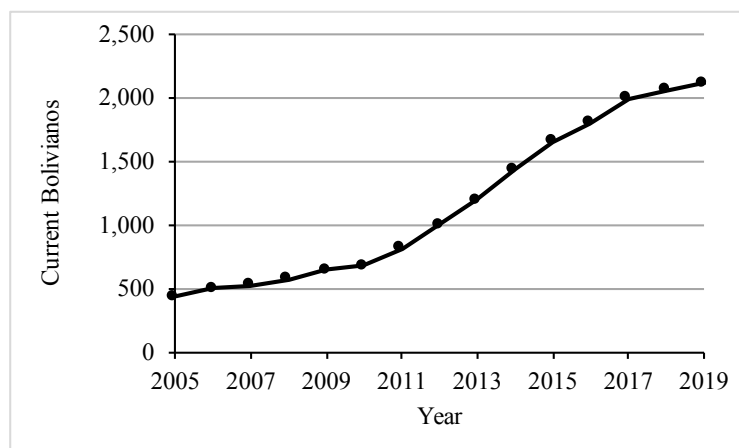
Bono Juancito Pinto has the largest groups of beneficiaries. However, it is not that crucial in terms of spending and only accounts for 0.2% of the GDP. Renta Dignidad is the biggest transfer. It accounts for more than 1% of the GDP and the number of beneficiaries is above 8% of the total population (Vargas & Garriga, 2015). It contributed between 2007 and 2009 to a reduction in extreme poverty by 5.8%, especially in rural areas (Hicks et al., 2018). Furthermore, the share of non-labor income of total income rose from 15% in 2001 to 50% in 2013 for the 75<sup>th</sup> percentile of people above the age of 60. At last, Bono Juana Azurduy is the least important transfer. It accounts for 0.06% of the GDP in 2014 in terms of spending and covers only around 2% of the total population. However, it is agreed upon that Juancito Pinto and Bono Juana Azurduy are important transfers for certain groups to improve access to health and education, which then leads to poverty and inequality reduction. Moreover, real non-labor income per capita increased more in rural than in urban areas, leading to a greater poverty reduction (Vargas & Garriga, 2015).

#### 5.2.4 Salaries

Moving on, Hicks et al. (2018) found that during Morales's presidency one-quarter of the income gap between indigenous and non-indigenous people was closed, while the income of indigenous households increased by 72% in total compared to an increase of 54% of non-indigenous households (Hicks et al., 2018). The rise in income can not only be explained by a rise in non-labor income, but also through a rise in labor income due to the increase of the minimum wage from 2006 onwards.

Concerning labor income, the minimum wage grew by 122 percent in real terms between 2000 and 2015 and is seen to be another explanatory variable for the downward trend in poverty and inequality (Vargas & Garriga, 2015). Figure 12 shows the increase in the minimum wage per year from 440 bolivianos in 2005 to 2,122 bolivianos per year in 2019.

**Figure 12:** Minimum wage per year, in current bolivianos, 2005-2019

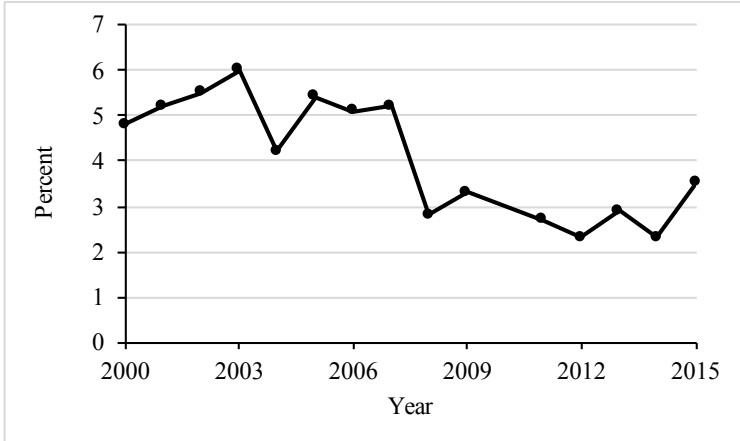


Source: based on UDAPE (2020d)

Nevertheless, Bolivia still has the lowest minimum wage in a South American comparative perspective. Furthermore, it has to be considered that it only directly affects the workforce in the formal sector, which only accounts for around 40% of the total workforce. Despite that, labor income in the informal sector increased as well. The increase in the minimum wage might have led to a higher reference salary in the informal sector (Vargas & Garriga, 2015). As mentioned earlier, the formalization of the economy was promoted and companies in the formal sector grew (Arauz et al., 2019). The share of salaried workers in the informal sector at the national level fell from 68.2% in 2007 to 57.3% in 2017. In rural areas it fell from 75% in 2007 to 58.5% in 2017. Nevertheless, most people are still employed in the informal sector (SEDLAC, 2018).

Concerning more sectoral differences, it has to be noted that the increase in labor income of 36% between 2000 and 2013 was not equal to all workers across all sectors. The salary for primary activities like commerce and construction increased, but the real salary in the public sector, and for skilled service workers, declined (Vargas & Garriga, 2015). In 2006, the hourly wage (in nominal LCU) for skilled services was 20.6. In 2007, it went down to 12.1 (SEDLAC, 2018). This contributed to a reduction in inequality, since the former groups of workers earned less than the latter (Vargas & Garriga, 2015). However, in recent years the wages for skilled workers have increased again (SEDLAC, 2018). At last, the higher economic growth rate has also contributed to a decreasing unemployment rate (Sánchez-Ancochea, 2019).

**Figure 13:** Average annual unemployment rate, in percentage, 2000-2015



Note: since a new measurement was introduced in 2016, data is only comparable until 2015

Source: based on CEPAL (2020i)

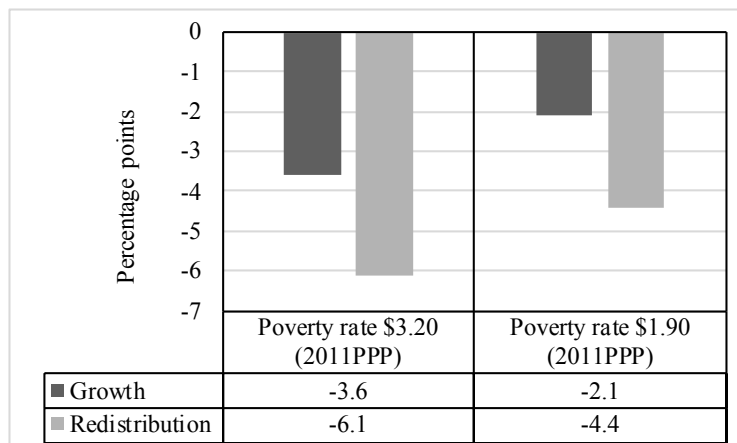
The data shows that the unemployment rate decreased from 6% in 2003 to 2.3% in 2014 and therefore has been more than halved. In 2015, it rose again to 3.5% but remains stable overall (Arauz et al., 2019).

This part of the analysis has laid out that economic growth and favorable terms of trade combined with redistributive policies via public investment, conditional transfer schemes, and changes in salaries are variables that impacted poverty and inequality reduction in Bolivia from 2006 to 2019.

### 5.3 Inequality and Poverty Decomposition

After providing a better understanding of the explanatory variables which could have led to pro-poor growth it is crucial to ask for the overall impact of growth on poverty following the proposed decomposition method by Datt and Ravallion (1992). Results suggest that redistribution drove overall poverty reduction more than growth, using the \$1.90 and \$3.20 (2011 PPP) poverty line.

**Figure 14:** Drivers of change in \$3.20 and \$1.90 (2011 PPP) poverty rate between 2008 and 2018



Source: based on The World Bank (2020c)

Between 2008 and 2018 growth contributed to a change in -3.6 percentage points in the \$3.20 (2011 PPP) poverty rate, while redistribution contributed to a change in -6.1 percentage points. Using the \$1.90 (2011 PPP) poverty rate, growth contributed to a change in -2.1 percentage points and redistribution to a change in -4.4 percentage points. These results differ to earlier periods. Between 2008 and 2013 growth contributed to a greater change in both poverty rates than redistribution did (The World Bank, 2020c). This points towards the important role of policy implementations on poverty reduction during the second half of Morales's administration period.

## 6 Discussion

As this study has laid out in the theoretical framework, the inclusive growth paradigm is to some extent in accordance with the absolute definition of pro-poor growth, but not with the relative one (Ianchovichina & Lundstrom, 2019). It is open to debate whether the economic growth process in Bolivia can be considered as inclusive. From its definition, inclusive growth

necessarily requires a structural transformation. However, this thesis concludes that the sectoral composition of the economy, and the employment shares per sector in Bolivia, have not changed much between 2006 and 2019. The theory of pro-poor growth mainly points towards the importance of agricultural productivity growth and the relocation of labor to the non-agricultural sector (Kuznets & Murphy, 1966). There is little empirical evidence that this took place in Bolivia. However, those findings stand in contrast to the results of Arauz et al. (2019). The authors conclude that Bolivia has undergone a structural transformation during Morales's administration period. In contrast, authors like Molero Simarro and Paz Antolín (2012) claim that the government should have focused more on the development of new sectors. A major concern is the sustainability of poverty and inequality reduction. All the improvements were derived from higher revenues in the hydrocarbon sector, the income of which has been allocated to the poor. Changes in these revenue sources are beyond state control and Bolivia is highly dependent on international commodity prices. As revenues decline, social spending has to be cut in order to avoid high public debt. In this context, it could be argued that Morales's policies contributed to declining inequality and poverty in the short term, but not in the long run. Furthermore, it could be claimed that Morales should have focused more on the structural transformation of the economy to ensure economic growth in the future and to sustain poverty and inequality reduction.

Despite that debate, this thesis still concludes that the economic growth process between 2006 and 2019 has been pro-poor.

Concerning the first research question: "How did inequality and poverty change?", the results of this thesis show that the growth rate among the poor people in the Bolivian economy between 2006 and 2017 has been higher than in the rest of the economy. This is in accordance with the relative approach of pro-poor growth (Kakwani & Pernia, 2000; McCulloch & Baulch, 1999; Ravallion & Chen, 2003). Moreover, this study has found that there was a drastic decline in inequality and poverty since 2000, alongside falling inequality in the whole region. That being the case, inequality and poverty have especially fallen during the presidential term of Evo Morales. Furthermore, the analysis concludes that poverty in rural areas has fallen, but still remains at a higher level compared to the national and urban area, which is consistent with earlier research (Klasen et al., 2004; Vargas & Garriga, 2015). However, compared to earlier research, this study has pointed out a greater improvement in poverty reduction for the indigenous population. Evo Morales, as the first indigenous president in Bolivia, has especially



strengthened the rights of the indigenous population and targeted them in his development strategy (Hicks et al., 2018). This is in accordance with the theory which states that ethnical discrimination has to be removed to foster pro-poor growth (Klasen, 2003). At last, the results are not consistent with the theory of Kuznets (1995), since inequality was decreasing, and per capita income was rising at the same time.

Moving on to the second research question: “What has caused inequality in Bolivia?”, the study suggests that inequality was mainly driven by the economic structure, the demography, and the unequal distribution of land (Molero Simarro & Paz Antolín, 2012; Hicks et al., 2018; Hertzler & Ledebur, 2007). Being a landlocked country with bad neighbors also contributes to high inequality. Bolivia’s colonial heritage is seen as a factor contributing to high inequality, but to a smaller extent than the former factors. The three main factors, especially the structure of the economy, are in accordance to earlier research on the causes for inequality in whole Latin America (Hartmann et al., 2016).

Addressing the third research question: “What policies were implemented during Morales’s presidency?”, the president targeted the causes which have contributed to persistent inequality. One of the most important policy actions has been the nationalization of natural resources and to a smaller extent the nationalization of other strategic sectors. This has been fundamental to the development strategy, since the government regained its control over natural resources and was then able to maintain the revenues (Arauz et al., 2019). Furthermore, this action is in line with the theoretical framework, which claims that pro-poor growth policies have to avoid the exploitation of natural resources.

Moreover, Morales increased public investment, implemented cash transfers, and introduced pro-poor labor policies (Arauz et al., 2019; Vargas & Garriga, 2015). These policy implementations are in line with pro-poor growth policies by the OECD (2007), Hanmer and Both (2001), and Klasen (2003), elaborated in the theoretical framework. Furthermore, Morales introduced exchange rate and monetary policies. The distribution of land has been another important policy step, which is consistent with pro-poor growth policies (Hertzler & Ledebur, 2007; Hicks et al., 2018). At last, Morales intended to foster the diversification of the economy. However, this action is seen as a failure since the economy did not experience structural change. Overall, the policy implementations are in line with policy actions across all countries in Latin America during that period.

Moving on to the last research question: “Which policy implementations and macro trends are factors that explain pro-poor growth?”, the two fundamental factors have been economic growth and favorable terms of trade. High revenues during the commodity boom enabled the administration of Morales to redistribute more income towards the poor. However, this gives rise to the question among authors whether the reduction of poverty and inequality was due to Morales or just coincidence. Indeed, this study concludes that economic growth was fostered by a rise in commodity prices whereas declining inequality and poverty are due to redistributive policies by the Morales administration. That redistribution drove poverty and inequality reduction more than economic growth is supported by the results of the decomposition method in this thesis. This is consistent with research conducted by Molero Simarro and Paz Antolín (2012). In this context, it is also debated whether left leaning governments performed better in reducing poverty and inequality in Latin America (Lustig, 2009). However, this thesis concludes that the rise of left leaning governments coincided with the commodity boom, which helped to redistribute more. But the decline in poverty and inequality is not due to left leaning governments itself. However, this development contradicts to historical evidence, which has mostly shown a positive correlation between commodity booms and income inequality. Nevertheless, most countries in Latin America benefited from rising revenues during that recent boom (Molero Simarro & Paz Antolín, 2012). This can primarily be attributed to policies that aimed to equally distribute the revenues to all sectors of society (Sánchez-Ancochea, 2019).

Moving on, public spending is seen as another explanatory variable. The increase in public spending contributed to a stronger impact of growth on inequality. This is consistent with the theory that the impact of economic growth on poverty reduction depends on the distribution of additional income (Hanmer & Both, 2001). However, some authors argue that public investments could have been higher, since they were decreasing as a share of GDP (Arauz et al., 2019).

The implementations of the three transfer schemes: Juancito Pinto, Bono Juana Azurduy, and Renta Dignidad are the main explanatory variables for the improvement of the non-labor income, but relatively small. However, it benefited certain groups and improved the access to human capital. Especially the program Renta Dignidad was important for elderly people. This is consistent with the theory, stating that cash transfers can build up human capital and stabilize the income of the poor (Hanmer & Both, 2001; Klasen, 2003). Moreover, it shows consistency with the study conducted by Vargas and Garriga (2015).

The study concludes that the most important factor, that has driven poverty reduction, has been the higher labor income at the lower end of the income distribution. This has mostly been accomplished by a rise in the minimum wage and a lower skill premium. This is consistent with the experience of most countries in Latin America.

## 7 Conclusion

Concerning the first part of the main research question: “How and why has the economic growth process in Bolivia from 2006 to 2019 benefitted the poor?”, this thesis has shown that inequality and poverty, especially for rural areas and the indigenous population, have fallen. Non-income poverty has also improved significantly.

Regarding the second part of the main research question, the study concludes that the main factor that has impacted poverty and inequality reduction has been the economic growth process during the commodity boom. The second most important factor has been a higher labor income at the lower end of the income distribution due to a rise in the minimum wage. In this context, a lower skill premium and a lower unemployment rate have contributed to declining inequality. Third, an increase in social spending led to a higher non-labor income, especially in rural areas. The implementation of three cash transfer programs, especially the program *Renta Dignidad*, has driven poverty reduction for certain groups. At last, a new land reform has contributed as a minor factor to lower inequality.

Taking that into account, there are several lessons to be learned from the Bolivian experience. First, it is important to change the regulatory framework of an economy to regain control over its natural resources, especially the hydrocarbon sector. Second, it is important to define strategic sectors. Third, the redistribution of revenues from those sectors is an important tool to achieve poverty reduction. However, it should also be focused on the structural transformation of an economy to ensure sustained economic growth and the development of new sectors has to be targeted.

More recently, Latin America and Bolivia are facing a period of slower economic growth, which can be traced back to the fall in commodity prices and a decline in revenues from hydrocarbons. In a sharp consolidation, revenues from hydrocarbon will decline from 6.2% of GDP to 1.7% of GDP by 2024. In a gradual consolidation, the revenues will drop from 6.2% to

3.5% of GDP by 2024 (Arauz et al., 2019). If public investments in Bolivia stay at the current level and revenues of hydrocarbons continue to decline, public debt will be pushed to 100 percent of the GDP by 2030 (Endegnanew & Tessema, 2019).

For that reason, the government has decided to limit growth in public investment. A cut in social spending could again lead to increasing poverty and inequality. In that context, directors of the International Monetary Fund are pledging for a shift of Bolivia's growth model from the public redistribution of hydrocarbon revenues to private sector-led activity (International Monetary Fund, 2018). To promote further growth, industrialization and economic diversification are targeted. Great lithium reserves are seen as one major driver to pursue those goals in the future (Arauz et al., 2019).

For future research it might be interesting to analyze the potential of Bolivia's Agenda Patriótica 2025, which guides its economic policy towards becoming a global leader in the export of lithium batteries. Deeper insights on the promotion of further economic growth, in order to avoid drastic cuttings in social spending, could be obtained.

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## B Appendix

**Table 1:** Poverty gap, \$3.20 (2011PPP)

| Year | National | Urban | Rural |
|------|----------|-------|-------|
| 2000 | 24.9     | 9.3   | 53.4  |
| 2001 | 19.5     | 7.3   | 40.7  |
| 2002 | 20.8     | 7.4   | 44.1  |
| 2003 | -        | -     | -     |
| 2004 | -        | -     | -     |
| 2005 | 16.4     | 4.8   | 37.1  |
| 2006 | 13.9     | 3.5   | 33.2  |
| 2007 | 11.3     | 3.3   | 27.1  |
| 2008 | 9.3      | 2.8   | 21.5  |
| 2009 | 8.8      | 2.3   | 21.3  |
| 2010 | -        | -     | -     |
| 2011 | 6.1      | 1.4   | 15.6  |
| 2012 | 6.9      | 1.5   | 18.1  |
| 2013 | 5.7      | 1.0   | 15.6  |
| 2014 | 5.2      | 1.1   | 14.0  |
| 2015 | 5.3      | 1.1   | 14.4  |
| 2016 | 5.7      | 1.7   | 14.7  |
| 2017 | 4.9      | 1.1   | 13.4  |

**Table 2:** Poverty gap, \$1.90 (2011PPP)

| Year | National | Urban | Rural |
|------|----------|-------|-------|
| 2000 | 17.6     | 4.4   | 41.7  |
| 2001 | 12.3     | 3.1   | 28.5  |
| 2002 | 13.4     | 2.8   | 31.9  |
| 2003 | -        | -     | -     |
| 2004 | -        | -     | -     |
| 2005 | 10.0     | 1.5   | 25.0  |
| 2006 | 8.1      | 1.1   | 20.9  |
| 2007 | 6.0      | 0.7   | 16.5  |
| 2008 | 5.0      | 1.0   | 12.7  |
| 2009 | 5.0      | 0.9   | 13.0  |
| 2010 | -        | -     | -     |
| 2011 | 3.1      | 0.4   | 8.5   |
| 2012 | 4.0      | 0.5   | 11.1  |
| 2013 | 3.1      | 0.3   | 9.0   |
| 2014 | 2.6      | 0.4   | 7.2   |
| 2015 | 2.8      | 0.3   | 8.2   |
| 2016 | 3.0      | 0.8   | 7.9   |
| 2017 | 2.5      | 0.4   | 7.0   |

Source: based on SEDLAC (2018)

**Table 3:** Disaggregation of the poverty line by household characteristics (total Bolivia), 2006-2018

## Population living in poverty by years of schooling (%)

|       | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| <=5   | 71.4 | 71.9 | 55.8 | 52.2 | -    | 45.7 | 47.6 | 48.1 | 44.4 | 43.9 | 45.9 | 47.0 | 44.9 |
| 6-9   | 64.9 | 62.0 | 44.6 | 39.4 | -    | 32.4 | 31.9 | 31.5 | 31.2 | 33.6 | 33.2 | 35.0 | 29.6 |
| 10-12 | 50.9 | 43.6 | 30.2 | 30.6 | -    | 25.5 | 25.3 | 24.2 | 22.4 | 24.7 | 24.7 | 26.0 | 23.6 |
| >=13  | 17.0 | 17.1 | 12.9 | 10.0 | -    | 9.3  | 9.9  | 8.2  | 7.2  | 7.9  | 7.9  | 7.5  | 7.7  |

## Population living in extreme poverty by years of schooling (%)

|       | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| <=5   | 43.9 | 44.6 | 29.2 | 27.5 | -    | 23.6 | 26.8 | 26.2 | 23.6 | 22.8 | 25.0 | 25.3 | 23.6 |
| 6-9   | 27.7 | 31.0 | 19.7 | 15.0 | -    | 12.4 | 11.7 | 14.6 | 12.8 | 12.7 | 13.3 | 15.1 | 12.6 |
| 10-12 | 20.3 | 16.1 | 7.2  | 9.1  | -    | 6.5  | 7.7  | 6.6  | 5.3  | 7.2  | 8.4  | 8.7  | 7.9  |
| >=13  | 5.3  | 5.2  | 2.4  | 1.7  | -    | 1.9  | 1.9  | 1.4  | 1.6  | 1.5  | 2.3  | 1.8  | 1.9  |

## Population living in poverty by ethnicity (%)

|                | 2006 | 2007 | 2008 | 2009 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Non-indigenous | 49.3 | 46.1 | 29.4 | 26.6 | 27.2 | 28.0 | 27.0 | 27.1 | 30.9 | 29.4 | 28.2 | 28.4 |
| Indigenous     | 67.4 | 63.5 | 51.8 | 48.1 | 51.7 | 54.0 | 51.5 | 47.0 | 44.8 | 46.5 | 49.7 | 47.7 |

## Population living extreme poverty by ethnicity (%)

|                | 2006 | 2007 | 2008 | 2009 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Non-indigenous | 20.3 | 20.2 | 10.2 | 8.7  | 8.1  | 9.5  | 9.8  | 9.3  | 12.0 | 11.1 | 10.1 | 10.5 |
| Indigenous     | 40.4 | 36.1 | 25.3 | 24.3 | 29.6 | 32.8 | 29.6 | 26.3 | 21.6 | 27.5 | 29.7 | 27.5 |

Source: based on CEPAL (2020c; 2020d)

**Table 4:** Measurement of non-income poverty, 2000-2018

## Education

Illiteracy rate of the population aged 15 and over, by geographical area, % of population.

|          | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------|------|------|------|------|------|------|------|------|------|------|
| National | 13.8 | 14.0 | 12.7 | -    | 13.1 | 11.0 | 10.6 | 9.3  | 8.9  | 8.8  |
| Rural    | 29.0 | 26.3 | 25.5 | -    | 24.0 | 22.3 | 22.1 | 20.0 | 19.3 | 17.8 |

|          | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------|------|------|------|------|------|------|------|------|------|
| National | -    | 7.8  | 7.9  | 7.7  | 6.9  | 7.5  | 8.2  | 8.9  | 7.2  |
| Rural    | -    | 17.3 | 17.9 | 18.2 | 16.2 | 16.4 | 19.4 | 21.3 | 17.6 |

Percentage of population between ages 15 to 19 that completed primary education, by geographical area, % of population.

|          | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------|------|------|------|------|------|------|------|------|------|------|
| National | 80.8 | 81.8 | 80.8 | -    | 87.8 | 90.1 | 90.7 | 92.8 | 92.1 | 93.8 |
| Rural    | 57.5 | 64.3 | 61.8 | -    | 78.0 | 80.2 | 83.4 | 87.2 | 84.4 | 88.7 |

|          | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------|------|------|------|------|------|------|------|------|------|
| National | -    | 94.1 | 95.0 | 95.3 | 95.1 | 96.4 | 96.1 | 97.3 | 98.0 |
| Rural    | -    | 89.6 | 91.4 | 90.2 | 91.6 | 93.8 | 91.9 | 95.2 | 96.5 |

Percentage of population between ages 20 to 24 that completed secondary education, by geographical area, % of population.

|          | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------|------|------|------|------|------|------|------|------|------|------|
| National | 46.1 | 48.9 | 48.2 | -    | 51.0 | 58.7 | 58.1 | 63.9 | 66.0 | 64.3 |
| Rural    | 12.4 | 15.5 | 13.0 | -    | 26.0 | 25.5 | 22.2 | 40.6 | 30.7 | 38.1 |

|          | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------|------|------|------|------|------|------|------|------|------|
| National | -    | 66.4 | 69.8 | 76.9 | 66.4 | 70.3 | 72.8 | 74.3 | 76.2 |
| Rural    | -    | 39.4 | 44.2 | 48.0 | 34.9 | 47.5 | 47.1 | 46.0 | 53.6 |

## Health

Infant mortality rate, deaths per 1,000 live births.

|          | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------|------|------|------|------|------|------|------|------|------|------|
| National | 55.7 | 52.9 | 50.2 | 47.7 | 45.2 | 42.8 | 40.6 | 38.4 | 36.4 | 34.4 |

|          | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------|------|------|------|------|------|------|------|------|------|
| National | 32.6 | 30.9 | 29.2 | 27.7 | 26.2 | 24.9 | 23.8 | 22.8 | 21.8 |

Source: based on CEPAL (2019b; 2019c; 2020a; 2020b)

**Table 5:** Commodity price index, 2000-2018

(Base year 2010=100)

|                              | <b>2000</b>  | <b>2001</b>  | <b>2002</b>  | <b>2003</b>  | <b>2004</b>  | <b>2005</b>  | <b>2006</b>  | <b>2007</b>  | <b>2008</b>   |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| <b>Total commodity price</b> | <b>40.16</b> | <b>37.31</b> | <b>36.29</b> | <b>41.56</b> | <b>51.55</b> | <b>63.42</b> | <b>76.71</b> | <b>86.94</b> | <b>107.41</b> |
| Agricultural products        | 52.21        | 49.61        | 48.12        | 52.88        | 59.61        | 62.16        | 68.97        | 77.49        | 95.28         |
| Minerals and metals          | 27.53        | 25.29        | 25.27        | 28.44        | 39.76        | 50.64        | 73.14        | 87.16        | 96.67         |
| Energy products              | 41.93        | 38.34        | 36.82        | 44.29        | 55.62        | 75.49        | 85.72        | 93.98        | 126.01        |
| Petroleum products           | 54.19        | 54.07        | 48.44        | 57.39        | 67.02        | 82.33        | 93.45        | 99.50        | 122.49        |
| Natural gas                  | 98.25        | 90.21        | 76.51        | 125.24       | 134.42       | 203.31       | 153.23       | 159.21       | 201.98        |

|                              | <b>2009</b>  | <b>2010</b>   | <b>2011</b>   | <b>2012</b>   | <b>2013</b>   | <b>2014</b>   | <b>2015</b>  | <b>2016</b>  | <b>2017</b>  |
|------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|
| <b>Total commodity price</b> | <b>78.50</b> | <b>100.00</b> | <b>122.95</b> | <b>116.40</b> | <b>112.61</b> | <b>104.40</b> | <b>73.96</b> | <b>70.92</b> | <b>79.34</b> |
| Agricultural products        | 86.69        | 100.00        | 119.62        | 112.35        | 107.61        | 105.69        | 89.14        | 92.89        | 92.18        |
| Minerals and metals          | 70.32        | 100.00        | 119.31        | 105.91        | 100.03        | 85.75         | 65.63        | 64.43        | 76.50        |
| Energy products              | 79.35        | 100.00        | 128.67        | 128.62        | 127.38        | 119.62        | 69.59        | 59.77        | 71.99        |
| Petroleum products           | 82.42        | 100.00        | 127.02        | 132.01        | 128.05        | 124.29        | 90.29        | 77.17        | 86.63        |
| Natural gas                  | 90.08        | 100.00        | 91.18         | 62.76         | 84.92         | 99.64         | 59.60        | 56.83        | 67.49        |

|                              | <b>2018</b> |
|------------------------------|-------------|
| <b>Total commodity price</b> | 86.24       |
| Agricultural products        | 91.33       |
| Minerals and metals          | 78.03       |
| Energy products              | 89.49       |
| Petroleum products           | 99.34       |
| Natural gas                  | 71.95       |

Source: based on CEPAL (2019e)



**Table 6:** Composition of Bolivia's exports, in millions of dollars, 2002-2018

|                          | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Minerals and Metals      | 346.90      | 369.30      | 457.20      | 545.70      | 1,061.80    | 1,394.10    | 1,941.40    | 1,847.40    |
| Hydrocarbons             | 346.40      | 505.30      | 850.90      | 1,443.20    | 2,059.90    | 2,290.80    | 3,548.70    | 2,135.20    |
| Non-traditional products | 626.60      | 715.30      | 886.50      | 878.50      | 966.60      | 1,136.90    | 1,442.80    | 1,417.00    |

|                          | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Minerals and Metals      | 2,400.80    | 3,448.60    | 3,744.40    | 3,076.10    | 3,933.00    | 2,856.40    | 3,073.70    |
| Hydrocarbons             | 3,014.90    | 4,148.70    | 5,909.90    | 6,682.70    | 6,674.70    | 4,032.60    | 2,221.40    |
| Non-traditional products | 1,550.40    | 1,548.50    | 2,160.20    | 2,492.90    | 2,291.40    | 1,848.10    | 1,831.20    |

|                          | <b>2017</b> | <b>2018</b> |
|--------------------------|-------------|-------------|
| Minerals and Metals      | 3,891.00    | 3,999.50    |
| Hydrocarbons             | 2,734.40    | 3,141.70    |
| Non-traditional products | 1 569.10    | 1,827.90    |

Source: based on UDAPE (2020a)

**Table 7:** Sectoral composition of GDP and its growth, in percentage, 2006-2018

|                                                        | 2006  |        | 2007  |        | 2008  |        | 2009  |        |
|--------------------------------------------------------|-------|--------|-------|--------|-------|--------|-------|--------|
|                                                        | Share | Growth | Share | Growth | Share | Growth | Share | Growth |
| <i>A. Private Sector</i>                               |       |        |       |        |       |        |       |        |
| Agriculture, Forestry, Hunting and Fishing             | 14.44 | 4.26   | 13.74 | -0.51  | 13.28 | 2.61   | 13.33 | 3.68   |
| Minerals (Metal and non-metal)                         | 4.08  | 6.67   | 4.29  | 9.98   | 6.31  | 56.26  | 6.71  | 9.90   |
| Crude Petroleum and Natural Gas                        | 6.79  | 4.60   | 6.83  | 5.24   | 6.57  | 2.04   | 5.50  | -13.48 |
| Manufacturing                                          | 17.03 | 8.09   | 17.28 | 6.09   | 16.88 | 3.66   | 17.11 | 4.81   |
| Electricity, Gas and Water                             | 1.97  | 4.03   | 1.96  | 4.31   | 1.91  | 3.58   | 1.97  | 6.11   |
| Construction                                           | 2.79  | 8.25   | 3.05  | 14.35  | 3.14  | 9.20   | 3.37  | 10.82  |
| Commerce                                               | 8.12  | 3.85   | 8.20  | 5.59   | 8.09  | 4.77   | 8.21  | 4.90   |
| Transportation and Communication                       | 10.86 | 3.92   | 10.75 | 3.50   | 10.53 | 4.02   | 10.76 | 5.58   |
| Finance, Insurance, Real Estate, and Business Services | 11.26 | 5.39   | 11.44 | 6.27   | 11.28 | 4.67   | 11.37 | 4.15   |
| Personal services                                      | 4.29  | 2.46   | 4.23  | 3.07   | 4.09  | 2.68   | 4.10  | 3.59   |
| Restaurants and Hotels                                 | 2.84  | 2.21   | 2.78  | 2.36   | 2.66  | 1.80   | 2.64  | 2.31   |
| Imputed Bank Services                                  | -3.17 | 16.25  | -3.37 | 11.30  | -3.45 | 8.60   | -3.51 | 5.11   |
| <i>B. Public Sector</i>                                |       |        |       |        |       |        |       |        |
| Public Administration Services                         | 9.02  | 3.65   | 8.97  | 4.06   | 8.78  | 3.83   | 9.04  | 6.48   |
|                                                        |       |        |       |        |       |        |       |        |
|                                                        | 2010  |        | 2011  |        | 2012  |        | 2013  |        |
|                                                        | Share | Growth | Share | Growth | Share | Growth | Share | Growth |
| <i>A. Private Sector</i>                               |       |        |       |        |       |        |       |        |
| Agriculture, Forestry, Hunting and Fishing             | 12.65 | -1.18  | 12.39 | 3.06   | 12.27 | 4.15   | 12.03 | 4.69   |
| Minerals (Metal and non-metal)                         | 6.18  | -4.07  | 6.07  | 3.36   | 5.49  | -4.97  | 5.29  | 2.89   |
| Crude Petroleum and Natural Gas                        | 6.01  | 13.95  | 6.12  | 7.13   | 6.68  | 14.69  | 7.13  | 13.97  |
| Manufacturing                                          | 16.86 | 2.59   | 16.62 | 3.68   | 16.56 | 4.75   | 16.45 | 6.09   |
| Electricity, Gas and Water                             | 2.03  | 7.34   | 2.07  | 7.32   | 2.08  | 5.82   | 2.05  | 5.12   |
| Construction                                           | 3.48  | 7.46   | 3.57  | 7.98   | 3.67  | 8.02   | 3.80  | 10.64  |
| Commerce                                               | 8.20  | 3.96   | 8.07  | 3.60   | 7.97  | 3.78   | 7.76  | 3.93   |
| Transportation and Communication                       | 11.16 | 7.99   | 11.25 | 6.09   | 11.00 | 2.71   | 10.98 | 6.69   |
| Finance, Insurance, Real Estate, and Business Services | 11.53 | 5.62   | 11.35 | 3.53   | 11.87 | 9.94   | 11.87 | 6.83   |
| Personal services                                      | 4.07  | 3.49   | 3.97  | 2.65   | 3.91  | 3.49   | 3.78  | 3.17   |
| Restaurants and Hotels                                 | 2.61  | 3.17   | 2.56  | 2.99   | 2.51  | 3.36   | 2.43  | 3.31   |

|                                |       |      |       |      |       |       |             |
|--------------------------------|-------|------|-------|------|-------|-------|-------------|
|                                |       |      |       |      |       |       |             |
| Imputed Bank Services          | -3.60 | 6.90 | -3.62 | 5.84 | -4.27 | 24.05 | -4.47 11.66 |
| <i>B. Public Sector</i>        |       |      |       |      |       |       |             |
| Public Administration Services | 9.00  | 3.64 | 9.08  | 6.14 | 9.14  | 5.86  | 9.38 9.54   |

|                                                        | 2014 (p) |        | 2015 (p) |        | 2016 (p) |        | 2017 (p) |        | 2018 (p) |        |
|--------------------------------------------------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
|                                                        | Share    | Growth | Share    | Growth | Share    | Growth | Share    | Growth | Share    | Growth |
| <i>A. Private Sector</i>                               |          |        |          |        |          |        |          |        |          |        |
| Agriculture, Forestry, Hunting and Fishing             | 11.85    | 3.82   | 11.87    | 5.12   | 11.75    | 3.13   | 12.13    | 7.60   | 12.44    | 6.91   |
| Minerals (Metal and non-metal)                         | 5.32     | 6.01   | 5.00     | -1.40  | 5.02     | 4.72   | 4.90     | 1.58   | 4.79     | 1.87   |
| Crude Petroleum and Natural Gas                        | 7.15     | 5.73   | 6.72     | -1.37  | 6.17     | -4.37  | 5.78     | -2.39  | 5.11     | -7.82  |
| Manufacturing                                          | 16.22    | 4.03   | 16.18    | 4.58   | 16.48    | 6.18   | 16.33    | 3.29   | 16.54    | 5.52   |
| Electricity, Gas and Water                             | 2.07     | 6.41   | 2.09     | 6.28   | 2.11     | 5.28   | 2.11     | 4.04   | 2.09     | 3.38   |
| Construction                                           | 3.88     | 7.81   | 3.90     | 5.36   | 4.03     | 7.84   | 4.06     | 4.99   | 4.04     | 3.54   |
| Commerce                                               | 7.64     | 3.87   | 7.60     | 4.35   | 7.62     | 4.43   | 7.68     | 5.09   | 7.75     | 5.15   |
| Transportation and Communication                       | 10.94    | 5.02   | 10.98    | 5.27   | 11.13    | 5.67   | 11.24    | 5.21   | 11.26    | 4.39   |
| Finance, Insurance, Real Estate, and Business Services | 11.93    | 5.97   | 12.06    | 6.06   | 12.48    | 7.85   | 12.55    | 4.81   | 12.68    | 5.30   |
| Personal services                                      | 3.73     | 4.05   | 3.69     | 3.84   | 3.70     | 4.34   | 3.69     | 4.06   | 3.70     | 4.43   |
| Restaurants and Hotels                                 | 2.40     | 3.94   | 2.38     | 4.18   | 2.38     | 4.26   | 2.40     | 5.08   | 2.41     | 4.49   |
| Imputed Bank Services                                  | -4.54    | 7.08   | -4.66    | 7.79   | -5.03    | 12.36  | -5.11    | 6.00   | -5.20    | 5.95   |
| <i>B. Public Sector</i>                                |          |        |          |        |          |        |          |        |          |        |

|                                |      |      |      |      |      |      |      |      |       |      |
|--------------------------------|------|------|------|------|------|------|------|------|-------|------|
| Public Administration Services | 9.51 | 6.91 | 9.92 | 9.37 | 9.92 | 4.33 | 9.98 | 4.77 | 10.22 | 6.78 |
|--------------------------------|------|------|------|------|------|------|------|------|-------|------|

Note: (p): preliminary

Source: UDAPE (2020c)

**Table 8:** Public investments by sectors, in thousands of dollars, 2006-2018

|                                   | 2006 (a)          | 2007 (a)            | 2008 (a)            | 2009 (a)            | 2010                |
|-----------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|
| <b>Extractive</b>                 | <b>10,400.50</b>  | <b>18,856.40</b>    | <b>46,866.80</b>    | <b>79,166.60</b>    | <b>136,436.30</b>   |
| Mining                            | 3,062.10          | 11,249.80           | 34,160.80           | 47,969.20           | 27,834.20           |
| Oil and Gas                       | 7,338.50          | 7,606.70            | 12,706.10           | 31,197.40           | 108,602.10          |
| <b>Production</b>                 | <b>124,870.30</b> | <b>151,423.60</b>   | <b>170,729.50</b>   | <b>169,876.90</b>   | <b>160,399.50</b>   |
| Agriculture                       | 75,989.70         | 83,072.40           | 81,638.60           | 90,096.50           | 83,613.80           |
| Manufacturing and Tourism         | 11,396.40         | 20,491.00           | 18,444.10           | 15,155.00           | 11,858.60           |
| Multisectoral                     | 37,484.20         | 47,860.20           | 70,646.80           | 64,625.40           | 64,927.10           |
| <b>Infrastructure</b>             | <b>481,468.30</b> | <b>550,930.80</b>   | <b>649,581.80</b>   | <b>694,342.20</b>   | <b>724,601.90</b>   |
| Transport                         | 409,475.00        | 449,554.30          | 490,157.20          | 537,196.40          | 600,701.60          |
| Energy                            | 44,118.50         | 69,638.70           | 79,828.20           | 82,728.80           | 70,959.10           |
| Communications                    | 1,283.70          | 1,395.30            | 46,680.90           | 36,507.10           | 8,841.50            |
| Water                             | 26,591.20         | 30,342.40           | 32,915.50           | 37,909.90           | 44,099.70           |
| <b>Social Services</b>            | <b>262,729.60</b> | <b>284,200.00</b>   | <b>427,328.00</b>   | <b>475,328.50</b>   | <b>471,700.50</b>   |
| Health                            | 61,150.60         | 63,034.20           | 79,674.20           | 91,366.10           | 71,612.40           |
| Education                         | 75,191.40         | 77,727.10           | 123,926.60          | 151,311.40          | 176,913.60          |
| Sanitation                        | 56,452.10         | 60,628.80           | 50,257.00           | 79,433.30           | 78,822.60           |
| Urban planning and housing        | 69,935.40         | 82,809.90           | 173,470.30          | 153,217.80          | 144,351.90          |
| Other social services             | -                 | -                   | -                   | -                   | -                   |
| <b>Others</b>                     | <b>-</b>          | <b>-</b>            | <b>56,713.70</b>    | <b>20,688.00</b>    | <b>27,981.80</b>    |
| Trade and Finance                 | -                 | -                   | 39.10               | 1,021.20            | 6,185.70            |
| Justice and Police                | -                 | -                   | 5,222.40            | 6,625.00            | 6,475.30            |
| National Defense                  | -                 | -                   | 51,452.20           | 13,041.80           | 13,899.20           |
| General Administration            | -                 | -                   | -                   | -                   | 1,421.60            |
| Natural Resources and Environment | -                 | -                   | -                   | -                   | -                   |
| <b>Total</b>                      | <b>879,468.70</b> | <b>1,005,410.80</b> | <b>1,351,220.00</b> | <b>1,439,402.00</b> | <b>1,521,120.00</b> |
|                                   | <b>2011</b>       | <b>2012</b>         | <b>2013</b>         | <b>2014</b>         | <b>2015</b>         |
| <b>Extractive</b>                 | <b>397,405.20</b> | <b>559,079.60</b>   | <b>692,158.30</b>   | <b>753,565.70</b>   | <b>868,573.70</b>   |
| Mining                            | 89,348.80         | 71,475.30           | 113,667.00          | 108,064.90          | 190,302.30          |
| Oil and Gas                       | 308,056.40        | 487,604.40          | 578,491.30          | 645,500.80          | 678,271.40          |
| <b>Production</b>                 | <b>233,810.20</b> | <b>367,318.30</b>   | <b>415,408.40</b>   | <b>461,320.30</b>   | <b>553,224.70</b>   |
| Agriculture                       | 134,773.80        | 180,186.50          | 222,642.90          | 275,493.70          | 319,597.00          |
| Manufacturing and Tourism         | 18,971.10         | 70,421.50           | 101,343.40          | 119,233.40          | 208,402.60          |
| Multisectoral                     | 80,065.30         | 116,710.30          | 91,422.20           | 66,593.30           | 25,225.10           |
| <b>Infrastructure</b>             | <b>959,748.10</b> | <b>1,158,259.70</b> | <b>1,502,590.70</b> | <b>1,654,212.50</b> | <b>2,008,618.90</b> |
| Transport                         | 722,343.40        | 896,701.00          | 1,082,893.10        | 1,310,198.70        | 1,608,725.30        |
| Energy                            | 106,874.44        | 123,303.90          | 173,496.00          | 214,447.90          | 312,438.70          |

|                                   |                     |                     |                     |                     |                     |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Communications                    | 85,476.80           | 81,969.40           | 137,926.40          | 34,470.10           | 19,715.90           |
| Water                             | 45,053.40           | 56,285.30           | 108,275.20          | 95,095.80           | 67,739.00           |
| <b>Social Services</b>            | <b>566,152.80</b>   | <b>742,518.30</b>   | <b>1,084,300.10</b> | <b>1,447,916.40</b> | <b>1,341,403.30</b> |
| Health                            | 79,674.20           | 93,437.40           | 151,303.50          | 157,561.60          | 234,032.20          |
| Education                         | 170,431.30          | 232,775.50          | 326,377.40          | 454,722.00          | 383,585.50          |
| Sanitation                        | 119,886.10          | 156,501.70          | 201,876.10          | 255,440.40          | 229,795.70          |
| Urban planning and housing        | 196,161.20          | 259,803.60          | 404,743.10          | 580,192.30          | 360,643.20          |
| Other social services             | -                   | -                   | -                   | -                   | 133,346.70          |
| <b>Others</b>                     | <b>24,430.60</b>    | <b>69,985.60</b>    | <b>86,271.40</b>    | <b>190,101.30</b>   | <b>120,494.40</b>   |
| Trade and Finance                 | 4,092.10            | 2,259.20            | 11,136.40           | 80,732.30           | 11,245.10           |
| Justice and Police                | 8,647.80            | 12,580.10           | 26,705.00           | 35,007.10           | 24,462.60           |
| National Defense                  | 10,376.70           | 53,869.00           | 15,335.10           | 17,984.90           | 39,231.50           |
| General Administration            | 1,314.00            | 1,277.30            | 3,3094.90           | 14,904.30           | 17,422.60           |
| Natural Resources and Environment | -                   | -                   | -                   | 41,472.80           | 28,132.60           |
| <b>Total</b>                      | <b>2,181,547.00</b> | <b>2,897,162.00</b> | <b>3,780,729.00</b> | <b>4,507,116.00</b> | <b>4,892,314.90</b> |

|                            | 2016                | 2017 (p)            | 2018 (p)            |
|----------------------------|---------------------|---------------------|---------------------|
| <b>Extractive</b>          | <b>627,843.90</b>   | <b>456,021.10</b>   | <b>353,458.70</b>   |
| Mining                     | 98,165.20           | 114,963.10          | 191,442.20          |
| Oil and Gas                | 529,678.70          | 341,058.00          | 162,016.50          |
| <b>Production</b>          | <b>402,325.30</b>   | <b>483,934.70</b>   | <b>498,256.10</b>   |
| Agriculture                | 236,356.50          | 227,229.40          | 273,785.60          |
| Manufacturing and Tourism  | 126,764.10          | 213,323.90          | 191,086.70          |
| Multisectoral              | 39,204.70           | 43,381.40           | 33,383.80           |
| <b>Infrastructure</b>      | <b>2,697,670.50</b> | <b>2,451,240.60</b> | <b>2,120,169.90</b> |
| Transport                  | 1,692,185.60        | 1,507,463.50        | 1,403,697.20        |
| Energy                     | 875,327.90          | 823,425.60          | 601,948.50          |
| Communications             | 82,748.00           | 98,771.70           | 91,124.10           |
| Water                      | 47,409.60           | 21,579.80           | 23,400.10           |
| <b>Social Services</b>     | <b>1,191,590.90</b> | <b>1,193,675.20</b> | <b>1,277,997.40</b> |
| Health                     | 221,878.60          | 175,653.70          | 264,035.90          |
| Education                  | 323,083.00          | 340,252.10          | 314,180.00          |
| Sanitation                 | 185,425.40          | 244,046.30          | 273,899.40          |
| Urban planning and housing | 337,716.70          | 294,683.70          | 280,402.60          |
| Other social services      | 123,487.20          | 139,039.40          | 145,479.50          |
| <b>Others</b>              | <b>145,799.50</b>   | <b>186,760.60</b>   | <b>208,066.60</b>   |
| Trade and Finance          | 5,946.60            | 18,846.20           | 6,177.40            |
| Justice and Police         | 17,925.80           | 15,216.80           | 47,352.90           |
| National Defense           | 67,282.10           | 94,487.70           | 78,286.80           |
| General Administration     | 35,889.60           | 30,824.10           | 52,888.50           |

|                                   |                     |                     |                     |
|-----------------------------------|---------------------|---------------------|---------------------|
| Natural Resources and Environment | 18,755.40           | 27,385.80           | 23,361.00           |
| <b>Total</b>                      | <b>5,065,230.90</b> | <b>4,771,632.50</b> | <b>4,457,948.60</b> |

Note: (a): includes projected delivery of municipal governments

(p): preliminarily

Source: based on UDAPE (2020b)

**Table 9:** Coverage rates for Juancito Pinto, Renta Dignidad, and Bono Juana Azurduy, 2006-2018

|             | Number of beneficiaries |                |                    | Beneficiaries as a % of total population |                |                    |
|-------------|-------------------------|----------------|--------------------|------------------------------------------|----------------|--------------------|
|             | Juancito Pinto          | Renta Dignidad | Bono Juana Azurduy | Juancito Pinto                           | Renta Dignidad | Bono Juana Azurduy |
| <b>2006</b> | 1,084,967               | -              | -                  | 11.5                                     | -              | -                  |
| <b>2007</b> | 1,324,030               | -              | -                  | 13.9                                     | -              | -                  |
| <b>2008</b> | 1,677,660               | 752,347        | -                  | 17.3                                     | 7.7            | -                  |
| <b>2009</b> | 1,670,920               | 779,634        | 140,803            | 16.9                                     | 7.9            | 1.4                |
| <b>2010</b> | 1,647,958               | 801,875        | 196,545            | 16.4                                     | 8.0            | 2.0                |
| <b>2011</b> | 1,622,515               | 823,361        | 210,302            | 15.9                                     | 8.1            | 2.1                |
| <b>2012</b> | 1,762,291               | 855,424        | 182,992            | 17.0                                     | 8.2            | 1.8                |
| <b>2013</b> | 1,887,624               | 887,119        | 214,503            | 17.9                                     | 8.4            | 2.0                |
| <b>2014</b> | 2,132,393               | 919,362        | 244,155            | 19.9                                     | 8.6            | 2.3                |
| <b>2015</b> | 2,152,969               | 954,936        | 310,980            | 19.8                                     | 8.8            | 2.9                |
| <b>2016</b> | 2,156,464               | 989,068        | 228,802            | 19.5                                     | 9.0            | 2.1                |
| <b>2017</b> | 2,171,532               | 1,022,515      | 230,693            | 19.4                                     | 9.1            | 2.1                |
| <b>2018</b> | 2,182,792               | 1,055,996      | 229,415            | 19.2                                     | 9.3            | 2.0                |

Note: data for Renta Dignidad is not available prior to 2008, since the program was established in 2008; data for Bono Juana Azurduy is not available prior to its implementation in 2009.

Source: based on UDAPE (2020e) and CEPAL (2019d)