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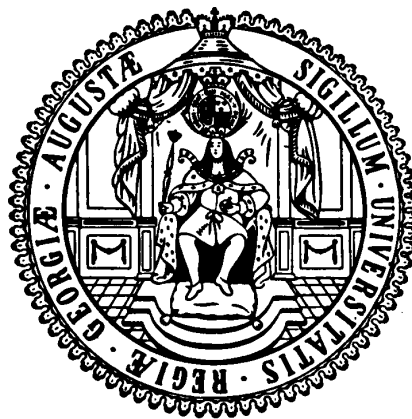
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Macroeconomic Policy and Pro-Poor Growth in Bolivia

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Macroeconomic Policy and Pro-Poor Growth in Bolivia¹

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Abstract

In this paper, we analyze the potential and limitations of macroeconomic policy to affect pro-poor growth in Bolivia. After discussing the possibility to use macro policy to affect pro-poor growth in general, I then turn to the case of Bolivia, a highly dualistic small open economy that undertook significant macroeconomic and structural reforms in the 1990s. We show that the growth these reforms generated was generally pro-poor in the 1990s but was not enough to achieve significant poverty reduction due to high levels of initial inequality. It also made the country more vulnerable to external shocks which forced the economy into an anti-poor contraction after 1998. Using a dynamic CGE model we demonstrate that there are only limited options for pro-poor macro policy which is particularly due to the low domestic savings rate and the high rate of dollarization of the economy. Consequently, in order to increase the options for pro-poor macro policy, the large inequality, the high dualism, the low savings rate, and high dollarization of the economy need to be addressed.

Keywords: Pro-Poor Growth, Bolivia, CGE model, dollarization.

JEL classification: O1, I32, C68

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1. Introduction

With the Millennium Development Goals, poverty reduction has been placed at the center of the international policy debates on economic development. The ability to achieve rapid poverty reduction critically depends on the amount of economic growth and the poverty impact of that growth. This, in turn, depends on initial inequality and changes in inequality in the growth process (Klasen, 2005). As can be shown analytically, the highest poverty impact will obtain in an environment of low initial inequality and pro-poor distributional change (World Bank, 2000; Bourguignon, 2003). As a result of these findings, the term ‘pro-poor growth’ has been coined to describe growth that achieves high rates of poverty reduction (Klasen, 2004; AfD et al. 2005).

The policy implications of aiming for ‘pro-poor growth’ have been discussed for some time (see Klasen, 2004) and were the subject of a recently concluded 14 country case study project coordinated by several by-lateral donors and the World Bank called ‘Operationalising Pro-Poor Growth’ (OPPG, see AfD et al. 2005). While many policy areas are likely to affect the ability of a country to achieve ‘pro-poor growth’, the focus of this paper is a narrower one. It investigates the ability of macroeconomic policy to foster or hinder ‘pro-poor growth’. After some general discussion, the paper will mainly focus on a country case study of Bolivia to illustrate in which ways macroeconomic policies have affected ‘pro-poor growth’ in Bolivia over the past 20 years. In this sense, the study will reflect on selected findings from the case study of Bolivia for the OPPG project as they pertain to macroeconomic issues (see Klasen et al. 2004 for more details) but also places this in a larger context of the debates on ‘pro-poor growth’.

The paper is organized as follows. Section 2 discusses the concept of pro-poor growth (PPG) and the findings from recent policy discussions about the potential impact of macro policy. The third section then discusses the recent trends in growth and poverty reduction in Bolivia. The fourth and fifth sections discuss macro policies and link them to results from a CGE-analysis on the impact of macroeconomic policies on PPG, both to understand the past record of the link as well as to analyze forward-looking policy options. The sixth section summarizes the main results and suggests policy conclusions for the scope of macro policy to promote pro-poor growth in Bolivia and elsewhere.

2. Pro-Poor Growth and Macro Policy: Concepts and Evidence

Before discussing the role of macro policy in pro-poor growth, it is useful to briefly discuss the concept of pro-poor growth (PPG). This is a large topic which will only be summarized briefly here.² While some authors see pro-poor growth as growth that is accompanied with inequality reduction (e.g. Kakwani and Pernia, 2000), others already talk about pro-poor growth when growth yields positive benefits to the poor (independently of what happened to inequality, e.g. Ravallion and Chen, 2003). While these are significant differences on a very serious issue, the two positions can be reconciled from a policy perspective if one considers ‘pro-poor growth’ as a rate rather than as a state, i.e. if the aim is to maximize income growth of the poor (see Klasen, 2005; AfD et al., 2005). If one takes this position, it is clear that high average growth as well as pro-poor distributional change could both contribute to raising income growth of the poor. Also, this way of framing the issue clarifies that they can be trade-offs (or win-win situations) between growth and inequality change that will affect the income growth of the poor. As is shown below, there can indeed be win-win situations as

² Interested readers are referred to Ravallion and Chen, (2003), Klasen (2004, 2005), and AfD et al. (2005) for detailed discussions on this issue.

well as trade-offs when examining particular macro policies and their impact on pro-poor growth.

There is a very large literature that has examined the impact of macro policy on growth or distributional change. Much of this literature was generated in the debates about structural adjustment and its ability to foster growth and poverty reduction. While some of the findings of this literature remain contentious, Klasen (2004) attempted to summarize what we have learned from these debates about macroeconomic policy and its effects on pro-poor growth. I argued that a core policy consensus has emerged on a number of macro issues, while there are also intense remaining debates and/or insufficient research on particular aspects. Table 1 presents the results of this consensus as well as the areas of debate as they pertain to macroeconomic policy.

This general debate sets the stage for an analysis of macroeconomic policy issues in Bolivia, a subject to which I turn presently. In particular, the aim should be to investigate, whether the country experience of Bolivia sheds light on some of the remaining debates about macroeconomic policies and their impact on pro-poor growth.

3. Macroeconomic Developments, Structural Reforms, and Pro-Poor Growth in Bolivia

Bolivia is a large land-locked country with a low population density, difficult terrain, and consequently poorly developed transport and communications infrastructure. It is characterized by great economic and social inequalities with deep historical roots. Apart from a Spanish-speaking population (consisting of people of Spanish and mixed descent) that has dominated political and social affairs since independence in the early 19th century, Bolivia also has a very large and heterogeneous indigenous population living in different parts of the country.

Table 1: Macroeconomic policies to Promote Pro-Poor Growth: Research Findings, Consensus Policies, and Remaining Debates

Policy Issue	Research Finding	Agreed Policy Implication	Areas of Debate
Macro-economic Stability	Macroeconomic stability critical necessary (though not sufficient) condition for pro poor growth; poor hurt particularly hard by high inflation and high macroeconomic volatility.	Monetary and exchange rate policy should aim for low inflation and competitive exchange rates; fiscal policy should aim for low budget deficits;	Should exchange rate policy principally be used to fight inflation? How quickly should stabilization occur in order to avoid a recession?
Monetary and Exchange Rate Policy	Overvalued exchange rates and high black market premia hurt economic growth and tend to be anti-poor.	A competitive and possibly undervalued exchange rate a critical ingredient to ensure macro stability; government intervention necessary to manage capital inflows:	Fixed or floating rates? What is the role of capital controls to manage inflows and outflows during crises? Should undervaluation be a goal?
Fiscal Stance	Large budget deficits hurt growth and are unsustainable. Rapid expenditure cuts can often undermine delivery and quality of critical such services as health and education and thus hurt the poor.	Governments should aim for moderate budget deficits through broadening of the tax base and, if necessary, a refocusing of expenditures (esp. cuts in subsidies to state-owned enterprises and unproductive sectors). During crises cutting expenditures rapidly is neither feasible nor desirable.	Mix of tax increases, tax broadening, and expenditure cuts?
Financial Sector	Severe financial repression hurts savings and promotes capital flight. Poorly sequenced financial sector reforms can be counter-productive and destabilizing.	Capital account and financial sector reform should be phased slowly, be implemented only if macro stability has been achieved, and be accompanied by tight regulation, competition policies, and policies to improve access of the poor.	Should the state allocate of credit to priority sectors? Should the state be involved in providing credit for the poor? What policies should be adopted to mobilize domestic savings?
Trade Policy	An anti-export bias hurts growth and the poor; import liberalization can be anti-poor and not sufficient to generate supply response. Diversification is essential for long-term growth.	Focus on removal of anti-export bias (competitive exchange rate, duty draw-back schemes, etc); provision of infrastructure to assist exports, esp. for export diversification.	Is more activist state intervention (e.g. export subsidies, subsidized credit for exporters) needed to boost non-traditional exports?

Source: Adapted from Klasen (2004).

Until the revolutionary government of Victor Paz Estenzoro installed in 1952, most indigenous people lived in serf-like arrangements in rural areas. The agrarian reform in 1953 freed the peasants in the highlands and gave them access to land. Since then, subdivisions of land and population pressure have led to increasingly smaller land-holdings and growing landlessness. In other parts of the country, particularly the lowlands, large estates dedicated to commercial farming predominate. As a result, the Gini coefficient for land inequality stood at 0.768 in 1989, indicating overall high land concentration similar to other Latin American countries (Deininger and Squire 1998). The other main source of incomes in the highlands, tin and silver mining, became progressively less lucrative and was sharply curtailed in the 1980s. Instead, the production and exports of coca leaves became a major source of income in some highlands and valley areas and the ebb and flow of coca eradication efforts have played a significant role in the income sources of poor rural households in the highlands and valleys.

In contrast, the previously largely unpopulated lowlands surrounding Santa Cruz have become the focus of settlement and growth in recent decades, fuelled by a large-scale farming sector as well as the discovery of natural resources (oil and gas).

Politically, Bolivia oscillated between military dictatorships and civilian rule between the 1950s and the early 1980s when the latest military government was replaced with a democratic one, and democracy has persisted ever since. But Bolivia's democracy remains fragile with, until recently, little indigenous representation, and a significant extra-parliamentary opposition which has successfully ousted two governments in the last 3 years.

Regarding economic policies, Bolivia had pursued a state-led import-substitution regime until the 1980s, which was largely financed through the export of raw materials (tin and silver). The first democratic government under Siles-Zuazo (1982-85) faced a very difficult internal (drought, social unrest) and external environment (debt crisis, global recession and collapse of tin prices in 1985) and allowed a hyperinflation to develop which led to a collapse of the government in 1985. Victor Paz Estenssoro took over and first undertook a strict stabilization plan, which ended hyperinflation and brought back internal and external stability (for details see Sachs and Larrain 1998).

In addition, the Paz Estenzoro government designed and began implementation of a Nueva Politica Economica, which included a wide range of World Bank and IMF-supported structural reforms. These reforms were continued by most of the successive governments so that Bolivia stands out as a country having undertaken more structural reforms in line with the so-called 'Washington Consensus' than most developing countries (Rodrik 2003; Lora 2001). They included product market deregulation, domestic and external capital market deregulation, fiscal reforms involving the simplification and broadening of the tax structure, expenditure cuts on the public service and parastatals while expanding social sector spending, trade liberalization, liberalization of the FDI regime and the restructuring, closing, and 'capitalization' of the large state-owned companies.³ The one area where there were only few reforms was the labor market. Here, only government intervention in wage setting was reduced and there was some reduction in wages and benefits for public sector employees.

³ This refers to a scheme where public companies sold a 50% stake to strategic investors (where the proceeds remained with the companies to finance a pre-specified investment program). The proceeds from the remaining shares are being used to finance an annual old age pension (the Bonosol) for all citizens over the age of 65. This way, electricity, railway, telecommunications, mining, the national airline, and the national hydrocarbon company were transferred to (mostly foreign) strategic investors who took management control of these companies.

Table 2: Basic Economic and Human Development Indicators for Bolivia

	1985-1989	1989-1994	1994-1999	1999-2002
Economic Indicators				
Real GDP growth	1.62	4.08	3.93	2.18
Agriculture excluding mining	0.33	4.10	2.08	2.38
Mining	-0.16	4.07	2.36	2.80
Services excluding public administration	1.21	4.94	6.93	1.47
Public Administration	-0.98	1.88	3.93	2.44
Industry - Manufacturing	2.02	4.40	3.80	1.94
Export growth (goods and services)	15.56	4.08	1.54	0.02
Export growth (merchandise)	5.04	5.89	-0.89	0.09
Export growth (mineral and hydrocarbon)	-0.81	-2.49	-2.81	0.18
Ave. share of mineral and hydrocarbon exports to GDP	13.68	10.17	7.57	7.65
Ave. share of agricultural exports to GDP	2.14	3.87	5.16	5.28
Current Account Deficit	-5.28	-3.53	-6.05	-4.38
Budget Balance	-0.38	-1.92	-2.33	-5.06
Inflation	2414.35	13.41	7.43	3.10
Savings Rate (domestic)	10.91	9.05	10.53	7.52
Investment Rate	14.42	15.15	18.70	15.09
Human Development Indicators				
Population Growth	2.18	2.41	2.33	2.16
Child Mortality	146	122	97	80
Secondary Enrollment (male)	42.16	41.69	60.28	81.34
Secondary Enrollment (female)	35.92	35.74	54.54	77.87
Note: Data on GDP growth and current account is taken from UDAPE (various issues) and INE (various issues). Data on exports is taken from UDAPE (various Issues) and WDI (2003). All other data are taken from WDI (World Bank 2003a), covering the years up to 2001.				

Source: WDI 2003; UDAPE (various issues); INE (various issues).

In several economic dimensions, Bolivia's structural reforms produced positive outcomes. Macroeconomic stability was achieved and maintained throughout the period with low inflation, low fiscal deficits, and a relatively stable exchange rate. The fiscal reforms, combined with the reform of the state sector, ensured that the fiscal situation improved dramatically over the 1990s. Exports improved, and there were significant improvements in human development indicators, particularly education and health (see Tables 2). Economic growth also improved and Bolivia grew at around 4% per year from 1990-1998, but only about 1.5% in per capita terms. This relatively positive performance was aided by a favorable external environment, with high growth of Bolivia's main trading partners, the expansion of natural resource exports, and a surge in foreign direct investment that accompanied the 'capitalization' process. The combination of strong memories of the 1985 hyperinflation, an open capital account, and high political and economic uncertainty of a small open economy led to high and increasing dollarization in the economy, which permeates the financial system and significantly limits the options for an active monetary and exchange rate policy. There were few attempts to combat dollarization, which is extremely high to this day, where 77% of deposits and 97% of loans are denominated in dollars (Schweickert et al. 2005). In fact, Bolivia is probably the most dollarized economy among those countries that stopped short of adopting the US-\$ as legal tender (IMF, 2003).

In addition, a range of structural weaknesses remain, including a high reliance on primary product exports (particularly minerals, hydrocarbons, and agricultural cash crops), weak institutions (weak protection of property rights, high corruption, contraband economy, high regulatory burden for start-ups, high informality of the economy, e.g. Kaufman et al. 2003; World Bank 2004b), and a persistently very low domestic savings rate (see Tables 2) which makes Bolivia heavily dependent on capital inflows to finance investment.

Since 1998, economic growth has decelerated to an average of only about 1.5% per year and has become negative in per capita terms. The main causes for this slowdown are a series of external economic shocks that have affected the economy, including particularly the strong devaluations and recessions in Brazil and Argentina in 1999 and 2002, respectively, while the Boliviano appreciated significantly alongside the US\$. This led to a sharply overvalued currency and the (independent) monetary authorities did little to combat this due to the risks of devaluations in a dollarized economy, but instead stuck to their policy of allowing only very small devaluations against the dollar (some 8% in 2001, falling to 4% in 2002). Instead, the economy slowed down considerably, credit contracted sharply as the financial sector experienced build-up of non-performing loans; as a result of the recession and costly amendments to a pension reform, budget deficits have soared to unsustainable levels, adding economic uncertainty to the already existing explosive political and social situation (World Bank 2004a). The financing of the large budget deficit through domestic and international borrowing has placed Bolivia in an increasingly vulnerable situation where rising shares of government spending must be allocated to debt service payments, thereby partially wiping out some of the gains realized by the HIPC debt relief (World Bank, 2004a).⁴

The most important results regarding poverty and inequality are summarized in Table 3 below.⁵ We present our main estimates but also include (in brackets) the results of a sensitivity analysis of one of our key assumptions underlying the simulation which might lead to an overestimate in the decline of poverty in rural areas.

There is a steep gradient in poverty levels between capital cities, towns, and rural areas, with poverty being much higher in the latter. As far as the poverty rate is concerned, this differential between capital cities and rural areas gets larger over time (from about 25 percentage points in 1989 to nearly 29 percentage points in 2002). This is not true, however, when we consider the poverty gap, for which the differential gap has somewhat narrowed. This suggests that the very poor have been able to make some gains in the 1990s while rural dwellers close to the poverty line did not benefit as much. Third, there is a clear poverty trend in capital cities, which closely mirrors macroeconomic conditions. Thus poverty (using the headcount or the poverty gap measure) declines considerably between 1989 and 1999 and then increases again between 1999 and 2002. In towns and rural areas, in contrast, the dynamics of poverty are not as closely aligned to macroeconomic developments. In particular, there is no poverty reduction at all in rural areas between 1989 and 1994, then considerable poverty reduction between 1994 and 1999, and stagnation (headcount) or slight further reductions (poverty gap) between 1999 and 2002. Note also that the pace of poverty reduction in rural areas is smaller in our sensitivity analysis but does not change the general picture (see figures in brackets).

⁴ As the dollar has fallen recently against the currencies of Bolivia's main trading partners and raw material prices have increased, the external environment has improved somewhat and growth is projected to at 3.8% and 4.5% for 2004 and 2005, respectively.

⁵ Due to the absence of nationally representative and comparable household surveys prior to 1999, the results for the years before 1999 are based on a data-matching exercise between urban household surveys and nationally representative Demographic and Health Surveys. For details, refer to Klasen et al. (2004).

Table 3: Poverty and Inequality Trends using the Moderate Poverty Line*

	1989		1994		1999		2002
	Observed	Simulated	Observed	Simulated	Observed	Simulated	Observed
Headcount							
Capital Cities**	67.2	64.8	59.5	57.4	51.1	48.1	55.1
Towns		81.1 (80.7)+		75.1 (74.3)	69.1	64.2	67.7
Rural		89.7 (87.8)		89.6 (87.8)	83.4	79.1	83.8
Total		76.9 (76.0)		72.4 (71.6)	65.2	60.3	67.2
Poverty Gap							
Capital Cities**	32.9	32.9	25.7	25.3	21.0	21.3	24.4
Towns		51.3 (50.7)		44.7 (44.0)	34.7	33.6	32.9
Rural		58.3 (55.2)		60.9 (58.2)	47.7	43.1	44.9
Total		45.5 (44.1)		41.9 (40.7)	32.5	30.1	32.9
Gini Coefficient							
Capital Cities**	0.505	0.497	0.481	0.455	0.480	0.488	0.540
Towns		0.547		0.537	0.455	0.500	0.452
Rural		0.475		0.497	0.423	0.443	0.421
Total		0.555		0.555	0.525	0.531	0.551

*The moderate poverty line is, in line with standard practice in Bolivia, applied to income in urban areas, and consumption in rural areas (as income data are considered not to be reliable there and consumption data are not available for the urban household surveys prior to 1997). While the extreme poverty line in Bolivia is only based on ensuring adequate nutrition, the moderate poverty line also makes allowance for some non-food expenditures. The moderate poverty line stood at about US\$40 per capita and month, the extreme poverty line at about US\$20. For details on the poverty lines and the results for the extreme poverty line, refer to annex 1.

**Capital cities refer to the 9 departmental capitals and El Alto (the city adjacent to La Paz).

+ The figures in brackets refer to sensitivity analyses which changes one assumption in the data matching exercise. See Klasen et al. (2004) for more details.

Regarding inequality, the trends follow closely the poverty discussion, but with some additional features. In particular, the sharp increase in inequality in capital cities between 1999 and 2002 is noteworthy. In other areas, inequality seems to have fallen and thereby somewhat offsetting the dramatic worsening of inequality in capital cities. Overall, the Gini in 2002 is similar to 1989. It thus appears that the fate of the urban population, including the urban poor, has been closely linked to macro developments and has recently led to a significant deterioration in poverty and inequality. In contrast, the much poorer rural poor have been more detached from improvements and deteriorations in the overall economic environment and their poverty trends have followed another logic.

A way to examine the linkages between growth, inequality, and poverty is the Ravallion-Chen measure of Pro-poor Growth which calculates the average of growth rates of the quantiles of

the population that were poor in the initial period (see Ravallion and Chen 2003).⁶ The growth incidence curves underlying this analysis are shown below for the entire period (1989-2002); for sub-periods they are available in Klasen et al. (2004). For the entire country and the entire period, they are above 0 for all groups, and moderately downward sloping from the 10th to the 90th percentile suggesting that, on the whole, the poor gained proportionately more from growth than the rich. This is not true below the 10th percentile and above the 90th percentile suggesting that the extremely poor were not benefiting as much and that the very rich were benefiting more from growth.⁷ Matters are different when one considers the different parts of the country. In departmental capitals (and El Alto), growth over the period was anti-poor with the poor gaining less than the rich (particularly due to the influence of the period after 1999), while it was strongly pro-poor in towns, and moderately pro poor in rural areas.

The annual rate of pro poor growth, shown in Table 4, summarizes the information provided in the growth incidence curves.⁸ Overall, there was Pro Poor Growth between 1.9 and 2.2 per cent per year between 1989 and 2002, which was mostly due to high pro poor growth in towns and some pro poor growth in rural areas, while the rate of pro poor growth in capital cities was negligible. It is useful to consider sub-periods. Between 1989 and 1999, there was a considerable amount of pro-poor growth in total Bolivia, in capital cities, towns, and rural areas, regardless of the poverty line. Also, the rate of pro-poor growth exceeded the growth rate in the mean, suggesting that growth was accompanied by falling inequality. The particularly high growth rate in total Bolivia (2.2 per cent) is due to growth in the three areas plus a shift in the composition of the population from the poorer rural areas to the richer urban areas. Between 1999 and 2002, we find that there was a strongly anti-poor contraction in capital cities, wiping out most of the gains the urban poor have made in the ten previous years. In other urban areas, the contraction was not particularly anti-poor so that the poor had roughly stagnant incomes. In rural areas, incomes continued to rise, although very slowly, and growth continued to be somewhat higher for the poor than for the non-poor. Given that the rural poor predominate among the poor, overall growth was only slightly anti-poor between 1999 and 2002, and this finding is sensitive to the choice of the poverty line.⁹

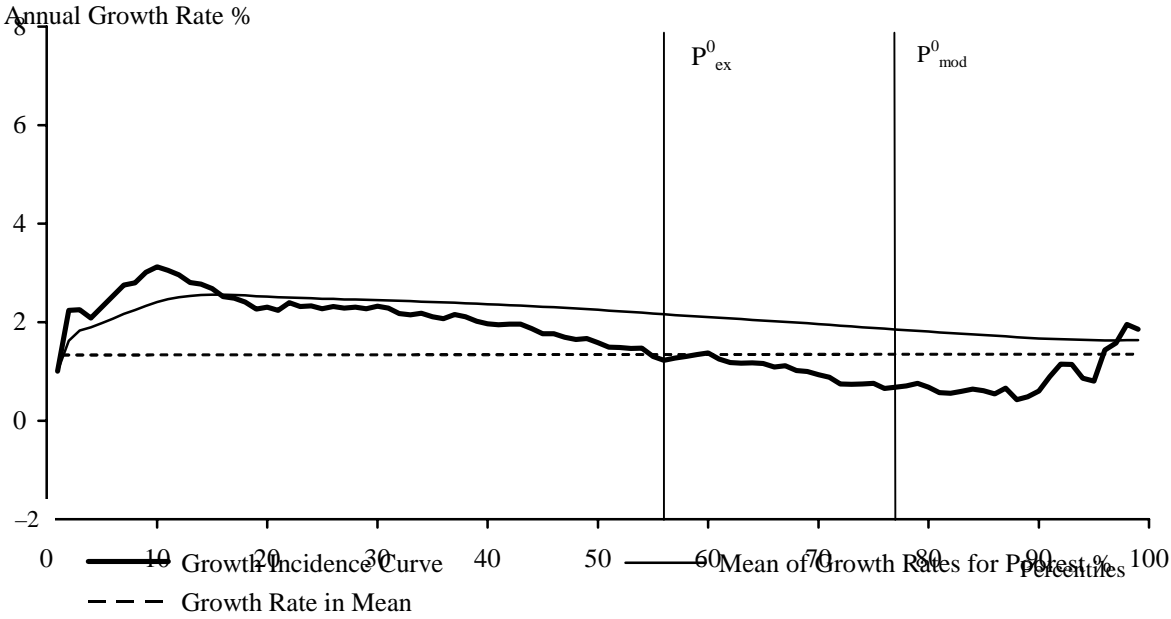
⁶ There are various criticisms of this approach of measuring pro-poor growth some of which can be found in Klasen (2004).

⁷ One should note that measurement error might have a considerable influence at the two tails of the distribution so that these results should be treated with some caution.

⁸ We also show the results of our sensitivity analysis for towns and rural areas (and by implication, all Bolivia) in brackets.

⁹ In the sensitivity analysis, growth and pro poor growth is somewhat smaller in total Bolivia and more significantly so in rural areas which hardly experienced any growth mean income growth between 1989 and 2002; but the rates of pro- poor growth remain between 1.2 and 1.4 per cent suggesting that the poor were able to make some gains over the period.

Figure 1 — Growth Incidence Curve for Bolivia, 1989 to 2002



With the exception of the strongly anti-poor growth in capital cities in recent years, it appears that growth has been quite pro-poor throughout most of the last 15 years, and particularly so in towns and (moderately so) in rural areas. One may wonder how this squares with the results in Table 3 which showed only slowly falling poverty rates in rural areas in the 1990s. But these results are entirely consistent with each other when one notes that the depth of poverty in rural areas is so large that even considerable pro-poor growth does not lift many of the poor above the poverty line (but does reduce the poverty gap as indeed happened, particularly between 1994 and 1999). Thus the problem of Bolivia’s poverty is not so much that growth in the 1990s has been biased against the poor, but that overall growth has not been very high throughout the period and that the initial inequality was so large that the poor remained poor despite some improvements in incomes. It would probably have taken another decade of such growth to make serious inroads into poverty, particularly in rural areas. Unfortunately, that did not happen. With the type of growth experienced since 1999, rural poverty will not change much and urban poverty is on a sharply increasing trend.

Table 4: Annual Pro-poor Growth Rates (per Capita)

	1989 – 2002	1989 – 1999	1999 - 2002
Total Bolivia			
Growth Rate in the Mean	1.41 (1.25)	2.23 (2.02)	-1.29
Mean of Growth Rates for Extremely Poor	2.16 (1.74)	3.39 (2.81)	-0.88
Moderately Poor	1.85 (1.49)	3.21 (2.74)	-2.22
All	1.67 (1.34)	2.98 (2.56)	-2.56
Departmental Capitals			
Growth Rate in the Mean	1.19	2.01	-1.51
Mean of Growth Rates for Extremely Poor	0.44	2.56	-6.30
Moderately Poor	0.48	2.58	-6.44
All	0.69	2.50	-5.01
Other Urban Areas			
Growth Rate in the Mean	1.76 (1.58)	2.89 (2.64)	-1.90
Mean of Growth Rates for Extremely Poor	4.70 (4.53)	6.23 (6.01)	0.48
Moderately Poor	4.22 (4.03)	5.80 (5.55)	-0.22
All	3.75 (3.56)	5.25 (5.00)	-1.03
Rural Areas			
Growth Rate in the Mean	0.87 (0.17)	0.94 (0.02)	0.59
Mean of Growth Rates for Extremely Poor	2.07 (1.40)	2.31 (1.39)	1.86
Moderately Poor	1.86 (1.18)	2.18 (1.28)	0.99
All	1.73 (1.02)	1.99 (1.06)	0.86

Source: Own calculations. Growth rates use the actually observed levels of income/expenditure where available (in capital cities throughout and elsewhere from 1999 onwards). Figures in brackets are based on sensitivity analysis. For details, refer to Klasen et al. (2004).

Before discussing the determinants of pro-poor growth, it is useful to briefly discuss the structure of GDP and the sources of overall growth in Bolivia in the past 15 years. Regarding the sectoral composition of GDP in 2002, agriculture makes up about 14 per cent, half of which is subsistence agriculture where many of the rural poor live. About 10 per cent of GDP is generated by mines, oil, and gas and only about 16 per cent by manufacturing. Most of this manufacturing consists of food processing and the processing of raw materials (wood, oil, and minerals), with hardly any light or heavy industry present in the country. The remainder of GDP consists of services of various kinds. In contrast to its low contribution to GDP, agriculture employs 60 per cent of the workforce, sales employs another 10 per cent of the workforce, while manufacturing, oil and gas, and high-value services employ only a small fraction of the workforce. Thus Bolivia is a highly dualistic economy with a large

employment in low value agriculture and the small-scale service sector and very small employment in manufacturing and the modern resource-based economy.

Overall GDP growth between 1989 and 1999 was driven largely by sharp growth in commercial agriculture, oil and gas production (and associated construction and production in the electricity, gas and water sector), some small-scale food processing industries, and some services. In contrast, subsistence agriculture, mining, hotels and restaurants, and public administration grew less than proportionately. Between 1999 and 2002, virtually all sectors grew slower, with the exception of oil and gas, which expanded production due to enhanced exports to Brazil. One should also note that the oil, gas and mineral sectors only account for about 10 per cent of Bolivia's GDP and less than 1 per cent of its employment, but more than 40 per cent of Bolivia's exports, so that the importance of these sectors for Bolivia's external position is much larger than its GDP share. Thus we find that Bolivia has a highly dualistic economy, with the most dynamic sectors being the oil and gas sector, industrial agriculture (concentrated in the lowlands) and some high-value service sectors, which are also highly capital-intensive with few linkages to the poor.

Clearly, Bolivia's economy suffers from considerable segmentation, with the poor being largely separated from the income-generating and growth processes that tend to favor urban areas as well as resource-based sectors and modernized agriculture. These divides relate primarily to a significant urban-rural divide, an ethnic divide, and a segmentation of the economy into a subsistence agricultural sector in the highlands and a resource-based economy in the valleys and lowlands. The urban-rural divide is largely due to large educational inequality, an uneven population distribution, poor infrastructure, a highly segmented urban formal labor market with few opportunities for outsiders of that market, and large inequalities in the education system. The ethnic divide overlaps considerably with the urban-rural divide but places further burdens on the indigenous populations who have fewer opportunities in the education system and the labor market.

These divides would be less important if it had been possible to ensure that productivity in highlands agriculture, the mainstay of incomes for many of the poor, had improved in past decades. But here, success has proved elusive for the majority of producers. Given the importance of highland agriculture for employment and incomes, the failure to improve productivity there is critical (e.g. Eastwood and Lipton 2001; Timmer 1997, Klasen 2004).¹⁰

4. The Poverty Impact of Macro Policies

Bolivia's macro and public expenditure approach to poverty reduction can be seen as closely following the World Bank's 1990 model for poverty reduction, which focused on developing a growth-oriented strategy and accompany it with investment in human resources and safety nets for the poor (World Bank 1990). Consequently, the growth agenda was largely seen as separate from a poverty-reduction agenda in the belief that high growth would ensure sufficient poverty reduction. This was to be aided by investment in human resources that could then allow for a participation of the poor in the growth process. For those who were left behind, safety nets (such as the Bolivian Social Fund and public works programs) should try to address this problem. While this approach worked as long as growth was satisfactory and there were increasing resources to be used for expanding social sector spending, it failed to sufficiently promote the productive activities of the poor and in addressing the large equity problems permeating Bolivia's society.

¹⁰ Given these divides, the generally pro-poor nature of growth (including in rural areas) seems surprising and has probably to do with favorable weather conditions, the coca economy, and some migration and remittance linkages. See Klasen et al. (2004) for more details.

The macro policy agenda was mainly one of stabilization and liberalization. One particular focus of macro policy was to ensure low and stable inflation and this has been achieved for the past 20 years (see Table 2). Given that inflation tends to hurt the poor disproportionately, this macro policy is likely to have supported poverty reduction. In addition, the external capital account was liberalized and a friendly foreign investment regime was established. While this allowed a significant increase in foreign direct investments throughout the 1990s (Schweickert et al. 2002, World Bank 2004a) the liberalization of the external capital account contributed to a further increase in dollarization of the economy which severely limited the room to maneuver as far as exchange rate policies are concerned. While the policy of allowing dollarization *per se* is neither pro- nor anti-poor, it increases the vulnerability of the economy to exchange rate shocks (such as the appreciation of the US\$, or the sharp devaluation of the Brazilian and Argentinian currencies as it occurred in the 1998-2001 period) which can hit the poor more as they are unable to shield themselves against such shocks. It also prevents Bolivia from using a strong devaluation to kick-start export-based growth as has been done in many other growth episodes in developing countries (Rodrik, 2003).¹¹ In addition, strong trade liberalization, while improving the allocative efficiency of Bolivia's economy, further undermined the ability of Bolivia to manage its external environment in ways to support poor producers, particularly in an environment of sharply fluctuating currency movements with its trading partners.

In the areas of fiscal and public expenditure policies, the pro-growth agenda initially dominated policy-making and fiscal policy aimed at low budget deficits, which was achieved through tax reforms, prudent expenditure policies, and divestiture from loss-making state-owned enterprises. Tax reforms largely focused on broadening the tax base through a value added tax and a transactions tax which together make up some 60% of tax revenues in 2002. A hydrocarbons tax is the only other significant tax generating about 18% of revenues (Servicio de Impuestos Internos 2003). As a result, there is no progressivity in the tax system, which could be achieved via an income tax on those employed in the formal sector, a serious tax on large land-holdings (also to facilitate the sale of underused land by large landowners) or other real estate, or significant surcharges for particular items mainly consumed by the non-poor.¹²

As long as growth was relatively high in the 1990s, and tax revenues continued to rise, the government was able to maintain relatively low budget deficits while at the same time ensuring rising expenditures for priority social sectors, such as health and education. Public expenditures as a share of GDP rose sharply in the 1990s, and also public capital expenditures were high by international standards (World Bank 2004a); excluding social security, Bolivia now devotes the second-highest share of its GDP to public social expenditures in all of Latin America (World Bank 2004c). This was also supported by generous aid flows and complemented by funds made available by HIPC I and II, with the latter being channeled entirely to the municipalities to fund priority investments, mostly in the social sectors and recently also in infrastructure.¹³

¹¹ Similarly, it was not possible to use exchange rate policies to affect the distribution of income through the use of a real depreciation that would favor poor export and import-competing producers at the expense of wealthier import-consuming parts of the population (see Klasen 2004).

¹² Such taxes could, however, face compliance problems in an economy where contraband is widely available and tax evasion is considerable (Delgadillo 2000). In 2003, a few taxes were changed to increase tax revenues but they did not seriously affect the progressivity of the tax system.

¹³ The World Bank Public Expenditure Report notes that from 1996 to 2001, 75-80% of municipal investment was in the social sectors, while in 2002 infrastructure received 34% with social sectors falling to 58% (World Bank 2004a). Investments in productive activities were always low and only amounted to 3-6% in the period.

Public expenditures in health, education, and infrastructure do reach the poor, although to varying degrees (World Bank 2004a, c). In particular, it is proportional in health, slightly pro-poor in primary education, but anti-poor for higher levels of education, infrastructure spending, and strongly anti-poor as far as the public pension system is concerned.

The ability to combine fiscal discipline with rising social expenditures collapsed in the late 1990s leading to ever-rising and now unsustainable budget deficits (reaching 9 percent of GDP in 2002). Three factors largely account for this deterioration (World Bank 2004a). First, tax revenues plummeted in line with the economic slowdown that began in 1999, while expenditures continued to rise. Second, a mismanaged pension reform led to much higher than anticipated costs. It is now costing 5 percent of GDP while providing benefits to only 2 percent of the population, most of them non-poor formal sector retirees in urban areas. Third, due to Bolivia's decentralization program and the dedication of HIPC funds to the municipalities, there is little central control or even information over expenditures at sub-national levels, thereby weakening the ability of the central government to maintain fiscal discipline.

The bargain that maintained economic growth and social stability in the 1990s and involved the continuation of an economic model fashioned on the Washington Consensus, while ensuring social stability through significant transfers to the social sectors, thus became unstuck. It appears that in a situation where inequality, social and ethnic tension are high, such a bargain proves unsustainable and extremely fragile. It has contributed to great opposition to the government, calls for populist reforms, and now has thrown the debate about the appropriate economic model wide open in the form of the constitutional assembly that will now address these issues.

5. Simulation of Past and Future Macro Policy Changes using a Dynamic CGE Model

To formally assess the impact of shocks and policies on pro-poor growth, we make use of a dynamic CGE model. The model has an overall neo-classical structure but with important structuralist features, particularly relating to a segmented labor market, credit rationing in the capital market, and the limited mobility of factors between sectors and household types.¹⁴ While the general approach in this section is to simulate forward-looking policies and focuses on the impact of shocks and policies on the ability to reduce poverty and inequality, we will also comment on the extent to which they are able to explain past performance in growth, inequality, and poverty reduction.

While assessing model results, two central characteristics of the model have to be kept in mind. First, economic growth is determined by changes in the endowments of the primary factors capital and labor as well as the efficiency with which these factors are used. As far as efficiency of using factors is concerned, the model assumes an exogenously given rate of TFP growth of 2 per cent per year.¹⁵ Thus all changes in the simulations will depend on changes in the primary factors capital and labor. The major driving forces of labor dynamics are population change, migration, the rate of labor productivity growth, and the change in human capital. Of these, the model only takes account of population changes, which are kept constant over simulations, and migration. The driving forces for capital accumulation are domestic savings and foreign capital inflows as well as relative returns on financial (domestic and foreign) and physical assets. Since net capital inflows are exogenously given in most

¹⁴ See Wiebelt (2004) for a detailed discussion of the model.

¹⁵ Two comments are in order. First, while the assumption of TFP growth of 2% is relatively high (slightly higher than was found for the 1990s), for an optimistic baseline scenario it appears realistic. Second, one may speculate that some of the policies proposed will have an impact on TFP growth. This is possible but there is very sparse literature on this subject, both in an international as well as in a Bolivian context. One might therefore speculate that the effects of some policies might be larger because of knock-on effects on TFP growth.

simulations¹⁶, differences in growth rates across simulations are the result of changes in total domestic savings.¹⁷ Second, the model assumes full employment for all types of labor and capital categories in each period of the simulation horizon. Hence, unlike other models for Bolivia that analyze short-run issues (e.g. Jemio 2001; Jemio and Wiebelt 2003; Thiele and Wiebelt 2004), this model neglects Keynesian multiplier effects that might result from changes in current and investment expenditures.¹⁸ Taken together, these two model characteristics imply that the model cannot be viewed as a short-run projections model and is not intended for that purpose. It is better suited to explain medium- to long-term trends and structural responses to changes in external conditions and development policy. But the problems facing pro-poor growth are inherently longer-run problems, and the model thus naturally reflects an emphasis on the long run rather than on the short run, on growth rather than stabilization, and on trends rather than cyclical variation.¹⁹

A scenario that describes how the Bolivian economy might evolve in the absence of shocks and policy changes serves as a benchmark against which all alternative developments will be evaluated. In this scenario, the economy exhibits smooth economic growth of about 4.7 percent on average over a ten-year period (Table 5)²⁰, where economic growth is driven by capital accumulation, (exogenous) growth of the labor force, and (exogenous) technical progress (2 percent TFP growth). This not only describes an optimistic forward-looking scenario, but is also a good description of the record of Bolivia in the 1990s. The growth process is associated with roughly constant domestic savings and investment ratios, which implies that the large savings gap is not closed over time. The continuing savings gap corresponds to a persistent current account deficit, and both are reflected in a fairly stable real exchange rate.

While total value added by sector barely changes over time, more pronounced shifts of resources are taking place within sectors. Within agriculture, for example, the more productive export-oriented segment gains at the expense of the traditional, subsistence-like segment. The same pattern prevails in the services sector, where higher productivity growth and a higher income elasticity of demand raise the provision of formal relative to informal services.

From a distributional point of view, the baseline scenario suggests that without further policy reforms and without external shocks the rise in urban inequality observed over the 1990s will continue, and that the rural-urban gap in income levels will widen. In addition, inequality within rural areas will also increase. In both urban and rural areas inequality is already at very high levels, which is why aggregate growth in Bolivia barely translates into poverty

¹⁶ Exceptions are the simulations of declining capital inflows, where capital inflows are changed exogenously, and of a devaluation, which changes the domestic currency value of capital inflows.

¹⁷ Domestic savings are the sum of savings by households, firms, and the government. Households are assumed to have a constant marginal propensity to save out of income, for firms (including banks) savings are determined residually by considering their revenues (sales and interest income) and their costs (inputs, labor, and interest costs), and for the state, savings is also determined residually, with revenues depending on the tax base and expenditures being based on fixed real consumption expenditures and investment expenditures which is in relation to GDP growth.

¹⁸ With the exception of some taxes and limited intersectoral mobility of certain factor categories, there is essentially no difference between the technologically feasible production possibility set and the resulting transformation set reflecting market behavior and institutional characteristics of the economy. All markets are cleared and overall output is almost fixed within individual periods.

¹⁹ This feature of the model also explains the rather small effects that are identified as the model is not intended to capture short-run demand-related changes in productivity and capacity utilization as well as structural shifts of the economy, both of which would probably lead to larger effects.

²⁰ See Klasen et al. (2004) for other poverty measures and inequality measures. It should be pointed out that the poverty gap often shows larger results than the poverty headcount, as has been the case in the past.

reduction. As the following figures indicate, this holds in particular for rural areas. In the course of the simulated 10-year period, the national headcount merely declines from 63.6 percent to 55.3 percent. The moderate reduction in poverty is a consequence of a decrease in the urban headcount from 49.7 percent to 38.9 percent, and a reduction in rural poverty of only 4 percentage points from 86.9 percent to 82.8 percent. Even under this optimistic scenario, Bolivia would just manage to reach its revised (and rather moderate) national poverty reduction target. Poverty reduction in rural areas falls short of the reduction projected in the PRSP, while urban poverty declines faster.

The next scenarios consider, more realistically, the effect of recurrent shocks for output (via El Niño), terms of trade, and capital flows. The model simulations show that El Niño lowers growth, increases poverty in rural areas directly and indirectly raises urban poverty. It also leads to higher inequality in both areas. Terms of Trade shocks, such as the 10-percent decrease in world market prices for agricultural and mineral products, differ from supply shocks, such as El Niño, in that they do not impair production capacities and thus do not lead to major output losses as long as the economy operates at or near full employment. They nevertheless increase rural poverty (particularly in the modern agricultural sector), and indirectly also negatively affect urban poverty. If foreign direct investment (FDI) falls by almost a third, as has been the case in Bolivia in the year 2000, this causes only about half the immediate output losses of El Niño, but the impact turns out to be much more persistent. Even after ten years, growth has not fully recovered and poverty increases substantially, particularly in urban areas.

All in all, a realistic baseline scenario for Bolivia's medium-run development prospects would have to acknowledge that under the current policy framework average growth rates are unlikely to lie markedly above 4 percent. Compared to the optimistic scenario, this implies worse prospects for poverty reduction. These simulations also are able to explain Bolivia's record in the 1990s where both favorable and unfavorable shocks of the type investigated here can well explain the growth and poverty experience then.

We now turn to simulations involving macroeconomic policies, the main focus of this analysis. One of Bolivia's biggest achievements since the beginning of reforms in 1985 has been the containment of inflation by means of prudent monetary, fiscal and exchange rate policies. It might be argued that now, with an internal equilibrium that is firmly established, the exchange rate could be used to improve the external competitiveness of the Bolivian economy and affect its income distribution, given that the Boliviano has always been quite strong (Schweickert et al. 2003).

A higher yearly devaluation of the Boliviano within the crawling peg regime causes an almost complete exchange rate pass-through to domestic prices, which will rise by nearly the same amount as the Boliviano is devalued as Bolivia's ability to respond to higher import prices with competitive import-substituting domestic production is quite limited.²¹ The resulting real devaluation is therefore too small to provide the incentives for a significant reallocation of resources, and the minor real adjustment that occurs has no discernible effect on aggregate economic performance. Real effects, however, originate from the financial side of the economy, which is strongly and directly affected by the devaluation. This is because in the highly dollarized Bolivian economy the value of most assets and liabilities is indexed to the Dollar exchange rate. As a consequence, the net wealth position of net creditors in the financial system improves, while that of net debtors worsens. Since the economy as a whole – in particular the government – is a strong net foreign debtor, the overall wealth effect of the

²¹ During recessions such as the current one, when capacities are underutilized, the pass-through will of course be lower, but the question here is whether the exchange rate can contribute to improve Bolivia's competitiveness in the medium run.

devaluation is negative. The deterioration of the domestic wealth position leads to a drop in aggregate real investment and a fall in the growth rate, which accelerates over time due to a compound interest effect. Among the household groups, the two richest, employers and employees are the only major actors on financial markets. Both are net creditors and thus benefit from higher net wealth and interest income, i.e. the revaluation of assets caused by the devaluation tends to reinforce existing wealth disparities. All other household groups are adversely affected by the negative growth effect. Unskilled workers and urban informals are most severely hurt because many of them are employed in the construction sector where production growth is lower because of lower real investment demand. As a consequence, urban inequality increases and urban poverty rises somewhat more than rural poverty. Thus such a policy would be counter-productive and poverty-increasing in the current environment of near complete pass-through to domestic prices, high dollarization, and large foreign debt. Conversely, tackling any of these three constraints successfully could change the assessment of such a policy considerably. In fact, in follow-up work using the CGE model, the impact of a nominal devaluation in the absence of dollarization is analyzed (Schweickert et al. 2005). The simulations show that in the absence of dollarization, the ability to effect a real depreciation through a nominal devaluation is much enhanced, allowing Bolivia to more effectively combat the impact of external shocks and actually use devaluation as a policy to stimulate GDP growth, as has been done in many other developing countries to kick-start a growth spurt (see Rodrik, 2003).

In the current dollarized environment, a real devaluation can be achieved only if the Central Bank conducts a restrictive monetary policy. By constraining the opportunities of private banks to supply credit, such a policy temporarily lowers aggregate real investment demand and thereby exerts downward pressure on the domestic price level. The drop in real investment, in turn, causes a temporary economic slowdown.²² While the investment slowdown makes non-agricultural workers, in particular construction workers, slightly less well off, the real depreciation entails minor losses for urban informals and minor gains for rural households. After the short-run adjustments, the economy soon shifts back to the old growth path, and household incomes evolve largely as in the base run. All in all, the negative impact on poor households often attributed to real devaluations is unlikely to occur in Bolivia, but clearly, such a policy does little to promote pro-poor growth, thereby highlighting the bind Bolivia is in regarding its ability to use monetary and exchange rate policies to further pro-poor growth.

By Latin American standards, Bolivia has also made remarkable progress in the area of structural reforms (see, e.g., Lora 2001). The main exception is labor market reform, where Bolivia lags behind most other Latin American countries. Among the labor market distortions that still prevail, the segmentation of the urban labor market into formal and informal parts stands out. The tax system is another area where further reforms may be warranted. In particular, the question arises of whether the income tax, which hitherto has been of only marginal importance, should become a major source of government revenues.

If the government makes it easier for urban informals to be employed as unskilled workers in the formal labor market, e.g. by lowering the costs of dismissal or by granting more options for temporary work, the obvious direct effect is that average real wages fall for unskilled workers and go up for urban informals. Better earning opportunities in the urban informal sector, in turn, induce rural-urban migration on a significant scale, which moderately increases the incomes of those who stay in traditional agriculture. At the macro level, the

²² Specifically, it has a contractionary impact on capital-intensive sectors and on the sectors providing capital goods. This effect dominates the restructuring of production resulting from the real devaluation, which brings about an improvement of the current account. Household incomes are only moderately affected by these adjustments.

efficiency gains achieved by reducing labor market segmentation – the wage differential between informal labor and unskilled labor is roughly halved – translate into average economic growth rates which are more than 0.3 percentage points higher than in the base run.

Table 5: The Impact of Shocks and Policies on Growth and Poverty

	Average Growth (%)	National ^a Headcount	Urban ^a Headcount	Rural ^a Headcount
Baseline Scenario	4.7	55.3	38.9	82.8
Terms-of-Trade Shock	4.7	55.6	39.1	83.3
El Niño	4.4	56.3	39.7	84.1
Declining Capital Inflows	4.4	56.3	40.3	83.3
Nominal Devaluation	4.5	56.7	40.4	83.9
Real Devaluation (restrictive monetary policy)	4.7	54.8	38.1	82.9
Labor Market Reform	5.0	54.4	37.4	82.8
Tax Reform (revenue-neutral)	5.0	53.9	37.0	82.4

^aRatio at the end of the 10-year simulation period. Please note that the initial poverty headcounts are: 63.6% national, 49.7% urban, and 86.9% rural.

Source: Klasen et al. (2004).

Urban poverty decreases because of higher growth, but it takes some periods for the positive growth effect to materialize. The rural income distribution changes somewhat in favor of poorer groups due to the gains experienced by smallholders. This change and a slight increase in rural growth do not show up in the poverty headcount, but the rural poverty gap falls moderately (see Klasen et al., 2004 for details).

Next, we consider tax reform, particularly a switch to a more progressive tax regime based on income taxes. If higher income taxes are combined with lower indirect taxes so as to arrive at a revenue-neutral tax reform, the economy-wide outcome is quite positive. Lower indirect tax rates cause an expansion of capital-intensive industries (oil and gas, mining, intermediate goods), where the indirect tax burden is highest, and thus boost investment and growth. Overall, given the current tax structure, a revenue-neutral tax reform can be expected to improve Bolivia's growth performance. As for household incomes, the decrease in indirect taxes raises private consumption expenditures, thereby offsetting the negative demand effect that higher income taxes have on smallholders and urban informals. The main beneficiaries of the reform are non-agricultural workers, many of whom work in the mining and the intermediate goods sector, as well as in construction, which benefits from higher investment demand. The expansion of the construction sector additionally favors urban informals so that on balance their incomes are also significantly higher than in the base run. The gains of these two groups reduce the urban headcount ratio by up to 2 percentage points, and even rural poverty falls a little due to the growth effect.

To summarize the findings from the policy simulations, a few points are worth noting. First, one can nicely see how the evolution of poverty and growth in urban areas has varied with external shocks in the 1990s. Rural development has been more dependent on climatic conditions, and the lack of private and public capital. The failure to implement labor market reforms appears to have held back growth and urban poverty reduction. A deregulation of the

urban labor market would also have had a positive if limited impact on rural incomes by providing an incentive for additional rural-urban migration.²³

Looking forward, one can draw conclusions about the policy options for pro-poor growth as well as the constraints of Bolivia's economy that the model analysis has served to highlight. Turning to the former issue, the main conclusion to be drawn from the model analysis is that, currently, the opportunities for achieving pro-poor growth are much better in urban than in rural areas. Given the available policy choices, Bolivia could clearly exceed the targets for urban poverty reduction set in the revised PRSP. Rural poverty reduction, by contrast, risks falling short of the targets due to a combination of recurrent external shocks and limited policy options.²⁴

Turning to the issue of constraints, the analysis has clearly shown significant structural weaknesses of Bolivia's economy that also need to be addressed in order to accelerate pro-poor growth. A critical weakness is Bolivia's low domestic savings rate, which contributes to Bolivia's reliance on foreign capital inflows, the high degree of dollarization, its high foreign debt, its vulnerability to external shocks, and its inability to manage its external trade and monetary environment to support pro-poor growth. A related second weakness is Bolivia's high dependence on natural resources which have few linkages to the poor, but can have significant anti-poor effects. Third, Bolivia's economy exhibits such a great degree of dualism that well-managed policies to generate higher growth do not reach the poor in rural areas or have little impact on their poverty. Lastly, Bolivia's high initial inequality militates against success in poverty reduction, particularly in rural areas. While the policy packages discussed above can help with pro-poor growth, only success in tackling these four deep-seated issues will enable Bolivia to enter a sustainable path towards higher growth and poverty reduction.

5. Conclusion and Policy Implications

After this rather detailed discussion of Bolivia's record and options to use macroeconomic policies to further pro-poor growth, it is useful to briefly summarize what we have learned about the Bolivian case and what, if anything, it tells us about the ability of macro policy to further a pro-poor growth agenda more generally.

I believe the following key lessons emerge from the Bolivia case, many of which are closely related to the issues discussed in Table 1 above about lessons of pro-poor macro policy-making from elsewhere. First, macro stability has been a pre-requisite for pro-poor growth.²⁵ The stabilization after the hyperinflation in 1985 and the structural macro reforms that ensured low inflation and low fiscal deficits since the late 1980s have been critical in setting the stage for the sustained growth experience of the 1990s. Second, the much more thorough structural reforms in the trade and investment regime, in privatization and financial sector reform also helped to sustain growth in the 1990s. At the same time, they did little to address Bolivia's biggest structural weakness, its low domestic savings rate and the resulting high dependence on external capital. Also, the structural reforms further increased the

²³ There are indications that the model underestimates the response of migration to changes in wage differentials. Additional empirical research is needed to see whether the modeling of migration assumes the right amount of adjustment compared to actual migration patterns in Bolivia.

²⁴ In Klasen et al. (2004) the expansion of natural gas exports is also investigated as a potential means to higher growth and would indeed deliver higher growth, particularly if combined with labor market and tax reforms and if the proceeds were channeled into investment (rather than consumption). But due to Dutch disease effects and their capital-intensive and enclave nature, such an expansion would bypass rural areas and significantly increase inequality. Only a coordinated policy package combining higher gas exports with targeted transfer programs and other pro-poor interventions would allow Bolivia to achieve higher pro-poor growth and allow significant poverty reduction, also in rural areas.

²⁵ For an investigation of the impact of macro stability on pro-poor growth, see Lopez (2005).

vulnerability to external shocks which are the key driver of growth in the last 20 years. In particular, the very open trade regime, the dollarization, and the openness of the capital account were critical elements in increasing the external vulnerability of the economy. While a favorable external environment boosted growth and FDI in the 1990s (and again in the last year), the growth slowdown in the late 1990s was also largely driven by external events. Third, this approach to policy making has severely circumscribed the options for active macro management, particularly in the area of exchange rate and monetary policy. In particular, dollarization and the open capital account prevents a monetary policy that could either be used to counteract external shocks or to kick-start an export-led growth process.

Fourth, the growth associated with the structural reforms did little to address the large inequalities in Bolivia and the recent slowdown has hurt the poor (particularly the urban poor) considerably. Thus this approach to macro policy-making proved to be insufficient for achieving sustained pro-poor growth. Fifth, the approach policy-making which combined Washington Consensus policies in the macro arena with strong expansion in social sector investments is only a viable option for pro-poor growth if the macro policies deliver sustained growth over the longer term. Due to the external vulnerability of that growth, this was not possible in Bolivia and thus the approach to address poverty and inequality through social spending is no longer a viable option. This also calls into question the type of policy package that was proposed by the World Bank in its 1990 WDR which promoted such a policy package, not only in Bolivia but all over the developing world.

While it is fairly easy to arrive at these conclusions about the short-comings of this macro policy approach, it is considerably harder to come up with a policy package that would avoid these short-comings. In particular, many of the constraints to developing a pro-poor growth agenda cannot be addressed by macro policy. This is so for several reasons. First, the deep-seated inequalities in the economic, political, and social sphere cannot wait for positive distributional consequences of better macro policies that would materialize in the medium to long-term. In fact, in the current political environment, it is very hard to have a frank discussion about medium- to long-term pro poor growth strategies at all. Addressing these inequalities in the economic, social, and political dimension now must enjoy high priority. As discussed in Klasen et al. (2004), among the issues to consider are land reform, tax reform, and (conditional?) transfer programs. Similarly, further political, constitutional, and governance reform might be necessary. Secondly, many of the constraints for pro-poor growth are less related to policies, but to their insufficient and distorted implementation. As discussion in detail in Klasen et al. (2004) as well as Kaufman et al. (2003), severe governance problems have undermined otherwise well-intentioned pro-poor policy approaches such as decentralization, the national dialogue and PRSP process, and the implementation of agrarian reform. Third, Bolivia's unfavorable initial conditions reduce its options for pro-poor policy-making. Particularly being a small land-locked economy with poor infrastructure and a highly uneven population distribution is likely to reduce the returns to any pro-poor growth agenda considerably.

Nevertheless, it would be useful to point out a few macro policy issues that ought to be considered as part of a pro-poor policy agenda. In order to address the domestic savings and external vulnerability constraint, a combination of policy measures ought to be considered. First, at the international level the question should be re-opened whether debt relief in the case of Bolivia was deep enough. After several years of low growth, the foreign debt burden is high, putting pressure on the fiscal side and sharply curtailing any room for devaluations to improve the competitiveness of Bolivia's economy. Fortunately, Bolivia looks set to be a beneficiary of the new round of debt relief agreed to by G8 leaders recently.

Second, measures to raise the domestic savings should be strengthened. They should include both institutional strengthening of the financial sector, particularly the availability of reliable

savings institutions also in small towns and rural areas, policies to expand the coverage of the new fully-funded pension system (which currently covers only about 10% of workers, see World Bank 2004c), policies to shield savings from the risks of inflation (through index-linked products and possibly a complete indexation of the economy), and policies to promote public savings (through limiting obligations on the pension system, savings proceeds from the gas project, and further debt relief or an increasing share of grant aid). Third, measures to reduce dollarization should be pursued more vigorously to increase the ability of the monetary authorities to engage in pro-poor monetary policies.²⁶ The results here as well as those of Schweickert et al (2005) show that such a policy could enable to government to manage its exchange rate in support of a pro-poor growth agenda. Given the by now long record of low inflation, it should be in the interest of the government to begin pushing back the dollarization of its economy. This could be done via a set of incentives such as the recently passed financial transactions tax which is only levied on \$-denominated transactions, differential reserve requirements for \$ versus Boliviano denominated assets, and a push to popularize inflation-indexed securities as the main form of issuing government debt.

Once dollarization and the associated external vulnerability have been reduced, a much more active management of the exchange rate would become possible to promote international competitiveness and also address distributional issues. In fact, a once-off devaluation to promote international competitiveness and boost outward-oriented growth ought to be seriously considered. To maintain this flexibility, controls on capital inflows might be needed to ensure that they do not destabilize the currency and financial markets. Should Bolivia increase its exports of natural gas as envisaged, management of the exchange rate through sterilization policies would be critical to limit Dutch disease effects.

Lastly, Bolivia will need to work on diversifying its export base considerably to achieve sustained pro poor growth. In order to do this, a much more active export promotion strategy would be needed to particularly develop high-value niche export articles. The currently considered *cadenas productivas* (see Klasen et al. 2004) initiative is a good start but should be strengthened by more and more strategic incentives to promote non-traditional exports.

Such a policy package might be in a better position to support pro-poor growth in Bolivia. But as stated above, macro policy alone will not be able to deliver pro-poor growth on its own.

References

- AfD, BMZ, DFID, GTZ, KfW, World Bank. 2005. *Pro Poor Growth in the 1990s: Lessons and Insights from 14 countries*. Washington DC: The World Bank.
- Bourguignon, F. (2003). The Growth Elasticity of Poverty Reduction. In T. Eicher and S. Turnovsky: *Inequality and Growth*. Cambridge: MIT Press.
- Deininger, K., and L. Squire. 1998. New Ways of Looking at Old Issues: Inequality and Growth. *Journal of Development Economics* 57(2): 259–287.
- Delgadillo, M. .2000. *Es bueno el sistema tributario en Bolivia?* La Paz: UDAPE.

²⁶ Success with de-dollarization would also help boost domestic savings in times of external shocks or devaluations as both firms and the government would not be hit with higher \$-denominated interest payments and thus could save more.

- DHS (Demographic and Health Survey). 2003. *Bolivia*. Enquesta Nacional de Demografía y Salud. INE and MSD. Informe Preliminar.
- Eastwood R., and M. Lipton. 2000. Pro-Poor Growth and Pro-Growth Poverty Reduction: Meaning, Evidence, and Policy Implications. *Asian Development Review* 18(2): 1–37.
- IMF. 2003. Bolivia- Selected Issues and Statistical Appendix. IMF Country Report No 03/258. Washington DC: IMF.
- INE (various issues). Información Estadística. Online Data Base. Instituto Nacional de Estadística. <http://www.ine.gov.bo>.
- Jemio, L.C. 2001. *Debt , Crisis and Reform in Bolivia: Biting the Bullet*. Basingstoke: Palgrave in association with Institute of Social Studies.
- Jemio, L.C., and M. Wiebelt. 2003. ¿Existe Espacio para Políticas Anti-Shocks en Bolivia? Lecciones de un Análisis basado en un Modelo de Equilibrio General Computable (with L.C. Jemio). *Revista Latino Americana de Desarrollo Económico* 1(1), 2003, pp. 37-68.
- Jiménez, W., and F. Landa (2004). ¿Bolivia Tuvo un Crecimiento “Pro-Pobre” entre los Años 1993 y 2002?. UDAPE. La Paz.
- Kakwani, N. and E.M. Pernia. 2000. What is Pro-poor Growth? *Asian Development Review* 18 (1): 1-16.
- Kaufmann, D. M. Mastruzzi, and D. Zavaleta. 2003. Sustained Macroeconomic Reforms, Tepid Growth: A Governance Puzzle for Bolivia? In. Rodrik, D. (ed.) *In Search for Prosperity*. Princeton: Princeton University Press.
- Klasen, S. 2004. In Search of the Holy Grail. How to Achieve Pro-poor Growth. In: B. Tungodden, N. Stern, and I. Kolstad (eds.), *Towards Pro-poor Policies: Aid, Institutions, and Globalization*. New York: Oxford University Press.
- Klasen, S. 2005. *Economic Growth and Poverty Reduction*. OECD Development Center Working Paper No. 246. Paris: OECD.
- Klasen, S., M. Grosse, J. Lay, J. Spatz, R. Thiele, and M. Wiebelt. 2004. Operationalizing Pro Poor Growth: Country Case Study Bolivia. Discussion Paper No. 101. Göttingen: Ibero-America Institute for Economic Research.
- Lopez H. 2005. Pro-Poor Growth: How Important is Macroeconomic Stability? Mimeographed. Washington DC: The World Bank.
- Lora, E. (2001). Structural Reforms in Latin America: What Has Been Reformed and How to Measure it. Inter-American Development Bank, Research Department, Working Paper 466.
- Ravallion, M., and S. Chen. 2003. Measuring Pro-poor Growth. *Economics Letters* 78(1): 93–99.
- Ravallion, M. and G. Datt. 2002. Why has economic growth been more pro-poor in some states of India than others? *Journal of Development Economics* 68:381-400.
- Rodrik, D. 2003. *Growth Strategies*. NBER Working Paper 10050. Cambridge: NBER.

- Sachs, J.D., and F.B. Larraín. 1998. Bolivia 1985-1992: Reforms, Results, and Challenges. In: H. Costin (ed.), *Economic Reform in Latin America*. Fort Worth.
- Schweickert, R., R. Thiele, and M. Wiebelt. 2003. Makroökonomische Reformen und Armutsbekämpfung in Bolivien: Ebnet die HIPC-Initiative den Weg zu sozialverträglicher Anpassung? Kiel Discussion Papers 398. Institute for World Economics, Kiel.
- Schweickert, R., R. Thiele, and M. Wiebelt. 2005. Exchange Rate Policy in a Dollarized Economy: A CGE Analysis for Bolivia. Paper presented at Conference on 'Poverty, Inequality, and Policy in Latin America', Göttingen July 14-16, 2005.
- Servicio de Impuestos Internos. 2003. *Recaudacion renta interna por tipo de impuestos*. La Paz.
- Thiele, R., and M. Wiebelt. 2004. Growth, Poverty, and Income Distribution in Bolivia: A Regional and Sectoral Perspective (with R. Thiele). In M. Krakowski (ed.), *Attacking Poverty: What makes growth pro-poor?* HWWA Studies 75, Baden-Baden: Nomos.
- Timmer, P. 1997. The Agricultural Transformation. In H. Chenery and T. N. Srinivasan (eds.), *Handbook of Development Economics*, Vol. 1. Amsterdam: North-Holland.
- UDAPE (various issues). Dossier de Estadísticas Sociales y Económicas de Bolivia. Unidad de Análisis de Políticas Sociales y Económicas. La Paz.
- Wiebelt, M. 2004. GEMPIA – A Dynamic Real-Financial General Equilibrium Model for Poverty Impact Analysis. Kiel Working Papers (in print). Institute for World Economics, Kiel.
- World Bank. 1990. *World Development Report*. Washington, D.C.
- World Bank. 2000. *World Development Report*. Washington, D.C.
- World Bank. 2003. *World Development Indicators*. CD-ROM, World Bank, Washington, D.C.
- World Bank. 2004a. *Bolivia: Public Expenditure Management for Fiscal Sustainability and Equitable and Efficient Public Services*. Report 28519-Bo. Washington, DC: The World Bank.
- World Bank. 2004b. *Bolivia Poverty Assessment: Establishing the Basis for more Pro Poor Growth*. Report No. 28068-Bo. Washington DC: The World Bank.
- World Bank. 2004c. *Social Expenditure and its Relation to Poverty and Equity in Bolivia. Poverty and Social Impact Analysis*. La Paz: World Bank.