Bolivia

Case Study for the MDG Gap Task Force Report

May 2010

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* Disclaimer: The views presented in this paper are those of the author and do not necessarily represent the views of UN DESA. This draft was led by Massimiliano Calì and Luis Carlos Jemio and further includes inputs by Jodie Keane, Jane Kennan and Isabella Massa.

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1. Introduction

Bolivia has historically been one of the poorest countries in Latin America, with high incidence of poverty and a fairly dismal record in terms of social indicators. Such a poor record has been mainly explained along ethnic and geographical lines, with poverty and underdevelopment concentrated among the indigenous populations and the highland areas. In this context, reaching the Millennium Development Goals (MDGs) set in 1990 is a particularly important challenge for the country. Reducing (extreme) poverty by half would imply lifting a large chunk of the population out of poverty. Similarly sizable leaps forward were required when the targets were set in 1990 to immunise all children against measles and malaria and achieve universal primary education.

Advances in the attainment of the MDGs required a robust period of economic performance accompanied by a major focus on social spending. Riding on high international prices for its major exports (hydrocarbons and mining), and on fiscal expansion, remittances and debt forgiveness, Bolivia has experienced solid economic performance in the past few years. This has also allowed the country to emerge from the recent global downturn in relatively good shape, having not suffered major negative impacts as a result of the crisis. Moreover, the government has recently increased its social public expenditures, disposing of more resources (mainly from hydrocarbon revenues) and increasing the share of public spending to the social sector. These positive developments have increased the likelihood that the country will achieve the majority of the MDGs by 2015. For those on which Bolivia seems to be off track, we have tried to identify some indicative levels with regard to the financial resources gap to fill, building on recent work by Vos et al. (2009).

This review is matched by an analysis of the most important external flows which could help the country fill the financial gap, i.e. trade, debt and official development assistance (ODA). These represent the core flows underlying MDG 8. Section 3 will describe such flows and provide some evidence that the role of external actors in accompanying the country's efforts towards MDG achievement has somewhat lots prominence as the country has shifted from external dependence to domestic resource mobilisation. A major driver of the shift has been the increased reliance on trade – through revenues from hydrocarbon exports – which has largely replaced the role played by debt forgiveness and ODA in financing social spending.

In light of this scenario and of its possible evolution, we identify some ways in which the international community could be instrumental to accompanying the process of MDG achievements in Bolivia in line with the fulfilment of MDG 8.

2. Context and progress in reaching MDGs

2.1 Overall macroeconomic context

During the first half of the decade, Bolivia suffered the effects of the international economic crisis, characterised by a slowdown in economic growth, increased unemployment, large fiscal imbalances and an acute process of credit crunch in the banking system. Acute shortages of resources prevented the government from implementing countercyclical policies aimed at boosting aggregate demand and activity and at ameliorating the negative effects of the crisis on the most vulnerable segments of society.

Starting from 2006, however, the country began to benefit from an extraordinary international economic environment. The prices of the main commodities exported by Bolivia, such as hydrocarbons and minerals, experienced significant increases in world markets. As a result, Bolivia's export revenues went up from $2.2 billion in 2004 to $6.8 billion in 2008. Hydrocarbon exports jumped from $851 million to $3.5 billion in the same years. This significant boost, coupled with an increase in the royalty rate paid on hydrocarbon production, which was approved in the new Hydrocarbon Law of 2005, represented a major increase in fiscal revenues. Moreover, Bolivia benefited from a significant reduction in its external public debt, under the G8 initiative. Between 2005 and 2008, the public external debt that Bolivia owed to multilateral organisations such as the International Monetary Fund (IMF), the World Bank and the Inter-American Development Bank (IADB) was reduced by $ 2.9 billion, equivalent to 64% of the stock of public debt Bolivia owed to multilateral institutions at the end of 2004. Furthermore, remittances by Bolivian nationals who had migrated abroad experienced an increase, jumping from $169 million in 2004 to $1.1 billion in 2008. This had a significant impact on Bolivian households' incomes, which in turn contributed to reducing poverty incidence.

As a result of all these positive shocks and events, Bolivia's fiscal position improved considerably. The consolidated fiscal balance presented surpluses averaging 3% of gross domestic product (GDP) between 2006 and 2008. The Bolivian government for the first time counted on sufficient resources to implement social policies that could eventually have a significant impact in terms of poverty reduction, and that would bring Bolivia on track towards the MDGs.

The outbreak of the global financial crisis in 2008 found Bolivia in a relatively strong position to cope with the negative effects of the crisis (Jemio and Nina, 2010). The crisis reduced growth but Bolivia still presented a positive growth rate in 2009. Fiscal revenues went down, without causing a fiscal imbalance. The positive fiscal position allowed the government to implement countercyclical policies in order to offset the negative effects of the crisis on the poorest segments of the society. Thus, the crisis did not have a considerable negative impact in terms of bringing Bolivia off its track towards achieving the MDGs (see Box 1 for more details).

This section discusses how Bolivia has performed in terms of attaining each of the MDGs over time and how economic cycles have affected the effectiveness of policies aimed at attaining the MDGs.

Box 1: Bolivia and the global financial crisis

The global financial crisis has had an adverse effect on the Bolivian economy through external shocks that have transmitted into the economy by means of several channels and mechanisms. Commodity export prices have reduced significantly, causing a drop in export incomes, fiscal revenues and economic activity. However, the crisis has had a limited effect on the Bolivian economy. Since the outbreak of the crisis, Bolivia has managed to keep the macroeconomic equilibria and a comfortable level of foreign exchange reserves. Inflation has been brought down from the high levels observed in 2007 and 2008. Bank deposits have steadily increased despite the very negative levels of the real interest rates. Bank lending increased as well albeit at a much slower pace. Growth rates dropped, but stood at positive levels. The Government has

undertaken counter-cyclical policies in order to ameliorate the negative effects of the external shocks. Besides, commodity price drops have been only temporal, because they have tended to recover after the initial reduction took place. This occurred in the case of hydrocarbons and mining sectors. Although commodity prices have not returned to the pre-crisis levels, they are still very high if compared with the levels existing in 2004.

Main macroeconomic indicators

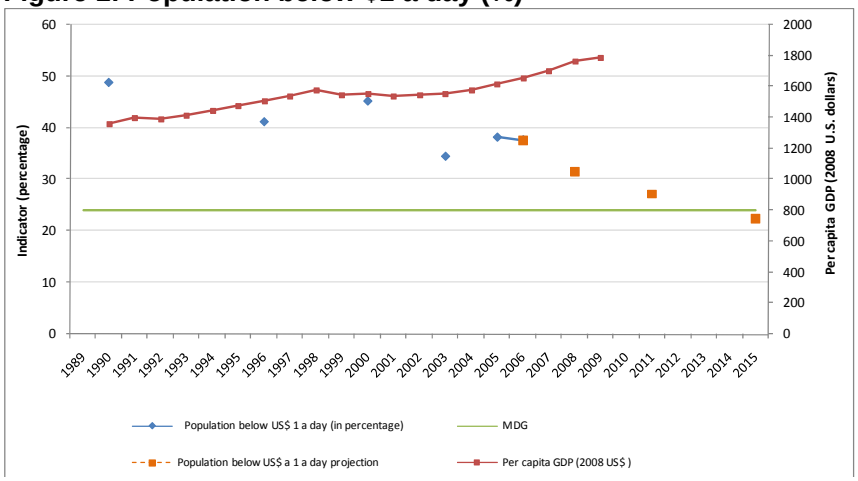
	2004	2008	2009
GDP Growth	4.2	6.1	3.3
Exports (Billion US$)	2.2	6.4	4.8
Current Account Balance (% of GDP)	3.9	12.0	3.5
International Reserves (Billion US$)	1.1	7.7	8.8
Fiscal Balance (% of GDP)	-5.6	2.8	0.1
Total Government Expenditures (% pf GDP)	32.6	36.5	32.6
MDG Related Government Expenditures (% pf GDP)	12.5	13.8	14.0
External Public Debt (Billion US$)	5.0	2.5	2.8

2.2 Progress on reaching the MDGs in Bolivia

Goal 1: Eradicate extreme poverty and hunger

The MDG of eradicating poverty and hunger is closely related to economic activity and to economic cycles. The economic crisis witnessed at the beginning of the decade had a negative effect on employment and income. Despite this, during the period Bolivia managed to make some progress in terms of reducing poverty incidence. Moderate poverty incidence, at the national level, reduced from 66.4% in 2000 to 60.6% in 2005. Extreme poverty incidence, on the other hand, went down from 45.1% to 38.2% during the same period. The downward trend followed by the index of extreme poverty incidence continued during the second half of the decade. Extreme poverty incidence went down from 38.2% in 2005 to 31.8% in 2009 (Figure 1).

Figure 1: Population below $1 a day (%)



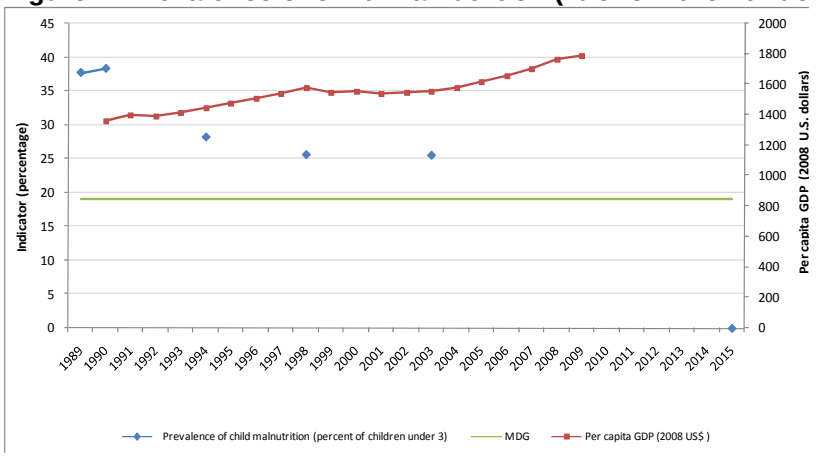
Source: UDAPE (various years).

Clearly Bolivia is on track towards attaining the target of halving, between 1990 and 2015, the proportion of people whose income is less than $1 a day. The MDG target is to reduce extreme poverty incidence to 24.1% by 2015. Government projections estimate that by that year extreme poverty incidence will be reduced to 22.3%. Bolivia is also close to attaining the target of reducing the prevalence of child malnutrition of children under three to 19% by 2015. However, this index remained practically constant at 25% during the 1990s, and thus a significant effort needs to be made in order to attain the MDG target (Figure 2). In recent years, the government has taken

significant steps to reduce poverty and improve social safety nets. Various government agencies are implementing a number of social programmes aimed at reducing poverty. Among them is the extreme poverty eradication programme Plan Vida, featuring a phased approach with an initial focus on the poorest geographic areas. In addition, various cash transfers have become an important component of social policies, including the Renta Dignidad, a universal pension introduced in 2008 – replacing and augmenting the former Bonosol – for all Bolivians aged 60 and above, equivalent to about $340 per year, with reduced benefits for those receiving any other pension. It is financed by a fixed share of the special hydrocarbon tax (IDH), with contributions from all levels of government.

The authorities report that social policies are yielding important results, including a reduction in extreme poverty of 4.8 percentage points in 2008 (especially in rural areas).

Figure 2: Prevalence of child malnutrition (% of children under 3)



Source: UDAPE (various years).

Goal 2: Achieve universal primary education

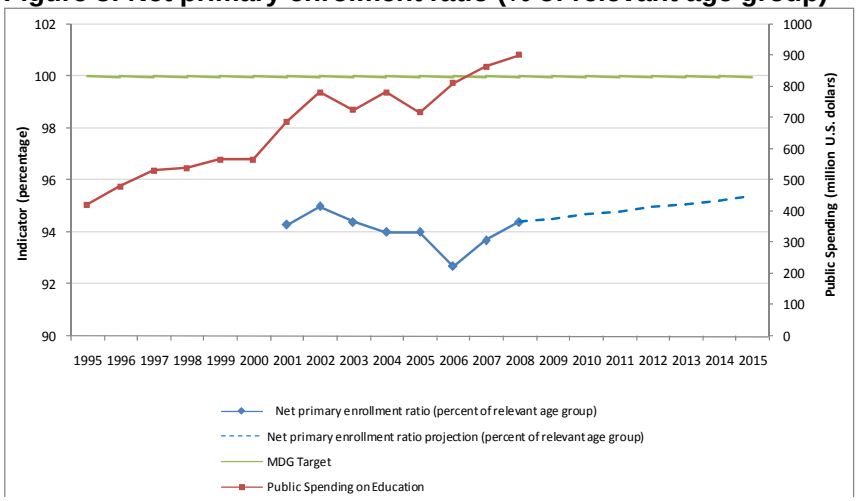
Available data suggest that Bolivia is off track in attaining the education goal of achieving universal primary education. During the 2000s, Bolivia has not made significant progress in terms of ensuring that, by 2015, children will be able to complete a full course of primary schooling. The net primary enrolment ratio has practically remained constant, at 94% during the whole period 2001-2008 (Figure 3). This generates some concerns regarding the feasibility of attaining the country's target of 100% primary school enrolment by 2015. As Vos et al. (2008) have pointed out, the main challenge for Bolivia is to keep children in school and to improve the internal efficiency of the primary schooling system by reducing both repetition and dropout rates.

However, owing to the fiscal revenue boom experienced in recent years, Bolivia is in a much better position to conduct a more aggressive policy aimed at approaching this and other MDGs. Government has already significantly increased its spending on education, which went up at an annual average real rate of 7.9%, during the period 2006-2008. The much larger quantities of resources devoted to education have not yet produced significant results in terms of MDGs achievements, but they are expected to contribute to this end in the following years. However, it is necessary to improve efficiency and effectiveness in the way these enlarged resources are being spent.

Furthermore, it is important to consider that the amount of marginal public spending that is necessary to achieve the MDGs towards the end of the period is larger as the goal is already closer to being achieved.

The Bono Juancito Pinto was established in 2007 as a conditional cash transfer programme aiming to reduce school dropout rates by offering an annual cash transfer equivalent to about $30 for all children attending public primary schools. This could greatly contribute towards improving Bolivia's performance on this particular MDG. Authorities report a decline in school dropout rates from 5.2% to 2.8% following the introduction of the Bono Juancito Pinto and a reduction in the illiteracy rate.

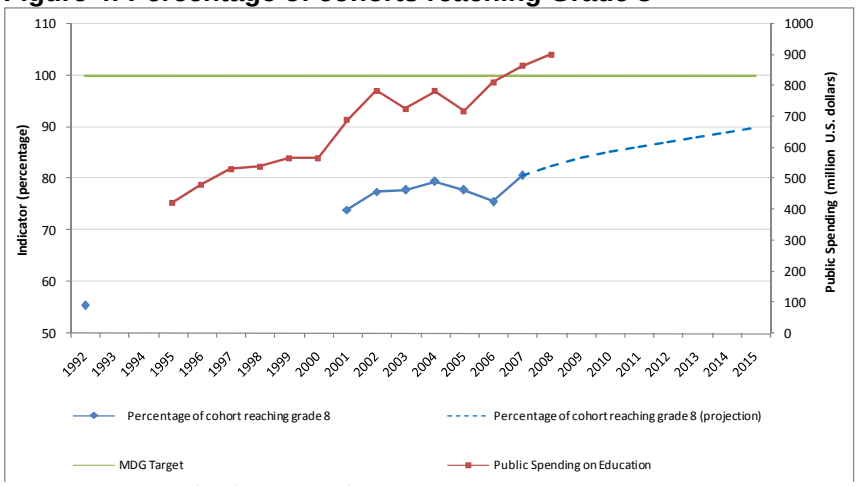
Figure 3: Net primary enrolment ratio (% of relevant age group)



Source: UDAPE (various years).

As discussed above, Bolivia seems to be off target in terms of attaining the full net primary enrolment target. Thus, the target of reaching the primary school completion target of 100% by the year 2015 will be even more difficult to attain. The percentage of cohorts reaching Grade 8 increased from 74% in 2001 to 79.5% in 2004. It decreased to 77.8% in 2005 and to 75.6% in 2006 (Figure 4).

Figure 4: Percentage of cohorts reaching Grade 8

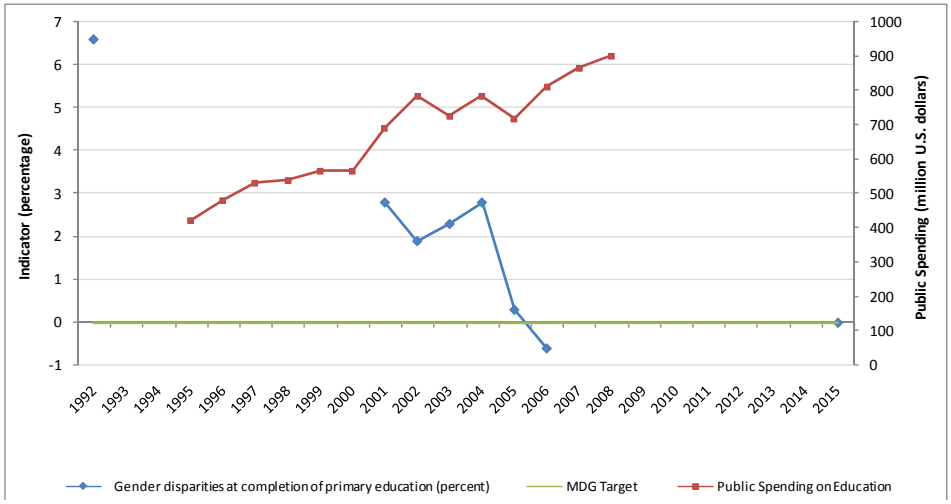


Source: UDAPE (various years).

Goal 3: Promote gender equality and empower women

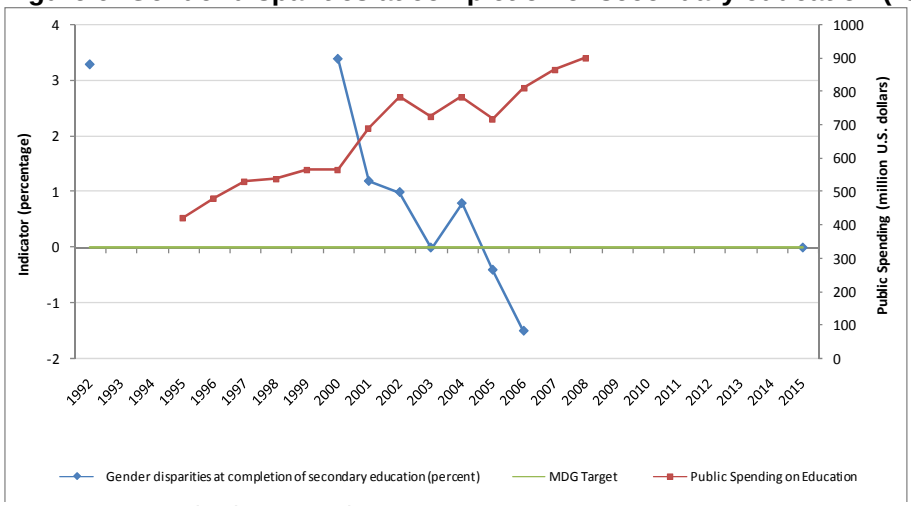
The target of gender equality and empowering women has been already attained. Target 4, on eliminating gender disparity in primary and secondary education, preferably by 2005, and at all levels of education by 2015, was attained in 2006 and 2005, respectively (Figures 5 and 6).

Figure 5: Gender disparities at completion of primary education (%)



Source: UDAPE (various years).

Figure 6: Gender disparities at completion of secondary education (%)



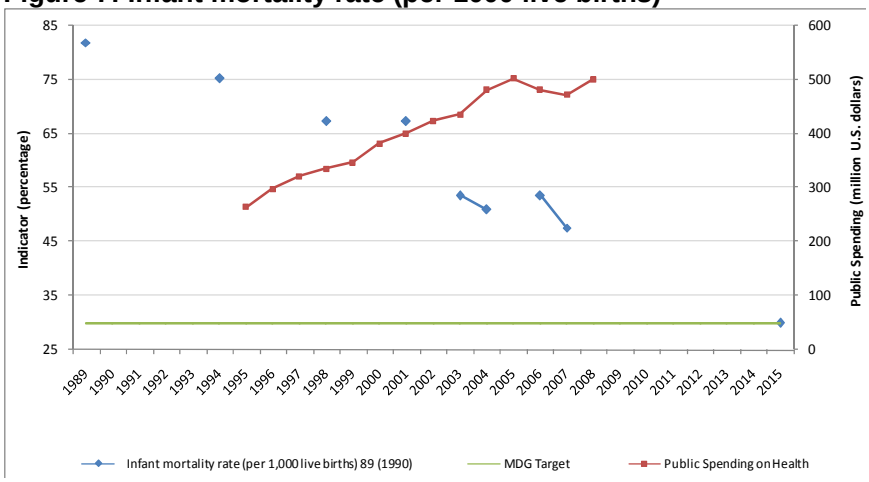
Source: UDAPE (various years).

Goal 4: Reduce child mortality

Bolivia appears to be on track on the health goal of reducing child mortality. Child mortality rates have declined substantially over the past decades. The infant mortality rate (per 1000 live births) decreased from 81.9 in 1989 to 67.3 in 2001 and to 44 in 2007. The target for this particular MDG is to reduce the child mortality rate to 30 (Figure 7).

Public spending in the health sector has increased over time. Between 1995 and 2005, these expenditures went up at an annual average rate of 6.6% in real terms. Despite the large availability of resources enjoyed by the public sector, government expenditures in the health sector dropped at an annual rate of -0.1% between 1996 and 1998.

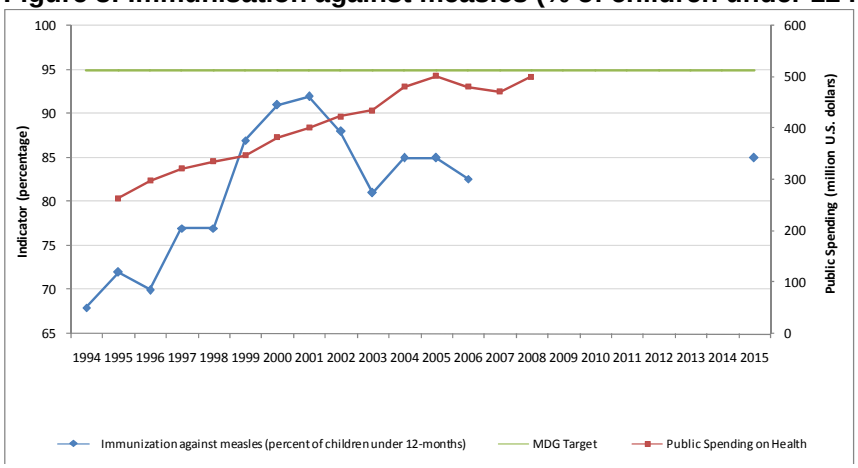
Figure 7: Infant mortality rate (per 1000 live births)



Source: UDAPE (various years).

The rate of immunisation against measles (percent of children under 12 months) has also exhibited substantial improvements over time, increasing from 68% in 1994 to 82.6% in 2006. The target for this specific MDG is 95% (Figure 8).

Figure 8: Immunisation against measles (% of children under 12 months)



Source: UDAPE (various years).

Goal 5: Improve maternal health

In the same way, Bolivia appears to be on track to improve maternal health. The maternal mortality rate dropped from 416 per 100,000 live births in 1998 to 235 in 1998 and 214 in 2004. The target is to reduce this ratio to 104 by 2015 (Figure 9).

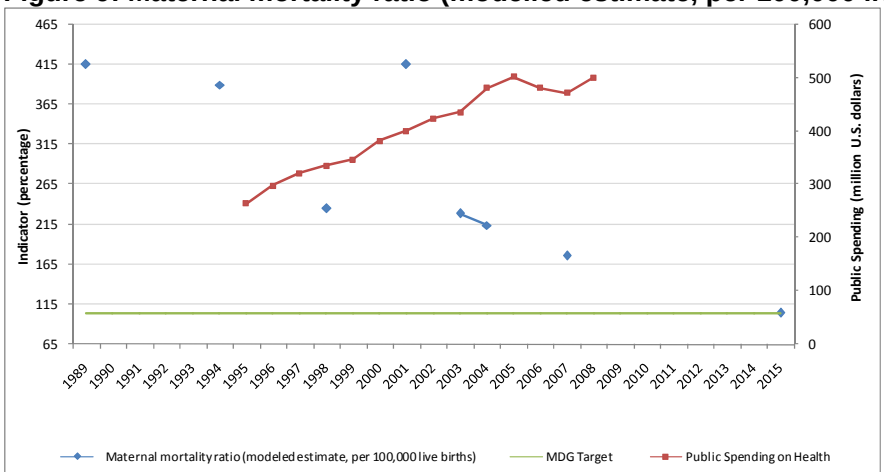
Bolivia is on track as well in terms of increasing the proportion of births attended by skilled health personnel. This ratio went up from 25% in 1994 to 54% in 2000 and 65% in 2006. The target is to increase this ratio to 70% by 2015 (Figure 10).

The much better fiscal position the country is enjoying at present can help the government to undertake the necessary actions to improve Bolivia's prospects to attain this goal.

The Bono Juana Azurduy, a conditional cash transfer programme introduced in 2009 for pregnant women and young children, is expected to contribute greatly to the attainment of this goal. The

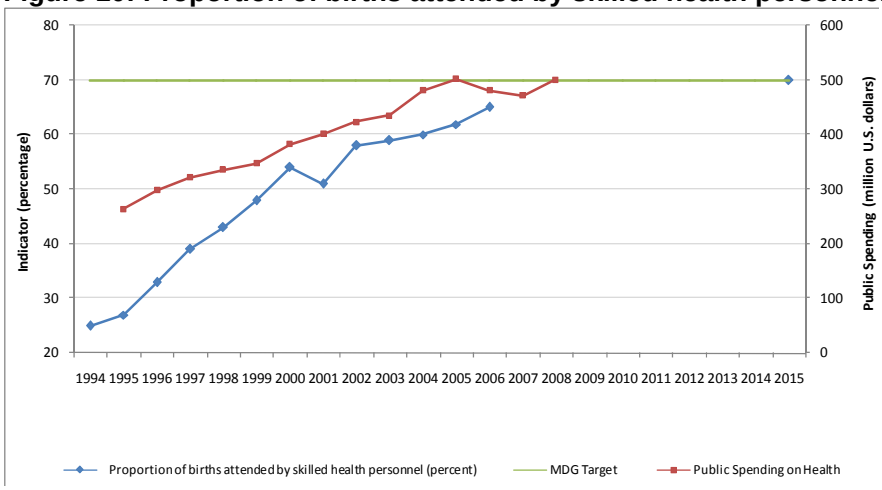
bonus is aimed at improving maternal care, reducing infant mortality and improving nutrition; the equivalent of about $150 is paid for regular prenatal and paediatric medical checkups.

Figure 9: Maternal mortality ratio (modelled estimate, per 100,000 live births)



Source: UDAPE (various years).

Figure 10: Proportion of births attended by skilled health personnel (%)



Source: UDAPE (various years).

Goal 6: Combat HIV/AIDS, malaria and other diseases

According to official estimates, Bolivia is relatively on track in terms of achieving the goal of combating HIV/AIDS and other diseases.

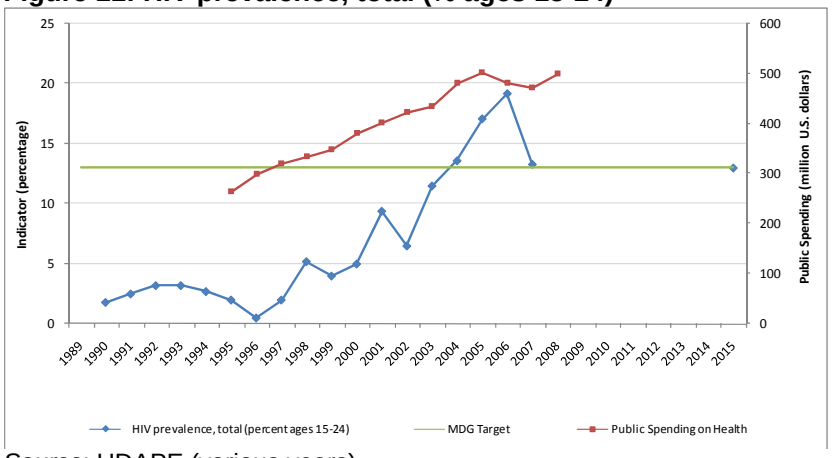
Target 7: Halt by 2015, and begin to reverse, the spread of HIV/AIDS has been already attained, in 2007. HIV prevalence among the population aged 15 to 24 had been increasing in past years, reaching 19% of the target population by 2006. By 2007 however, that ratio was reduced to 13.3 percent, which is almost the target value for 2015 (Figure 11).

Bolivia is also on track in terms of achieving the target of reducing the prevalence of malaria. Incidence of malaria was dramatically reduced from 24 per 1000 people in 1998 to 4.2 per 1000 people in 2008, against the MDG target of 2 per 1000 people (Figure 12).

However, Bolivia is off track in term of achieving the target of increasing the incidence of tuberculosis cases cured. The index of diagnosed tuberculosis cases cured substantially increased

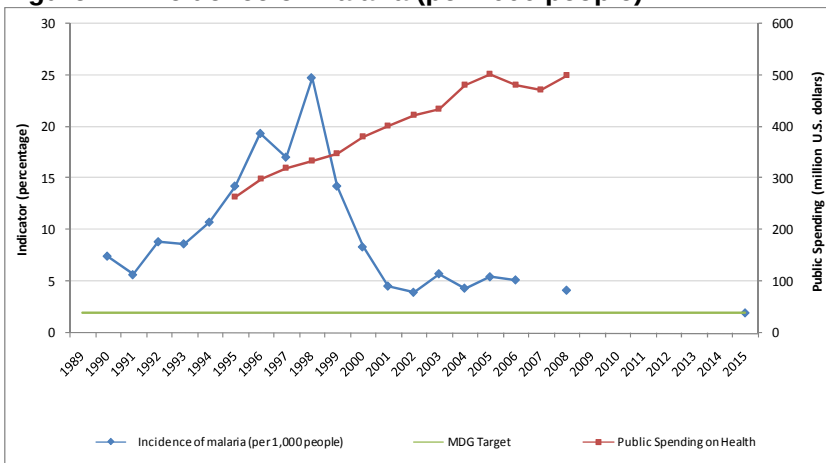
from 72.1% in 2000 to 81.9 in 2008. According to official forecasts, this would rise to 85% by 2015, against the MDG target of 95% (Figure 13).

Figure 11: HIV prevalence, total (% ages 15-24)



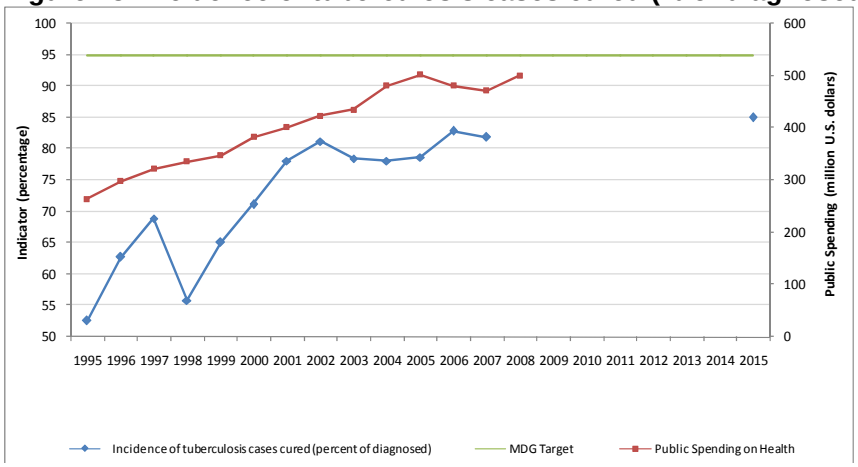
Source: UDAPE (various years).

Figure 12: Incidence of malaria (per 1000 people)



Source: UDAPE (various years).

Figure 13: Incidence of tuberculosis cases cured (% of diagnosed)

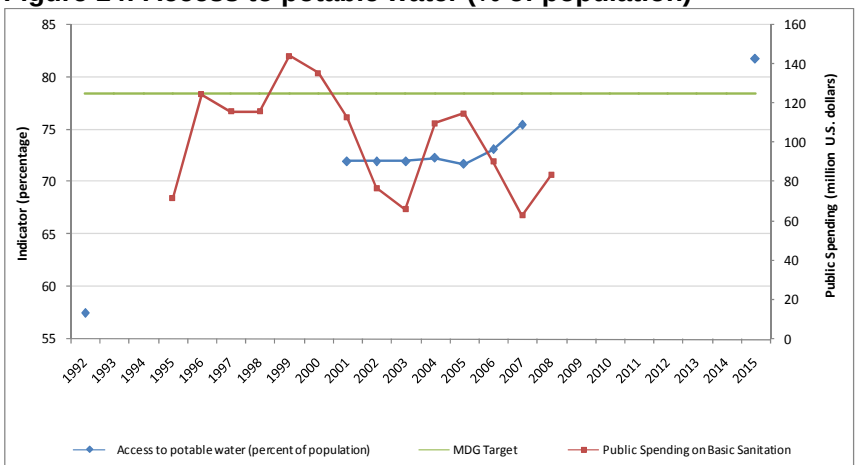


Source: UDAPE (various years).

Goal 7: Ensure environmental sustainability

In terms of ensuring environmental sustainability, Bolivia has succeeded in improving the access of the population to potable water. The proportion of the population with access to potable water went up from 57.5% in 1992 to 72% in 2001 and 75.5% in 2007. Bolivia is basically on track on this particular MDG, since the target for 2015 is to attain the goal of 78.5% of the Bolivian population with access to drinking water. According to government projections, this ratio will be of 81.8% by that year (Figure 14).

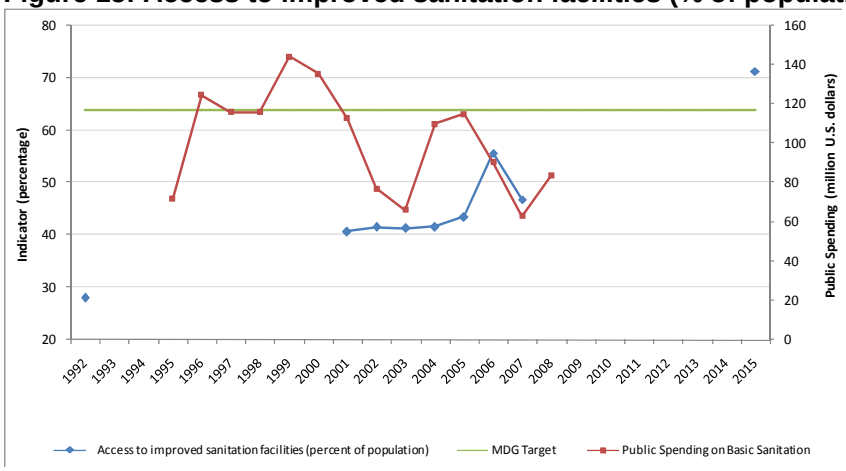
Figure 14: Access to potable water (% of population)



Source: UDAPE (various years).

Likewise, access of the population to improved sanitation facilities has increased over time. However, Bolivia seems to be off track on this particular target. The percentage of the population with access to this basic service rose from 28% in 1992 to 40.7% in 2001 and 46.8% in 2007 (Figure 15). The target for 2015 is to increase coverage of sanitation services to 64% of the population, which will require a significant effort in terms of investment.

Figure 15: Access to improved sanitation facilities (% of population)



Source: UDAPE (various years).

Table 1 summarises achievements of Bolivia in terms of the MDGs indicators. The country is set to achieve most of its targets. In particular, it has already achieved MDG 3 (gender equality) and is on track to accomplish all of the MDGs but Goal 2 (education). That is despite increasingly larger public expenditure in education (see above), which hints at other constraints to the achievement of the goal than the pure resource envelope.

Table 1: MDG indicators in Bolivia

	2000	2006	2007	2008	Forecast 2015	Target 2015	MDG Situation
Poverty							
Population below US$ 1 a day (in percentage)	34.5	37.7		31.5	22.3	24.1	On Track
Education							
Net primary enrollment ratio (percent of relevant age group)		92.7	93.7	94.4	95.4	100	Off-Track
Percentage of cohort reaching grade 8		75.6	80.6	82.4	90	100	Off-Track
Gender disparities at completion of primary education (percent)		-0.6				0	Achieved
Gender disparities at completion of secondary education (percent)	3.4	-1.5				0	Achieved
Health							
Infant mortality rate (per 1,000 live births) 89 (1990)		53.6	44		30	30	On Track
Immunization against measles (percent of children under 12-months)	91	82.6			85	95	Off-Track
Maternal mortality ratio (modeled estimate, per 100,000 live births)			176		104	104	On Track
Proportion of births attended by skilled health personnel (percent)	54	65			70	70	On Track
HIV prevalence, total (percent ages 15-24)	5	19.2	13.3		13	13	On Track
Incidence of malaria (per 1,000 people)	8.4	5.2		4.2	2	2	On Track
Incidence of tuberculosis cases cured (percent of diagnosed)	71.2	82.9	81.9		85	95	Off-Track
Sanitation							
Access to potable water (percent of population)		73.1	75.5		81.8	78.5	On Track
Access to improved sanitation facilities (percent of population)		55.7	46.8		71.3	64	On Track

Source: UDAPE (various years) and IMF (2009).

2.3 Computing the financial needs gap: comparison with existing projections

Although Bolivia appears to be on target to achieve many of the MDGs according to official estimates, the country is off target to reach a number of them, as shown in the Table 1. Thus, one could argue that additional funding is required to scale up public spending in order to accelerate progress on those indicators. This is the exercise carried out by Vos et al. (2008), who use a computable general equilibrium (CGE) model to estimate the additional public spending required by different Latin American countries, including Bolivia, in order to achieve MDGs.[1] In a follow-up study (Vos et al., 2009), the authors incorporate new projections in light of the expected (negative) effects of the crisis on Latin American economies. The results suggest that Bolivia should increase its public spending by at least 1.7% of GDP (in the best case scenario where the entire additional spending is financed by external grants) to achieve the MDGs. In the worst case scenario, when additional spending had to be raised through income tax increases, additional spending would be higher, at 2.8% of GDP, as the increased income tax would stifle economic growth. Moreover, the crisis would negatively affect the Bolivian economy, further increasing the additional financial gaps for the country. In both studies, the least costly and only feasible strategy for Bolivia would be to have the additional public spending funded entirely through external grants. We argue below that these forecasts are rather pessimistic and that Bolivia should be able to fund the additional public spending without resorting to increases in income taxes or external funds, as it has been doing in the past four years.

It is not entirely clear that lack of finances is a major impediment to the achievement of the goals, as even in those instances where Bolivia is off track to achieve a specific target public spending related to that target has increased, often by a higher percentage than that suggested by Vos et al. (2008). Perhaps more importantly, the studies do not incorporate information on some key events that have impacted on the Bolivian economy in recent years and thus have considerably changed the country's macroeconomic and fiscal position. This lack of detailed information is understandable in light of the characteristics of the studies: they focus on a fairly large number of countries and base their analysis on a CGE model common to all countries. Conversely, by analysing only one country, we can dig deeper into the country's data and base our analysis on more detailed and updated information.

The analyses by Vos et al. use data that do not include the very recent important developments of the Bolivian economy, chiefly the significant increases in external and fiscal revenues owing to the export commodity boom occurring between 2006 and 2009. The positive shocks the economy has experienced in recent years have greatly improved the country's fiscal stance and have enlarged tax revenues from the hydrocarbon sector. These patterns have completely changed the structure of public sector finances. Budget reliance on foreign grants, significant at the beginning of the decade, has considerably reduced in recent years. The bulk of the government balance is being financed by hydrocarbon tax revenues. As a matter of fact, public spending in Bolivia has increased in recent years well above the additional public spending figure required to reach the MDGs according to Vos et al. (it increased from 29.8% to 34.6% of GDP between 2006 and 2008 according to IMF (2009) figures). Interestingly, this increase has been achieved without increasing income taxes. Virtually all of it has been financed by increased hydrocarbon and (to a lesser extent) indirect taxes, such as value-added tax (VAT).

Despite the high growth rates in MDG-related public spending exhibited in recent years, Bolivia has not accordingly improved on some key MDG indicators, such as those related to universal primary education enrolment and attainment. This fact highlights that there are large inefficiencies in the way these sizable additional resources are being spent at present. The lack of efficiency in public expenditure is compounded by the fact that a large chunk of public expenses in Bolivia is

[1] However, in the case of Bolivia they exclude MDG 5 from the analysis.

undertaken at the decentralised level, municipalities and regional governments. A large number of small municipalities have capacity problems to use these resources efficiently in order to improve the MDG indicators.

There are also some differences in the data on the MDGs indicators used by Vos et al. with those we present above. According to the former, Bolivia is off track on practically all the MDGs and, based on the simulation exercises carried out, will be unable to meet most of the targets unless significant additional funding materialises. However, as noted in the previous section (based on official data from the ministries), Bolivia has already achieved the MDG of attaining gender equality. The indicators also show that Bolivia will be able to achieve the MDGs related to poverty eradication, child mortality, maternal health and access to drinking water. The country is off track in attaining the MDGs on universal education and on improving the access of the population to sanitary services. The improved fiscal position Bolivia is enjoying at present is likely to help the country make significant progresses on achieving those MDGs as well.

Similarly, total public spending and MDG-related public spending in the Vos et al. studies appear to be underestimated relatively to official figures. The studies estimate that total MDG-related public expenditures in 2000 were at 4.8% of GDP, while the Bolivian government Unit for the Analysis of Social and Economic Policies (UDAPE), the institution that calculates the official figures on the MDGs and related expenditures in Bolivia, estimates that this figure was as high as 10.8% in the same year.

Finally, in the follow-up study (Vos et al., 2009), the authors anticipate that the global financial crisis would have a significant negative effect on the Bolivian economy and this would in turn generate the need for further funding to reach MDGs. As explained above and shown in detail by Jemio and Nina (2010), the effects of the crisis have been relatively mild and the economy has continued growing, albeit at a lower rate, and the public balance has not experienced significant disequilibria.

We believe these arguments and the evidence presented in this and the next section are strong enough to consider that external additional resources is not a primary requirement to achieve the MDGs in Bolivia as long as future public spending bounces stays at the level of 2008 (34% of GDP). As mentioned, this level would be more than enough to cover the additional public spending envisaged by Vos et al. (2009) in the worst case scenario. Such a level of public spending is what the government projects for the years to 2015 given conservative estimates of economic growth below the 2005-2008 period, i.e. 4% per annum (IMF, 2009). In other words, the financial gap that may exist to achieve those targets that have not been achieved yet by Bolivia should be fundable with the expected pattern of public spending.

The fact that additionality of resources (to what is projected to be available) should not be a key factor in achieving the MDGs is further confirmed by the fact that the area of social spending, which has recently exhibited the highest growth, i.e. education, is also the area where most problems to achieve the MDGs are envisaged. That lack of progress owes mainly to the sluggish growth of education-related indicators despite the robust growth of related public spending (by 30% between 2006 and 2008). This points to the critical importance of reviewing the effectiveness of public spending in Bolivia, not just the total envelope.

As we said, additionality should not be a major issue as long as Bolivia can keep raising and spending enough public funds. This condition is dependent on two main factors: natural gas exports keep at least at the same level as in 2008 (i.e. the international price bounces back to 2008 levels and the supply remains at least constant) and economic growth keeps at a reasonable level to maintain direct and indirect taxes, i.e. at least 4%. Both conditions seem to be achievable considering the current trend in gas prices and Bolivian economic growth, but constant monitoring would be needed.

3. Trends in relation to trade, debt and aid

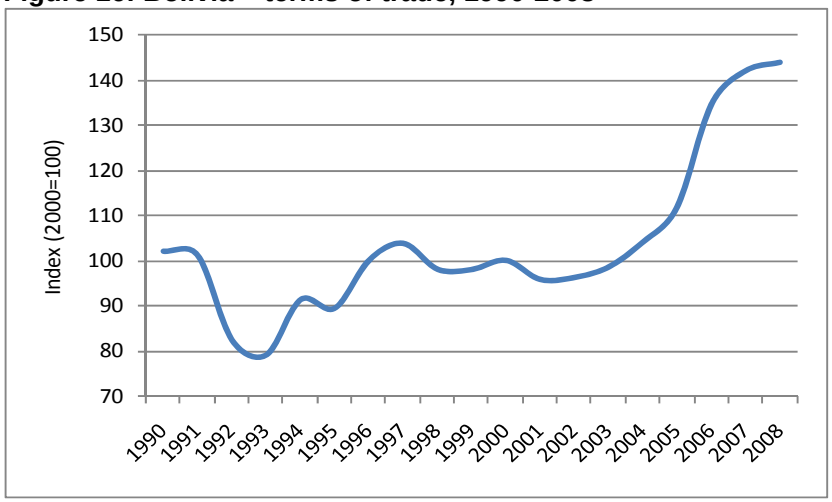
How have the major external flows – trade, debt and ODA – that could help fund the financial needs gaps to achieve the MDGs evolved in the past decade? What role have they played in funding MDG-related sector spending? What role could they play in the future? This section presents an analysis of the evolution of these flows that can help answer these questions.

3.1 Trade analysis

As mentioned above, booming international demand for the main commodities in Bolivia's export basket, especially natural gas and mining, has probably been the major factor in boosting the country's economic performance and its fiscal revenues.

Bolivia's exports are dominated by natural resources such as natural gas, zinc, silver ore and soybean cake. In 2009, over 95% of the category 'mineral fuels, oils distillation products etc' was accounted for by natural gas. Zinc accounted for almost 47% and silver 40% of 'ores, slag and ash'; soybean cake accounted for around 92% of 'residues, wastes of food industry, animal fodder'. Over the period 2001-2009, 'ores, slag and ash' was the fastest growing product category. Most exports of natural gas are destined for Brazil. Most zinc is destined for South Korea. Most soybean cake is destined for other regional partners such as Venezuela and Colombia, as well as neighbouring countries such as Peru. Bolivia is not a significant exporter of manufactured goods but, because of changes in the terms of trade for commodities in recent years, Bolivia's can be seen to have improved.[2]

Figure 16: Bolivia – terms of trade, 1990-2008



Note: Calculated based on net barter terms of trade, defined as the ratio of the export unit value index to the import unit value index.
Source: UNCTAD (2009).

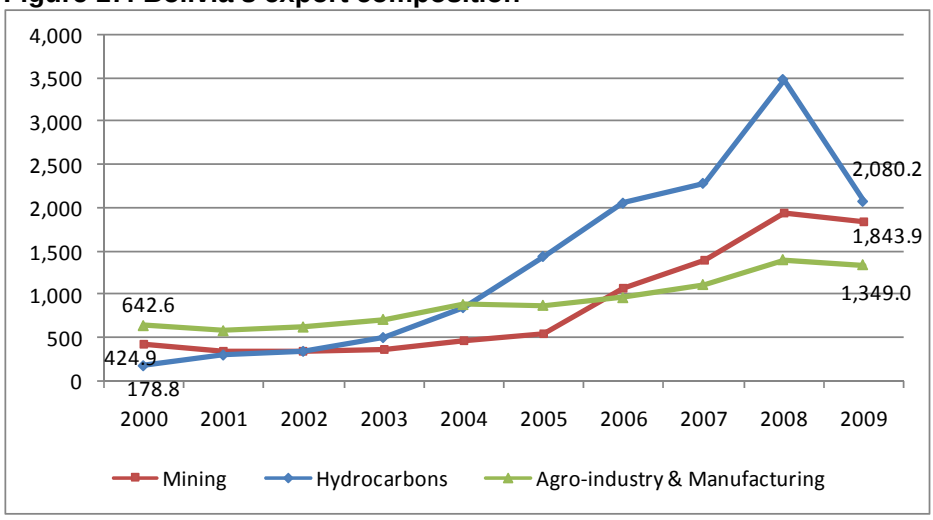
Although Bolivia was not totally immune to the global financial crisis, its major commodity exports such as natural gas and zinc experienced dramatic price increases in 2008, making price levels still high relative to 2006 even after subsequent declines by the latter quarter of 2008 (see Annex). Total exports decreased from $6.8 billion in 2008 to $5.3 billion in 2009, which is still higher than in 2007 and much higher than at the beginning of the decade. The composition of exports has changed during the decade, with hydrocarbons gaining the lion's share in total exports from 29% in 2003 to 50% in 2008 and 39% in 2009, owing to both price and quantity increases in natural gas

[2] Some argue that this is because the income drivers of terms of trade have changed (see Kaplinksy and Morris, 2008).

exports (Figure 17). Conversely, agro-industry's and manufacturing's share in total exports diminished from 36.9% in 2003 to 16.6% in 2008 and 24% in 2009. Agro-industry and manufacturing exports basically comprise soya and soya products, wood and wood manufacturing, textiles, Brazil nuts and sugar, among others. Mining has steadily increased its share, from 21.9% in 2003 to 27.8% in 2008 to 33.9% in 2009. If we filter out the effects of prices, exports have actually increased in volume for all three macro sectors in almost each year of the decade except for hydrocarbons, which have declined somewhat since 2006. This is mainly because the country reached full capacity in hydrocarbon production in 2006 and because of lower demand by Brazil in 2009.

The relatively good performance of non-traditional exports (NTEs) (i.e. agriculture and manufacturing) and mining is good news in terms of employment and income generation, as these sectors are the largest employers among the export sectors. The good performance of NTEs is especially remarkable given the Dutch disease type effects brought about by the natural resources export boom experienced by Bolivia in recent years.[3] In fact, NTEs are the largest export sectors in real terms and have grown substantially, even in 2009. This suggests that Bolivian exporters of NTEs have achieved a remarkable level of international competitiveness. This is further confirmed by the sector's relative resilience to the loss of one of its main preferential market access in 2008, the Andean Trade Promotion and Drug Eradication Act (ATPDEA) to the US (as shown below).

Figure 17: Bolivia's export composition

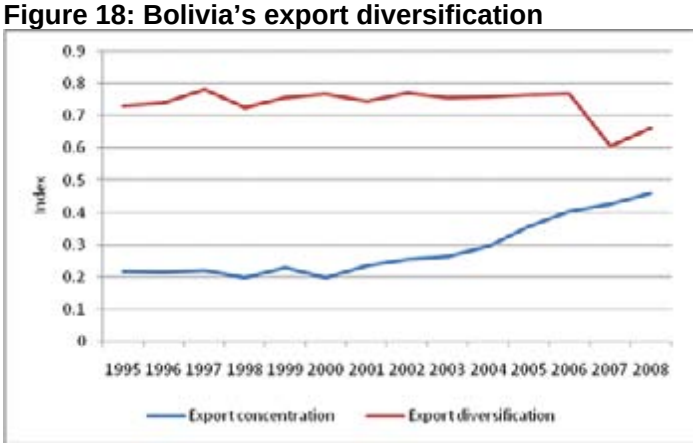


3.1.1 Export diversification

Interpreting the export diversification index calculated by the UN Conference on Trade and Development (2009) for Bolivia is difficult because of the impact that the global commodity price increases may have had. One can see that, by 2006, Bolivia's export diversification index had fallen, while at the same time export concentration was increasing fairly sharply (Figure 17).[4] Recent exchange rate developments may help to explain some of these developments: when commodity prices rise, those countries with a high dependence tend to experience an exchange rate appreciation that can make other exports less competitive.

[3] For example the national currency Boliviano has appreciated vis-à-vis the Dollar by 15% in 2008-09.
[4] See also Figure 5 Annex which has been calculated on the basis of a count of products and destination markets for each year.

Figure 18: Bolivia's export diversification



Note: Number of products exported at the three-digit SITC, Rev. 2 level; this figure includes only those products that are greater than $100,000 or more than 0.3% of the country's total exports. However, no base year is given for the indices.
Source: UNCTAD (2009).

On the import side, Brazil is Bolivia's main trading partner, followed by Argentina, the US, Japan and the European Union (EU). The fastest growing import in recent years has been vehicles (predominantly supplied by Japan). But energy-related categories comprise the largest in value terms, such as 'nuclear reactors, boilers, machinery, etc', on which the US is the largest supplier. Bolivia is a net fuel importer. Venezuela is Bolivia's largest supplier of 'mineral oils, distillation products etc'.

3.1.2 Trade policy and context

Bolivia faces 0% tariffs (most favoured nation (MFN)) for its most important export in the Brazilian market. As can be seen from Table 2, the most restrictive market for Bolivia is the US: only around 90% of products destined for the US are eligible for duty free treatment,[5] compared with almost 100% in the Korean, Japanese and EU markets. However, although South Korea may appear less restrictive at the aggregate level than the US, it is more restrictive for agricultural products.

Table 2: Market access in Bolivia's main markets

	Korea Rep.	USA	EU	Japan
Bolivia share of market's total import value (%)	0.2	0.03	n/a	0.1
All products:				
Value of Bolivia's exports (US$ mn)	495	410	482	303
Share of value for which simple AV tariff known (%) [b]	100	69.3	95.6	99.4
Share in value of non-arms exports (*for which simple AV tariff known*) of products eligible for duty-free entry (%) [c]	99.4	88.8	99.2	99.5
Simple average tariff (%) [d]	44.1	4.6	0.1	5.2
Trade-weighted average tariff (%)[d]	1.7	0.6	0.02	0.04
Agricultural products:				
Value of Bolivia's exports (US$ mn)	1	53	125	11
Share of value for which simple AV tariff known (%) [b]	100	92.8	83.1	86.2
Simple average tariff (%)[d]	319	1.0	0	6.6
Trade-weighted average tariff (%)[d]	627.6	0.6	0	0.3
Textile and clothing products:				
Value of Bolivia's exports (US$ mn)	0.25	7	7	0.6
Share of value for which simple AV tariff known (%) [b]	100	95.9	100	100
Simple average tariff (%)[d]	13	13.2	0.1	7.6
Trade-weighted average tariff (%)[d]	13	17.7	0.7	10.4

[5] However, as noted in Table 1, goods accounting for more than 30% of US imports from Bolivia are not known.

	Korea Rep.	USA	EU	Japan
Notes: (a) i.e. items actually exported by Bolivia to the market shown in 2009. (b) For some markets not all applicable duties are known because a specific or compound duty applies (for which *ad valorem* equivalents have not been calculated). The share of the total value of imports of goods to which simple *ad valorem* tariffs apply and are known is shown here – and it is only the exports accounting for the total representing this share that have been included in the average tariff calculations in this table. (c) Because the trade data are at the 6-digit level of the HS and tariffs are set at the more disaggregated national tariff line level, in many cases a range of tariffs applies to different items within an HS 6-digit sub-heading. In calculating this share the *maximum* rate applicable to any item within the 6-digit sub-heading has been used. The proportion of trade eligible for duty-free entry shown here may, therefore, be understated. (d) Again, *maximum* tariff rates (preferential wherever applicable) have been used in these calculations. *Sources:* Calculated from trade data obtained from ITC Trade Map and the latest tariff schedules available in UNCTAD's TRAINS database (2008 for EU; 2009 for Japan, Korea Rep. and USA).				

Table 3 presents applicable preferential regimes for Bolivia; Table 4 shows Bolivia's membership of other regional trade agreements (RTAs). At the World Trade Organization (WTO), Bolivia negotiates within the following groups: Bolivia is a member of the following negotiating groups: Small and Vulnerable Economies (SVEs) – agriculture; Small and Vulnerable Economies (SVEs) – non-agricultural market access (NAMA); Cairns Group; Tropical Products; G20; and G33.

Table 3: Applicable preferential regimes for Bolivia

Market	Applicable preferential regime(s)
Brazil	MERCOSUR Associate Status
Korea	Global System of Trade Preferences (GSTP)
Argentina	Various (see Table 1.2).
USA	GSP (ATPDEA until 2008)
EU	GSP+, GSP
Japan	GSP

Table 4: Bolivia's membership of other RTAs

CAN Andean Community	Bolivia Colombia Ecuador Peru Venezuela.
GSTP General System of Trade Preferences among Developing Countries	Algeria Argentina Bangladesh Benin Bolivia Brazil Cameroon Chile Colombia Cuba Democratic People's Republic of Korea Ecuador Egypt Ghana Guinea Guyana India Indonesia Islamic Republic of Iran Iraq Libya Malaysia Mexico Morocco Mozambique Myanmar Nicaragua Nigeria Pakistan Peru Philippines Republic of Korea Romania Singapore Sri Lanka Sudan Thailand Trinidad and Tobago Tunisia United Republic of Tanzania Venezuela Vietnam Yugoslavia Zimbabwe.
Latin American Integration Association (LAIA)	Argentina Bolivia Brazil Chile Colombia Cuba Ecuador Mexico Paraguay Peru Uruguay Venezuela.
MERCOSUR	Argentina, Paraguay, Uruguay. Associated countries: Chile and Bolivia.

A recent study undertaken by Bouët et al. (2010) explored a number of scenarios related to Doha outcomes within a general equilibrium framework. Simulation results for the completion of the Doha Development Round (DDR) suggests that Bolivia will suffer preference erosion vis-à-vis other least development countries (LDCs) should full duty-free quota-free (DFQF) market access be granted under the DDR (see Table 5). Only in simulations where LDCs plus other small poor countries are granted DFQF is Bolivia estimated to gain (see Table 6).

Table 5: Percentage change in key variables in 2020 from OECD implantation of 100% DFQF for LDCs for other developing countries

Other developing Countries	Exports	Welfare
Mauritius	0.03	0.02
Central America	0.14	0.01
South Africa	0.02	0.00
Rest of Asia and Oceania	0.00	0.00
Middle East and North Africa	0.01	0.00
Nigeria	0.01	0.00
Rest of Eastern Europe	0.00	0.00
Sri Lanka	-0.01	0.00
China	-0.03	0.00
India	-0.01	0.00
Pakistan	-0.04	0.00
Philippines	-0.01	0.00
Vietnam	-0.01	-0.01
Brazil	-0.03	-0.01
Bolivia	-0.03	-0.01
Indonesia	-0.03	-0.01
Rest of Latin America	-0.05	-0.01
Paraguay	-0.04	-0.03

Source: Bouët et al. (2010)

Table 6: Percentage change in export volume in 2020 in scenarios where OECD grants 100% DFQF

	OECD for LDCs	OECD for LDCs plus small LICs	OECD for LDCs plus all LICs	LDCs plus other small poor
Bolivia	-0.03	-0.04	-0.02	3.46

Source: Bouët et al. (2010)

It is important to point out that general equilibrium models rely on a number of assumptions as to how economies work. Moreover, estimates are unable to take into account supply-side constraints; they also assume that demand responds positively to increases in supply. The potential benefits for producers from the removal of tariffs also depend on the nature of the value chain within which they trade (see Box 2).

Box 2: The potential effects of DFQF for all LDCs

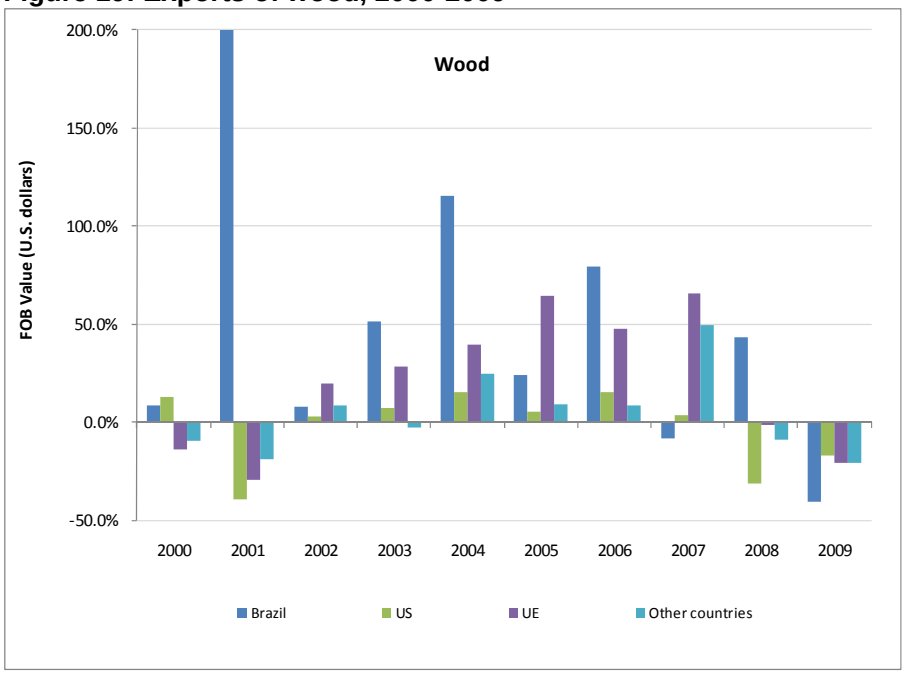
- The first and most immediate impact would be the transfer of import taxes, formerly levied by more developed trade partners to respective supply chains. If this accrues to producers and exporters, it will make exports more profitable.
- Second, if part of the revenue transfer accrues to importers, it could induce them to buy more from LDC suppliers, leading to an increase in exports. If it accrues to producers/exporters, it may also enable LDC suppliers to increase their supply of competitive products without substantial new investment.
- Third, by removing tariff barriers, DFQF may make it commercially feasible, for LDC suppliers to export new markets where these exports were previously constrained.
- The fourth effect could be greatest, but is hardest to predict. If DFQF means increased supply from LDCs, there could be increases in foreign exchange earning and knock-on effects for the rest of the economy.

Source: Adapted from Stevens et al. (2008).

There have not been any major changes in access to the main markets for Bolivian exports in the past decade, except the end of the preferential access to the US market granted through ATPDEA, which was terminated in 2008 following a political dispute between the US and Bolivia. This programme provided tariff-free quota-free access to US markets for three important Bolivian NTEs,

i.e. wood-related products, jewellery and textiles. While these do not represent large export sectors in terms of value for Bolivia, they are labour intensive and provide livelihoods for many relatively poor workers. However, the end of this preferential access does not seem to have caused any important changes in exports to the US. For example, the decline in wood-related exports experienced in 2009 was lower than that in 2008 for the US and lower than that of all the other major markets (see Figure 19). A similar picture emerges with respect to the other main products potentially affected by the end of APTDEA.

Figure 19: Exports of wood, 2000-2009



On the import side, most recent data suggest that tariff revenues make up around 7.2% of national tax revenue.[6] In relation to non-tariff barriers, Bolivia's most recent Trade Policy Review (TPR), undertaken in 2005, does not mention any immediate difficulties in relation to either imports or exports.

3.1.3 Aid for Trade

Most AfT resources have been directed towards Bolivia's productive sectors; more specifically, 'agriculture, forestry and fishing', followed by 'industry, mining and construction'. The proportion destined for 'trade policy, admin and management' has remained fairly stable over time. Shares destined for tourism, and the policy and administration associated with it, have been increasing over time (see Table 7). As shown by Table 8, in 2008 AfT allocated to Bolivia as a proportion of total trade as well as in absolute terms was the lowest since 2000.

Table 7: Aid for Trade destined for Bolivia (constant US$ millions 2008)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
33110: Trade policy and admin. management	3.97	1.80	10.36	0.12	0.68	2.40	0.18	3.17	2.86
33120: Trade facilitation	0.00	0.00	0.00	4.61	0.13	0.00	0.90	0.00	0.00
33130: Regional trade agreements	0.00	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.00
33140: Multilateral trade negotiations	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00
33150: Trade-related adjustment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[6] ITC Trade Map; data for 2001.

33181: Trade education/training	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.04
33210: Tourism policy and admin. management	0.06	0.04	15.11	0.76	2.01	1.33	0.87	0.81	1.64
200: II. ECONOMIC INFRA AND SERVICES	44.70	29.17	138.93	248.18	72.56	58.81	12.89	166.51	21.65
300: III. PRODUCTION SECTORS	147.68	39.02	119.52	141.70	116.32	138.43	117.10	131.54	60.90
310: III.1. Agriculture, Forestry, Fishing	129.67	34.00	68.20	127.97	99.13	123.80	95.48	105.00	42.98
320: III.2. Industry, Mining, Construction	13.98	3.16	23.97	8.23	13.56	10.90	19.68	22.56	13.38
331: III.3.a. Trade Policies & Regulations	3.97	1.83	12.24	4.73	1.62	2.40	1.08	3.17	2.90
332: III.3.b. Tourism	0.06	0.04	15.11	0.76	2.01	1.33	0.87	0.81	1.64

Source: OECD.

Table 8: AfT and total exports (US$ '000s)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total AfT (USD$'000)	344.09	109.08	405.30	537.07	308.83	339.40	249.04	433.56	147.99
Total Exports (USD$'000)	1,353	1,372	1,651	2,254	2,797	4,223	4,813	6,899	5,297
Aft as % of total exports	25.4	8.0	24.5	23.8	11.0	8.0	5.2	6.3	2.8

We next analyse the extent to which the AfT received by Bolivia is consistent with its trade-related priorities as emerging from the most recent OECD questionnaire on AfT (2009). In order to make the link we analyse specialisation index of different types of AfT. As described in Section 3.3 below, this measures the extent to which a country is receiving more ODA in that sector (within the broader AfT sector) relative to the other developing countries. In particular, an index greater than 1 indicates a relative specialisation in the specific AfT sector controlling for the overall specialisation in AfT, i.e. a measure of the allocation of AfT across sub-sectors, and vice-versa. We also compute the specialisation index for AfT to measure to what extent AfT has been prioritised in total ODA to the country.

Despite the country's stated prioritisation of trade as a tool for development, AfT to Bolivia has been rarely prioritised relative to other ODA between 2000 and 2008 (Table 9). And the AfT specialisation index was particularly low in 2008, suggesting that AfT was far from being a priority of ODA to Bolivia. On the other hand, there seems to be an assonance between the stated priorities of Bolivia and the sectoral allocation of AfT to Bolivia. AfT has been skewed towards aid to productive sectors (particularly agriculture, industry and mining and more recently tourism), which is consistent with the fact that two of the three top trade-related priority areas of Bolivia are related to building productive capacity.

Table 9: AfT specialisation index in Bolivia (based on 2008 US$ constant commitments)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
33110: Trade policy and management	1.8	1.6	1.1	0.0	0.2	0.5	0.0	0.7	2.0
33120: Trade facilitation	0.0	0.0	0.0	4.8	0.2	0.0	1.5	0.0	0.0
33130: RTAs	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
33140: Multilateral trade negotiations		0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
33150: Trade-related adj.								0.0	0.0
33181: Trade education		0.0	0.0	0.0	11.3	0.0	0.0	0.0	1.4
33210: Tourism policy	0.1	0.2	25.3	0.4	4.0	1.0	0.4	1.1	12.9
200: II. Econ Infra	0.3	0.6	0.8	1.0	0.6	0.5	0.2	0.8	0.4
300: III. PROD Sectors	2.3	1.7	1.3	1.0	1.9	2.1	2.6	1.4	2.6
310: III.1. Agriculture, Forestry, Fishing	3.0	2.1	1.2	1.4	2.9	3.0	3.6	1.5	2.7

320: III.2. Industry, Mining, Construction	0.8	0.6	0.9	0.2	0.7	0.6	1.9	1.5	2.5
331: III.3.a. Trade Policies & Regulations	1.7	1.0	1.2	0.4	0.3	0.4	0.2	0.4	1.1
332: III.3.b. Tourism	0.1	0.2	25.3	0.4	4.0	1.0	0.4	1.1	12.9
Total AfT (broad)	***0.6***	***0.2***	***0.8***	***1.5***	***0.6***	***1.4***	***0.9***	***1.5***	***0.5***

Source: OECD CRS database.

The questionnaire further suggests that AfT is not always coordinated, and that is less so when it comes to monitoring and evaluation activities, which are rarely carried out jointly by donors.

3.2 Debt sustainability

One of the six targets of Goal 8 is to 'Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term'.

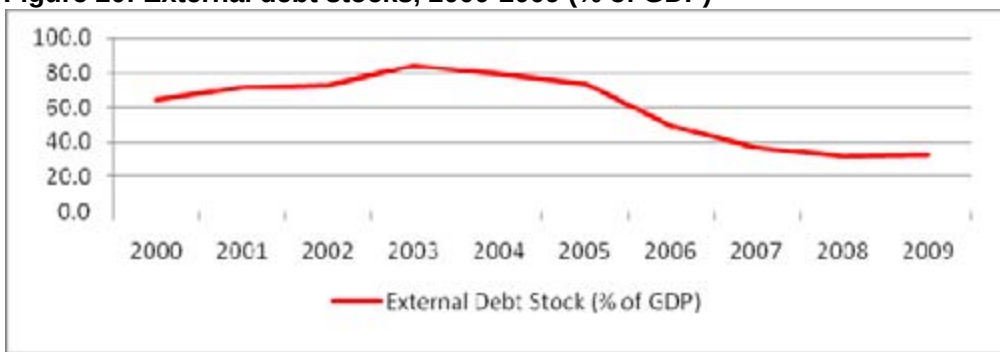
Debt sustainability is a key issue for developing countries, since the burden of debt may become a serious threat to achieving the MDGs. The assessment of debt sustainability is a very sensitive issue and it encompasses two main aspects: solvency and liquidity. Solvency can be defined as a country's ability to discharge its future external debt-servicing obligations without indefinitely accumulating debt. Liquidity is the ability of an economy to fully meet its current debt-servicing obligations.

In what follows, we analyse the trends in the level and composition of debt in Bolivia over the period 2000-2008, and we also provide some more recent information on debt for 2009 and 2010 where data were available. Then we assess the country's debt sustainability over the same years by looking at a number of standard solvency and liquidity indicators. Afterwards, on the basis of the latest available IMF/World Bank's Debt Sustainability Analysis (DSA), we assess the risk of debt distress in Bolivia by looking at the projected debt and debt service dynamics in the next 20 years under a baseline scenario and in the face of plausible shocks. Additional debt data are provided in the Annex.

3.2.1 Debt level and composition

The level of external debt in Bolivia experienced a downward trend over the period 2000-2008, owing to different debt relief strategies that benefited the country, such as the Heavily Indebted Poor Countries (HIPC) Initiative (bilateral debt) and the G8 initiatives (multilateral debt). The external debt stock as a share of GDP came down to 31% in 2008, from about 84% in 2003 (Figure 20).

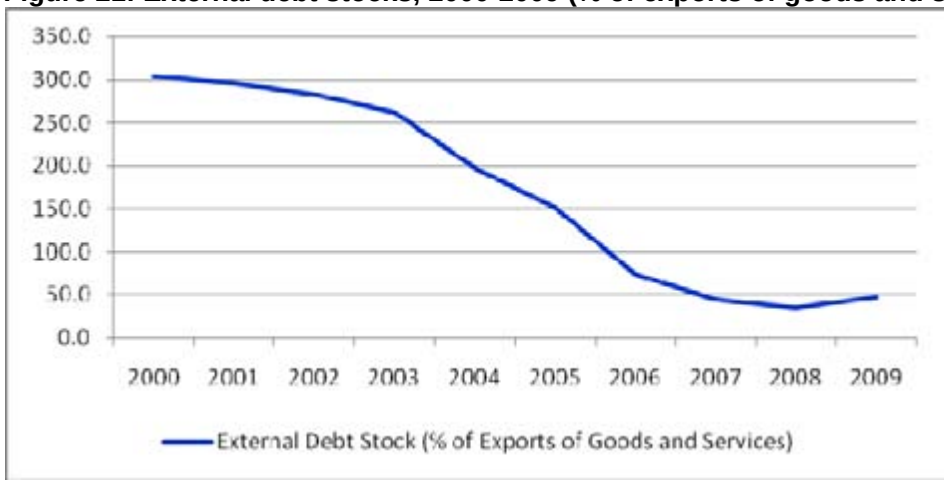
Figure 20: External debt stocks, 2000-2009 (% of GDP)



Source: Central Bank of Bolivia, National Statistics Office, and authors' elaborations.

The lessening of the debt burden over the period of analysis is also confirmed by the external debt to exports ratio. As shown in Figure 21, external debt as a share of exports of goods and services experienced a sharp decline, going down from 303% in 2000 to 35% in 2008. This sharp decrease owed not only to the reduction in the stock of debt, but also to the significant increase occurred in total exports as a result of the export commodity boom witnessed since 2006.

Figure 21: External debt stocks, 2000-2009 (% of exports of goods and services)

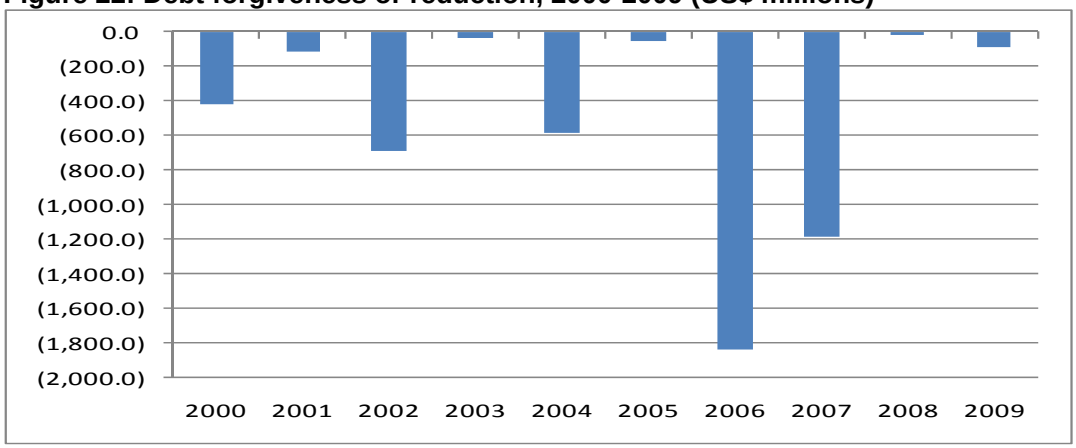


Source: Central Bank of Bolivia, and authors' elaborations.

In 2009, because of the adverse effects of the global financial crisis, both the external debt to GDP ratio and the external debt to exports ratio increased to 32% and 48,% respectively (Figures 20 and 21). The debt burden appeared still reduced compared to its values in early 2000s, however.

As shown in Figure 22, significant debt forgiveness and reduction occurred in 2001 under the HIPC Initiative, and in 2006 and 2007 under the G8 initiative.

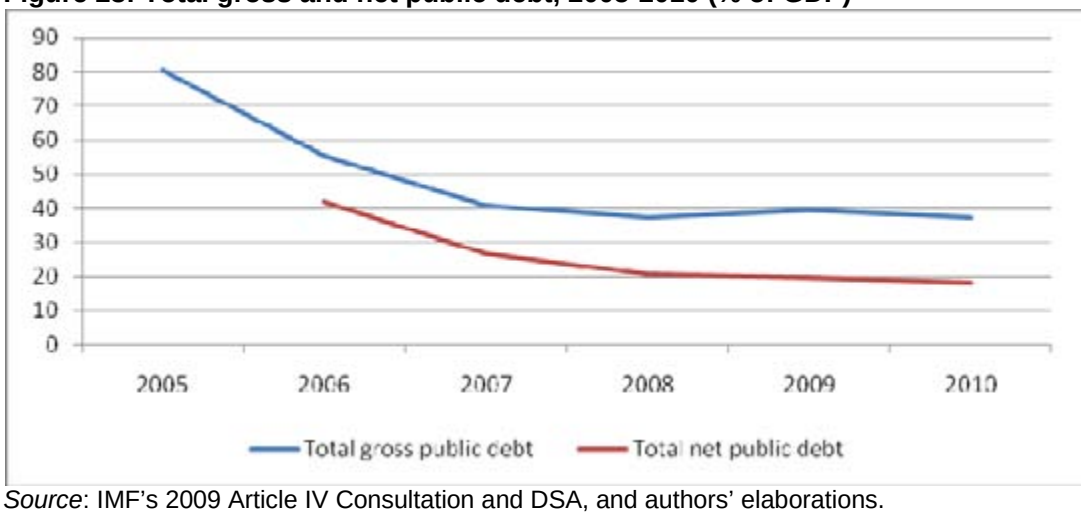
Figure 22: Debt forgiveness or reduction, 2000-2009 (US$ millions)



Source: Central Bank of Bolivia.

Total public sector debt has dropped significantly over recent years thanks to strong fiscal performance and the multilateral debt relief initiative (MDRI). As shown in Figure 23, gross public debt fell by about 50 percentage points of GDP between 2005 and 2008, when it reached a value of 38% of GDP. Total net public debt also declined to only 20% of GDP in 2008.

Figure 23: Total gross and net public debt, 2005-2010 (% of GDP)

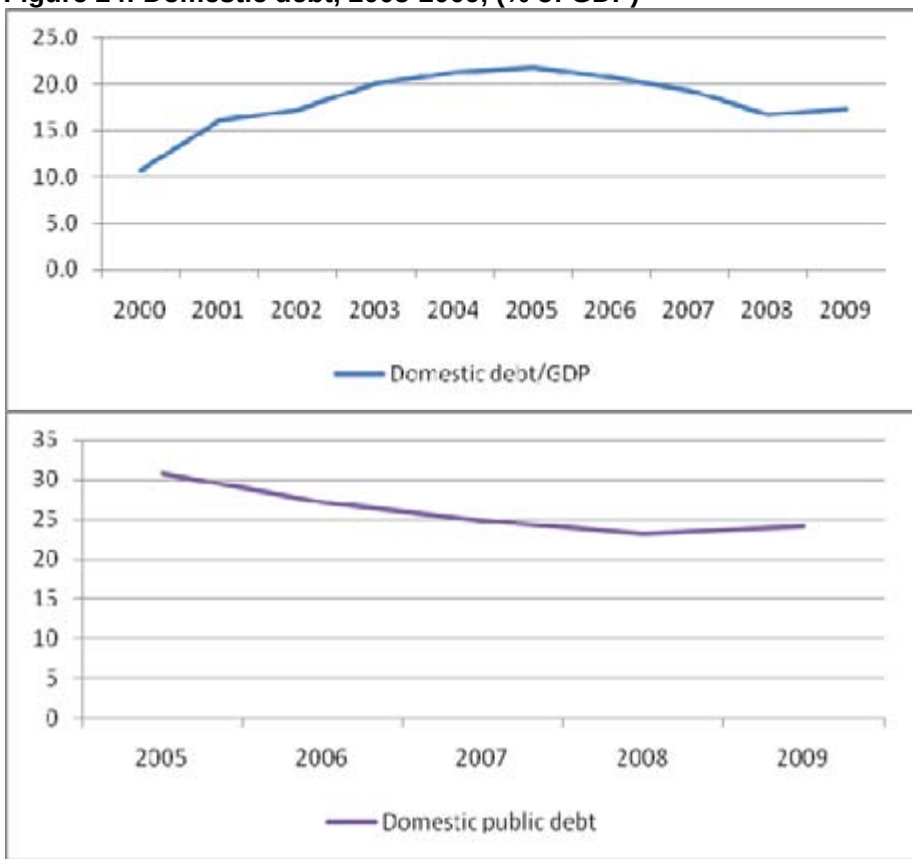


Source: IMF's 2009 Article IV Consultation and DSA, and authors' elaborations.

In 2009, lower GDP growth because of the global recession is expected to make total gross public debt increase temporarily to 39% of GDP before going down to 37% in 2010. Total net public debt is projected to experience a gradual downward trend up to 2010.

Domestic debt as a share of GDP declined from 21.7% in 2005 to 16.7% in 2008, but a slight increase to 17.3% occurred in 2009 (Figure 24).

Figure 24: Domestic debt, 2005-2009, (% of GDP)

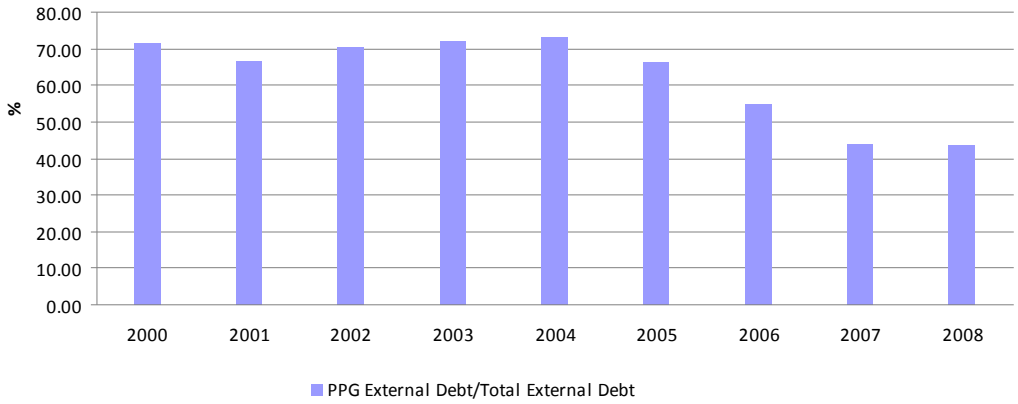


Source: UDAPE.

In terms of composition, it is worth looking at: 1) the share of public sector debt; 2) concessional debt; 3) foreign debt; and 4) short-term debt. Some of these indicators may also help assess the vulnerability of the economy to solvency and liquidity risk arising from the external debt position.

Public sector debt represents the largest share of external debt throughout all the period of analysis. However, after a slight increase, it progressively decreased from 73% in 2004 to 43% in 2008 (Figure 25).

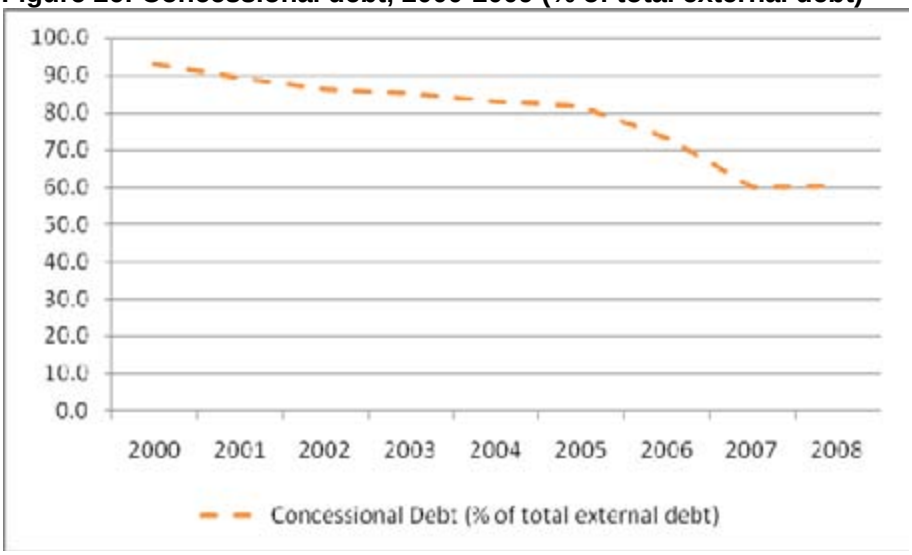
Figure 25: Public and publicly guaranteed (PPG) external debt (% of total external debt stocks)



Source: World Bank's GDF.

On the other hand, if we look at the share of concessional debt in total external debt we can see that it has experienced a downward trend, going down to 59.9% in 2007 from 92.9% in 2000 (Figure 26), owing to the fact that most of the debt relief involved concessional debt only. However, the ratio picked up slightly during 2008 before coming back to its previous value in 2009.

Figure 26: Concessional debt, 2000-2009 (% of total external debt)

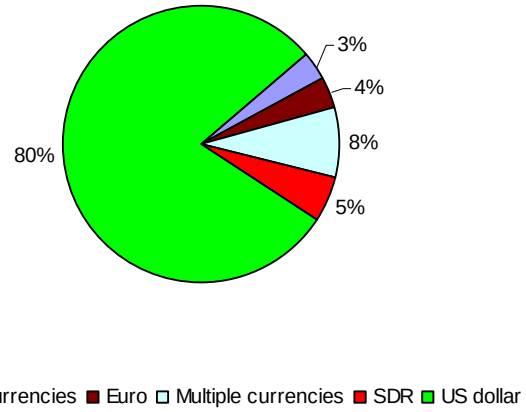


Source: Central Bank of Bolivia.

If we look at the currency composition of debt, we can see that Bolivia's foreign external debt is dominated by US dollars. Indeed, as shown in Figure 27, in 2008 a share of 80% of PPG external debt was payable in US dollars. Such a high share of foreign debt might represent an important source of vulnerability for the economy in the case of a sudden depreciation of the domestic

currency. Nevertheless, so far Bolivia's domestic currency (bolivianos) has appreciated continuously during the past years, backed by strong commodities exports and favourable international demand, going from 8.1 bolivianos per US dollar in 2005 to 7.07 bolivianos per US dollar in 2008.

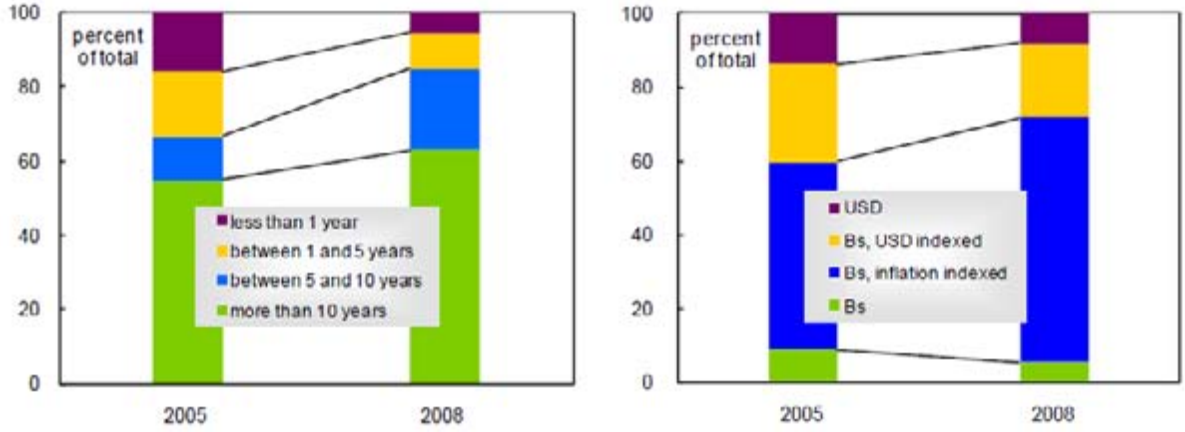
Figure 27: Currency composition of PPG external debt, 2008 (%)



Source: World Bank's GDF.

The foreign currency exposure of domestic debt reduced between 2005 and 2008. This as well as an extension of maturities has significantly reduced domestic debt vulnerabilities.

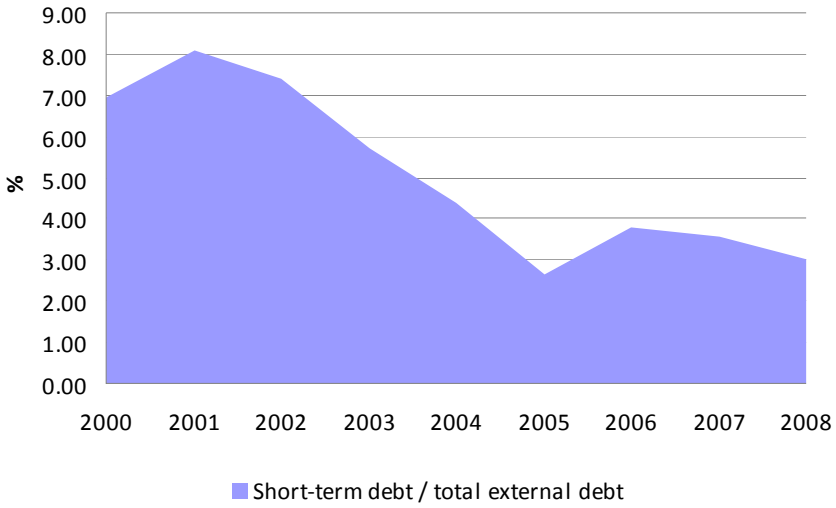
Figure 28: Domestic debt maturity and composition, 2005-2008



Source: IMF's 2009 Article IV Consultation.

If we look at the maturity composition of debt, in Bolivia the share of short-term debt has decreased over the past years. Indeed, the ratio of short-term debt to total external debt decreased from 8% in 2001 to 3% in 2008 (Figure 29).

Figure 29: Short-term debt (% total external debt), 2000-2008



Source: World Bank's GDF.

Table 10: Composition of the debt according to the creditors (US$ millions)

	2000	2004	2009	2009 (% of Total Debt)
MULTILATERAL	**3,077.4**	**4,661.9**	**2,246.4**	**79.2**
IMF	220.2	306.0	256.4	9.0
WORLD BANK	1,096.1	1,748.6	315.3	11.1
IDB	1,392.8	1,658.2	516.9	18.2
CAF	255.4	836.9	1,020.0	35.9
FIDA	36.7	43.5	46.0	1.6
FONPLATA	49.9	32.9	32.7	1.2
OTHERS	26.3	35.8	59.1	2.1
BILATERAL	**1,364.3**	**382.9**	**591.5**	**20.8**
JAPAN	523.4	71.6	0.0	0.0
GERMANY	325.4	39.1	58.4	2.1
SPAIN	134.9	142.8	19.3	0.7
ITALY	67.0	9.8	8.9	0.3
FRANCE	40.7	17.2	9.1	0.3
UNITED STATES	60.0	0.0	0.0	0.0
BELGIUM	57.7	0.0	0.0	0.0
UNITED KINGDOM	18.1	0.0	0.0	0.0
NETHERLANDS	12.8	0.0	0.0	0.0
AUSTRIA	63.1	0.0	0.0	0.0
BRAZIL	0.0	87.4	101.4	3.6
CHINA	0.0	14.0	79.5	2.8
CANADA	0.0	0.0	0.0	0.0
VENEZUELA	0.0	0.0	287.5	10.1
SOUTH KOREA	0.0	1.0	20.4	0.7
ARGENTINA	0.0	0.0	7.0	0.2
OTHERS	61.2	0.0	0.0	0.0
PRIVATE	**18.8**	**0.4**	**0.0**	**0.0**
TOTAL EXTERNAL DEBT	**4,460.5**	**5,045.2**	**2,837.9**	**100.0**

The significant debt reductions Bolivia has benefited from in recent years have considerably reduced the debt service burden. In 2009, the effective debt service of concessional debt amounted to $111.9 million, of which $27.4 million were interest payments and $84.5 million were

amortisations. The stock of concessional debt outstanding at the end of 2009 was $1.5 billion, which is expected to generate a debt burden of approximately $120 million (8% of the stock of debt). Thus, future additional debt relief initiatives would imply a debt service burden relief of a magnitude proportional to the share of the stock of debt that is relieved.

In 2009, Bolivia's total external debt amounted to $ 2.8 billion. Of Bolivia's external debt, 79% is with multilateral organisations, of which 35.9% is owed to the Andean Development Corporation (CAF), which lends to the country at commercial rates. The external debt owed to the World Bank and the Inter-American Development Bank (IADB) has reduced substantially in recent years, owing to the G8 debt relief initiative. These agencies now account for 11.1% and 18.2%, respectively, of Bolivia's total external public debt (Table 10).

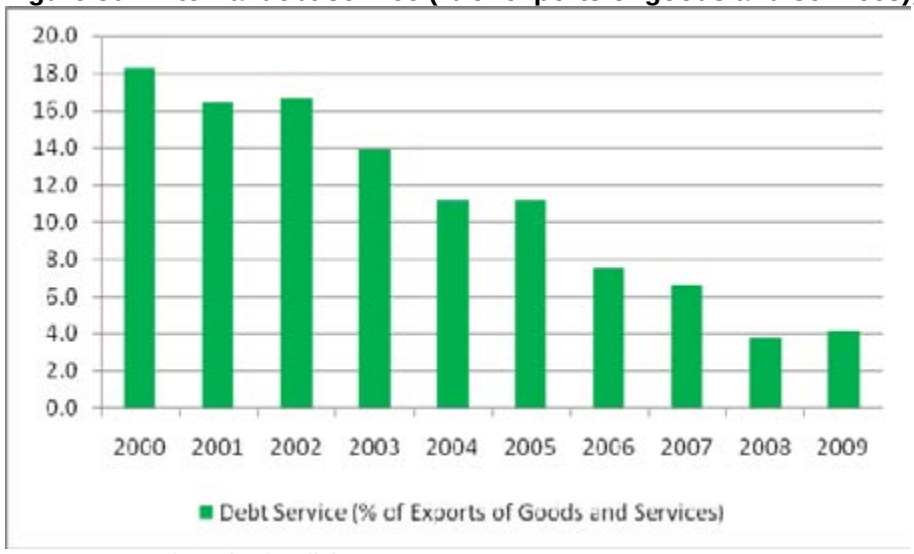
The rest of the external debt (20.8%) is owed to bilateral creditors, the most important of which is that owed to Venezuela, which accounts for 10.1% of the total debt. The importance of Venezuela as Bolivia's bilateral creditor has increased substantially in recent years.

3.2.2 Debt sustainability

In the period 2000-2009, the key solvency indicators for Bolivia remained below the debt burden thresholds over the majority of the period highlighting that public debt and external debt have been sustainable. Bolivia is classified as 'medium performer' on the basis of the quality of its policies and institutions as measured by the World Bank's Country Policy and Institutional Assessment (CPIA), and relevant thresholds are set to be: 150% for the net present value (NPV) of debt to exports ratio, 250% for the NPV of debt to revenue ratio, 20% for the debt service to exports ratio and 30% for the debt service-to-revenue ratio.

The external debt service to exports ratio has dropped drastically since 2000, going from 18.2% to 3.8% in 2008, thus remaining constantly well below the threshold level of 20%(Figure 30). In 2009, it increased to 4.2% but it still remained manageable.

Figure 30: External debt service (% of exports of goods and services), 2000-2009



Source: Central Bank of Bolivia.

Table 11 reports the different levels of spending that the government undertakes for health, education and to meet its debt obligations. It emerges that Bolivia spends roughly the same amount to pay health services and its debt (around 3% of GDP), although its debt obligations have not surpassed its health or education commitments in recent years.

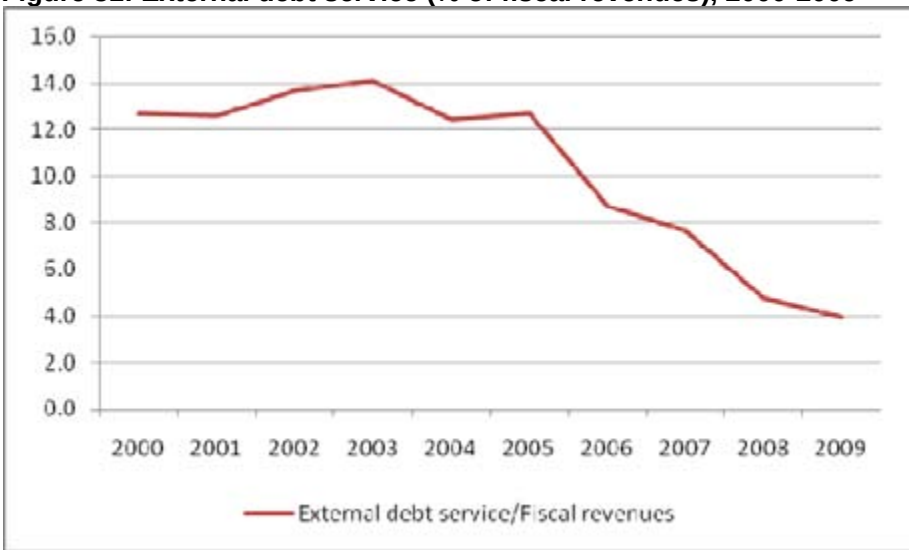
Table 11: Public expenditure pattern – essential services vs. external debt service

Year	Health expenditure (% GDP)	Education expenditure (% GDP)	External debt service (% GDP)
2000		5.47	2.89
2001		5.90	2.81
2002		6.23	2.57
2003	3.71	6.38	3.26
2004	3.82		3.11
2005	3.81		3.11
2006	3.54	6.31	3.17
2007	3.44		2.21
2008			3.06

Source: World Bank's World Development Indicators GDF.

The external debt service to revenue ratio declined from 14.1% in 2004 to 4.8% in 2008 and further to 4% in 2009 (Figure 31).

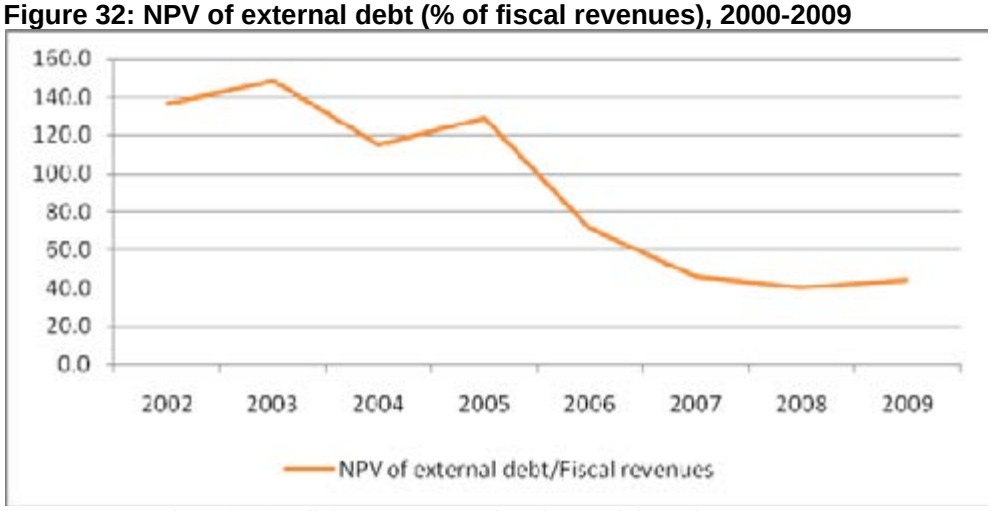
Figure 31: External debt service (% of fiscal revenues), 2000-2009



Source: Central Bank of Bolivia, UDAPE and authors' elaborations.

The NPV of external debt to exports ratio and the NPV of external debt in percent of GNI remained manageable. In 2008, the NPV of external debt to exports ratio was equal to 29.4%, well below the 150% indicative threshold level, while the NPV of external debt in percent of GNI amounted to 14.1%, also below the 40% threshold. The NPV of external debt in percent of government revenues was equal to 40.2% in 2008, well below the 250% indicative policy-dependent threshold (Figure 32).

Figure 32: NPV of external debt (% of fiscal revenues), 2000-2009

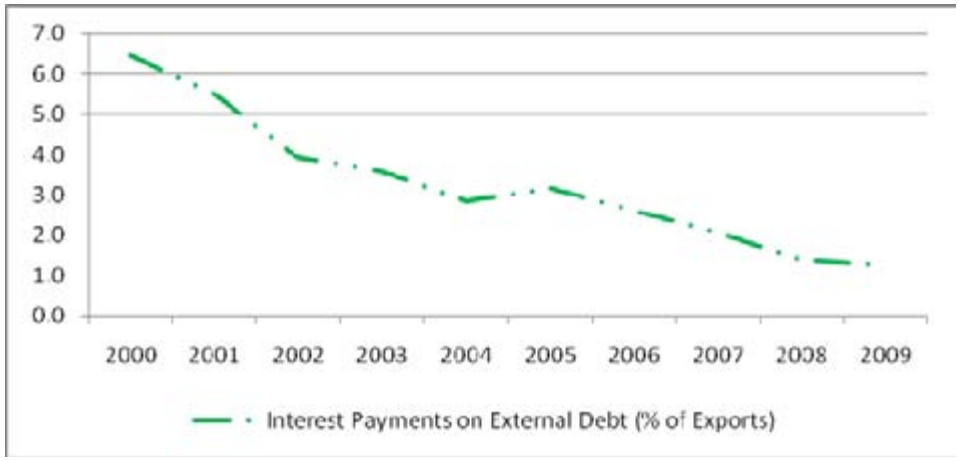


Source: Central Bank of Bolivia, UDAPE and authors' elaborations.

In 2009, both the NPV of debt to exports ratio and the NPV of debt to revenue ratio increased to 46% and 44%, respectively, owing to the adverse impact of the global recession on exports and the fiscal position, but they were still significantly below their indicative thresholds. The sustainability of debt in Bolivia in 2009 notwithstanding the crisis is confirmed by the NPV of debt to GDP ratio, which remained below its threshold at a level of 14%.

Further evidence of an improvement in debt sustainability over time is highlighted by a declining trend in the interest service ratio, which went from 6.5% in 2000 to 1.3% in 2009 (Figure 33).

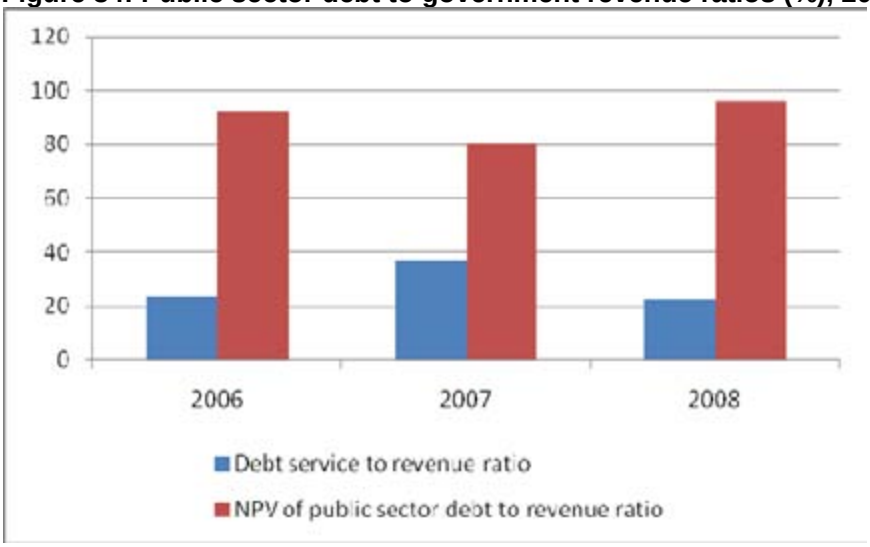
Figure 33: Interest payments on external debt (% of exports of goods and services), 2000-2009



Source: Central Bank of Bolivia.

If we look at public debt, the IMF's Debt Sustainability Analysis (DSA) of December 2009 reports that in 2008 both the debt service to revenue ratio and the NPV of public debt to revenue ratio were below their respective 30% and 250% (Figure 34).

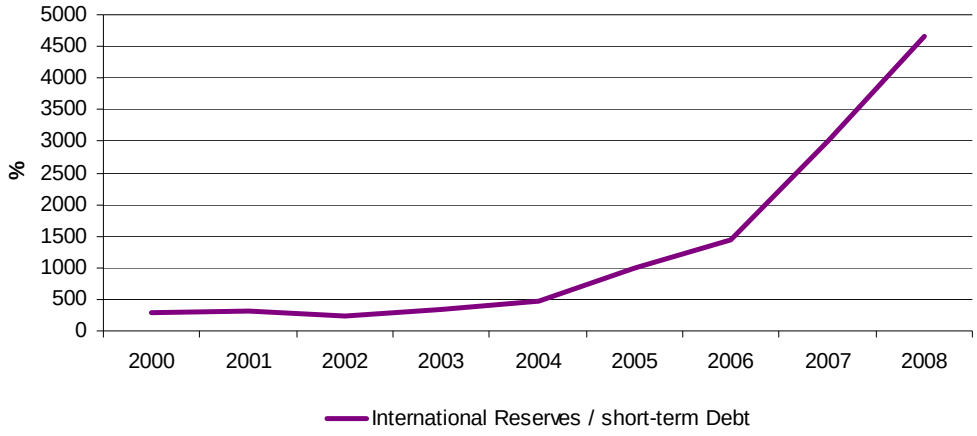
Figure 34: Public sector debt to government revenue ratios (%), 2006-2008



Source: IMF's 2009 Article IV Consultation and authors' elaborations.

Additional evidence comes from the liquidity situation in Bolivia during the period 2000-2008, when the ratio of international reserves to short-term debt, which is the single most important liquidity indicator, increased dramatically from 294% in 2000 to 4950% in 2008 (Figure 35). This trend was propelled by the windfalls generated by the commodities' price boom previous to the global economic downturn, which reinforced the country's reserve adequacy over the past couple of years.

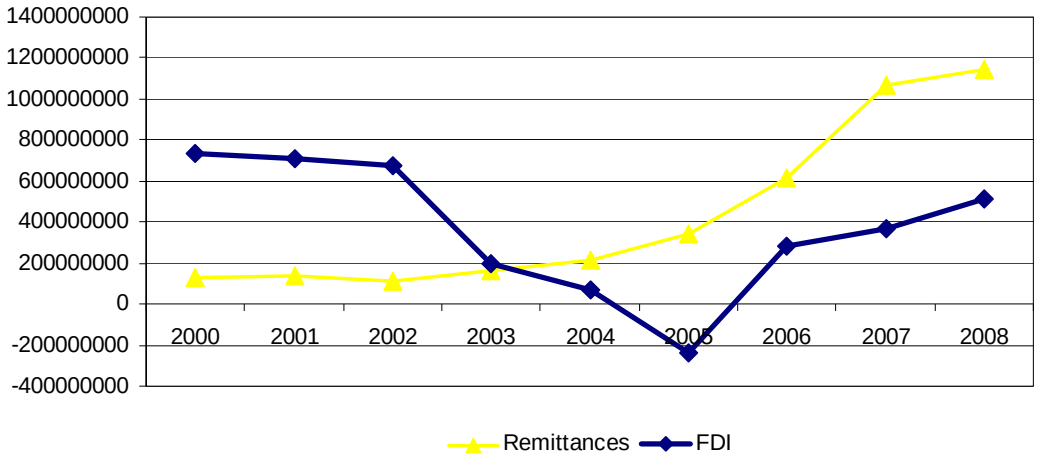
Figure 35: Ratio of international reserves to short-term debt, 2000-2008 (%)



Source: World Bank's GDF.

Finally, in order to assess the vulnerability of the economy to solvency and liquidity risks arising from the external debt position, it is also worth looking at the trends over time of different balance of payments (BOP) flows. Figure 36 reports the trends of foreign direct investment (FDI) and remittances in Bolivia. On the one hand, remittances experienced a steady upward trend up to 2008, albeit with a relative modest drawback of flows between 2007 and 2008. In any case, remittances continue contributing to enhance the country's ability to meet its debt obligations. On the other hand, FDI dropped continuously from 2000 until 2005; it then started recovering again, going from $280 million in 2006 to $512 million in 2008, helping the country to reinforce its debt position.

Figure 36: BOP flows, 2000-2008 (US$)



Source: World Bank's GDF.

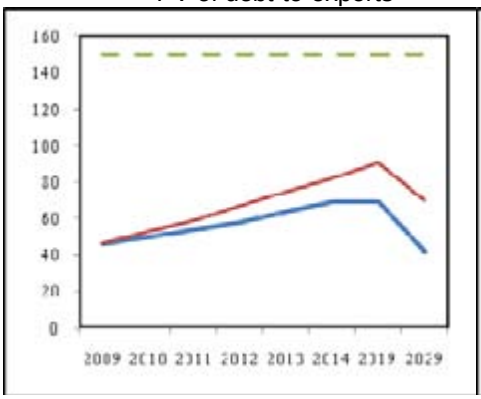
Box 3: Debt stress tests

In the latest DSA of December 2009, the IMF/World Bank conducted a series of stress tests to evaluate Bolivia's risk of debt distress over the next 20 years. The simulation exercise involved projecting debt trends as a response to a series of shocks (i.e. changes in GDP and export growth, external inflation and debt concessionality).

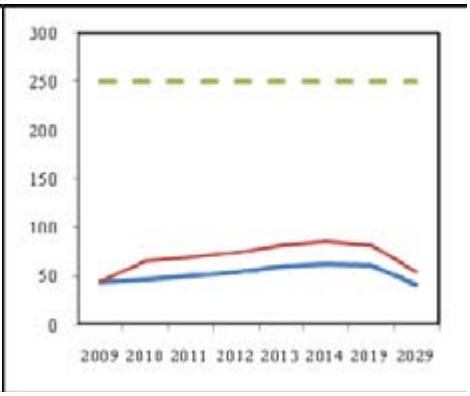
The main underlying macroeconomic assumptions for the baseline scenario are the following:

- Real GDP growth is expected to slightly increase averaging about 4% over the next 20 years.
- The average deflator inflation is expected to decline gradually to 3.5% in the long run.
- Export and import growth are projected to remain below their historical average in the medium and long term.
- Despite the overall balanced fiscal position, net external financing flows are expected to remain positive in the medium term.
- The average concessionality of the public sector borrowing is projected to grow in the medium term.

PV of debt-to-exports

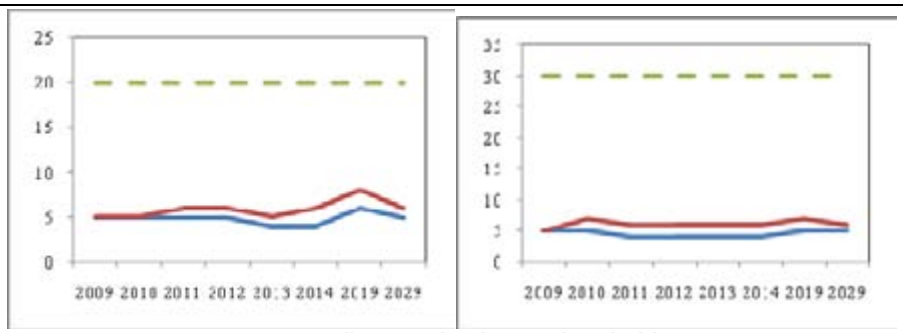


PV of debt-to-revenue



Debt service to exports

Debt service to revenue



-----Baseline ----Shock - - - Threshold

Note: The shocks used vary among graphs. In the first figure, the shock corresponds to a terms shock; in the second to a one-time depreciation shock; in the third to an exports shock; and in the fourth to a one-time depreciation shock.
Source: IMF DSA-BOLIVIA (2009) and authors' elaborations.

In general, results suggest that Bolivia's risk of debt distress is low since debt sustainability indicators present sufficient margins with respect to their indicative thresholds (see figures above). Nevertheless, simulations show that debt sustainability indicators could deteriorate under various standard stress tests, but still remaining manageable over the medium and long term. Debt service is expected to remain low as a consequence of the long maturities of remaining stocks of domestic and foreign debt.

3.3 Aid analysis

Box 4: Commitments vs. disbursements

We mainly use ODA commitments rather than disbursement for the analysis of ODA as the former have better ODA coverage than the latter in the Organisation for Economic Co-operation and Development (OECD) Creditor Reporting Statistic (CRS) dataset, which is our main source of data. This is especially the case for pre-2002 data, where the coverage of disbursements is not sufficient to have reliable data (and this is the reason why OECD CRS data on disbursement are readily available online only from 2002). The use of commitments data should not bias the analysis as commitments are a powerful predictor of disbursements, and this is the case also for our sample of four countries (Bolivia, Bangladesh, Cambodia and Uganda). We do this by running a panel data regression fort the four countries over the period 2002-2008 with disbursement as the dependent variable and commitment lagged two years as the regressor (plus country dummies). The coefficient of commitment was not significantly different from one. Moreover, allocation of commitments across sectors and donors in recipient countries mirrors closely that of disbursements. Keeping that in mind, we will also show some of the results using disbursements data as well.

Bolivia has historically been relatively dependent on ODA both to fund its public expenditure and to execute social and economic projects. At the beginning of this decade, ODA commitments were almost $1.5 billion per year (Figure 37). However, the boost in public revenues, especially related to hydrocarbon production, the phasing down of the reduction in external debt (see above) and a new more horizontal relationship between the government and the donor community (Rodriguez Carmona, 2009) have contributed to somewhat reducing the dependence of the country on external aid. This is visible in the decline in the absolute value of commitments after 2004 (the peak in disbursement in 2006 owes to previous commitments coming on stream), which were close to $500 million in 2008. This pattern is even clearer in the case of the share of ODA in GNI, which fell abruptly from 14% in 2004 to less than 4% in 2008 (Figure 38). This certainly owes to the rapid increase in Bolivian GNI in those years, but also to a relative disengagement of the donor community in Bolivia.[7]

[7] An exception is Venezuela and to some extent Brazil, which according to our interviews have rapidly scaled up their aid programmes in Bolivia in the last few years. However these figures are not included in the OECD CRS figures we use, nor are there official figures available.

Figure 37: ODA flow to Bolivia (constant 2008 US$ million)

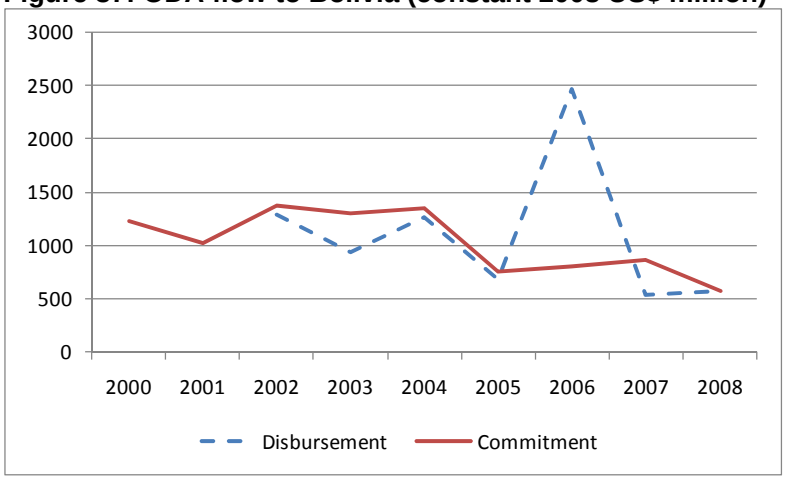


Figure 38: ODA per capita and as share of GNI, Bolivia

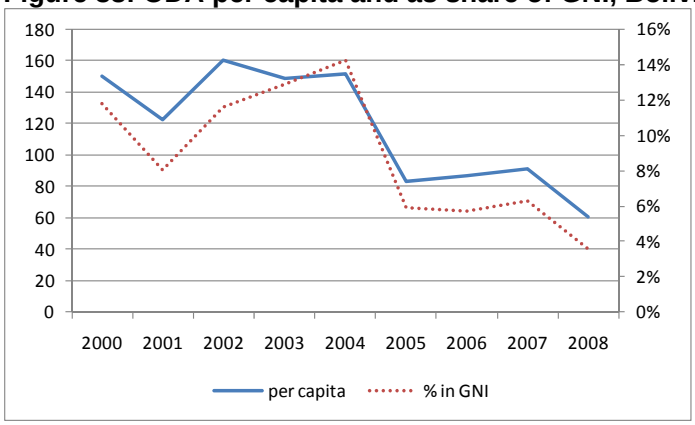


Figure 39 and 40 provide further confirmation of this trend, as they show the decline in the share of Bolivia in total ODA as well as in total ODA to the low-middle income group of recipient countries in terms of both commitments and disbursements.

Figure 39: ODA flow to Bolivia as a share of total ODA

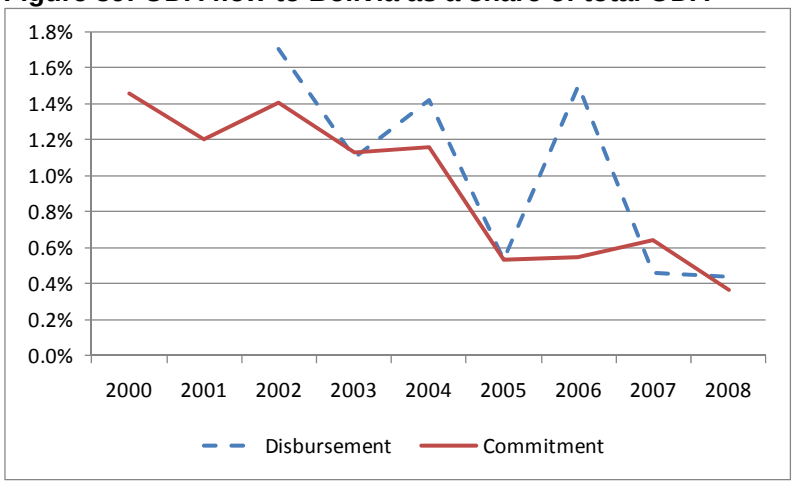
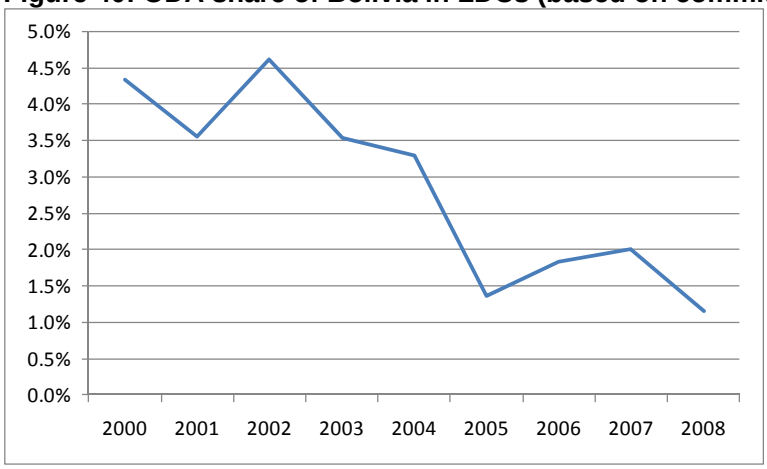


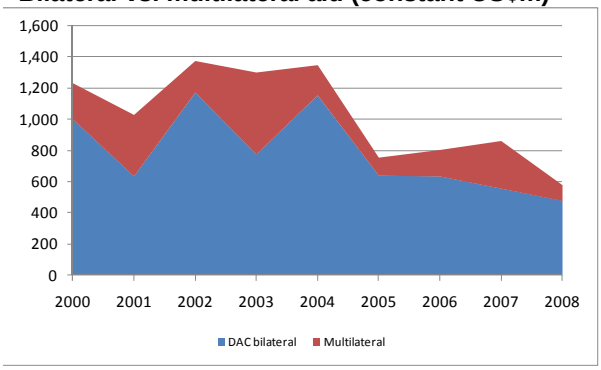
Figure 40: ODA share of Bolivia in LDCs (based on commitment const. 2008 US$ millions)



Multilateral aid in Bolivia has always been a fairly minor part of total ODA (Figure 41), although both multilateral and bilateral aid has been declining in recent years. As such, there is no multilateral institution among the top three donors to Bolivia over 2000-2008, in which period the US, Japan and Germany provided most bilateral ODA (Table 12). All major OECD donors have reduced their commitments to Bolivia in the past decade, with Spain the only exception, having steadily increased its commitments (now the second largest OECD donor).

Figure 41: Bolivia: Bilateral vs. multilateral ODA

Bilateral vs. multilateral aid (constant US$m)



Share of aid in total bilateral and multilateral aid

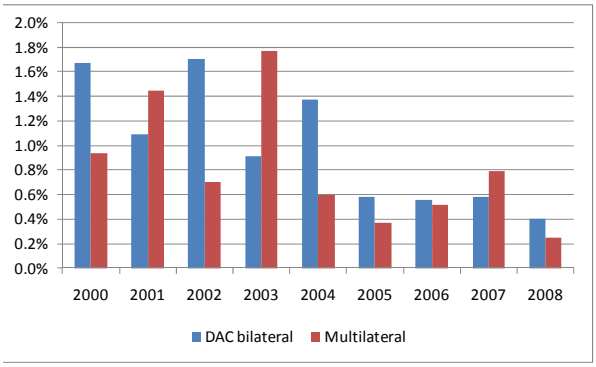
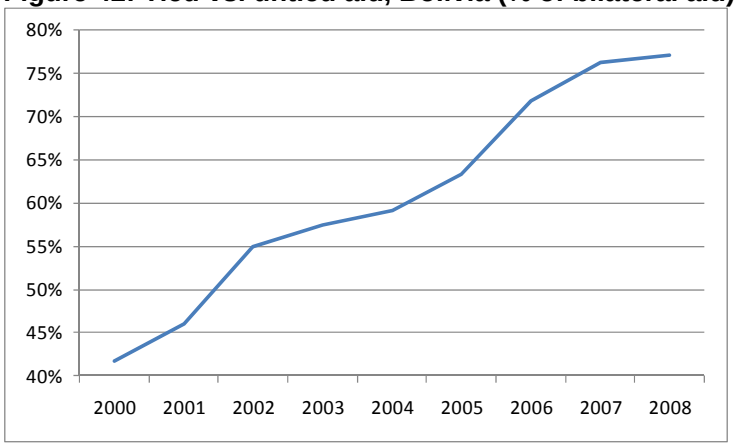


Table 12: Bolivia's major donors (constant 2008 US$ millions)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	*Total*
DAC bilateral	**999**	**635**	**1,169**	**775**	**1,152**	**639**	**634**	**557**	**478**	***7,039***
US	300	132	216	298	195	177	232	182	121	***1,854***
Japan	361	13	18	40	536	58	108	38	31	***1,203***
Germany	111	69	608	88	57	32	51	68	68	***1,151***
Netherlands	31	108	64	111	144	27	61	54	64	***664***
Spain	49	56	59	94	70	57	60	72	91	***609***
Multilateral	**231**	**393**	**203**	**523**	**193**	**115**	**169**	**305**	**101**	***2,232***
IADB	132	175	46	301	37	38	64	137	22	***953***
IDA	7	164	117	125	49	51	35	82	40	***670***
EU	72	49	36	91	92	19	52	67	32	***509***

In line with the general tendency, bilateral ODA to Bolivia is increasingly untied. As of 2008, over three-quarters of bilateral ODA from OECD donors was untied, which makes an important change vis-à-vis the situation at the beginning of the decade, when the majority of ODA was tied. This may also be explained by the shift mentioned above from project-based support (which is more prone to be tied) to budget- and programme-based support, which has been materialising in recent years.

Figure 42: Tied vs. untied aid, Bolivia (% of bilateral aid)



3.3.1 Allocations across sectors

We analyse the ODA allocation across sectors in two ways. First, we simply examine the sectoral composition of ODA, focusing on the macro sectors (i.e. 2-digit OECD CRS sectors) and on some 3-digit level sectors that should be particularly relevant to reach some of the MDGs (e.g. education and health spending); second, we compute a simple index of relative specialisation for those sectors. The index is the ratio of the share of country *i* in total ODA for a specific sector *s* and the share of country *i* in total ODA:

$$S_{is} = \frac{ODA_{is} / \sum_{j=1}^{n} ODA_{js}}{ODA_{i} / (\sum_{j=1}^{n} ODA_{j})}$$

where ODA_{is} and ODA_{i} are ODA in sector *s* (in US$) and total ODA (in US$) for country *i* respectively, and *n* is the total number of donors. A value of the index greater than one indicates that country *i* is receiving more ODA in that sector relative to the other developing countries.

The social sector has been the main recipient of ODA to Bolivia in this decade. The level of commitments to the sector has been declining, although less abruptly than for the other sectors, such as the economic sectors (Table 13), although aid to productive sectors has remained relatively high throughout the period (Table 14). Therefore, the specialisation index for the social sectors has been increasing in recent years (Table 14). It is difficult to establish why aid has become more pro-social in this period in Bolivia. One hypothesis that emerges from our discussions is that, given the rising leverage that the Bolivian government appears to have in recent years over donors' allocation of resources, this may reflect government priorities of increasing social spending.

On the other hand, the importance of debt relief-type aid has been declining over time, consistent with what we noted above. From being one of the key forms of external support, debt-related aid has become unimportant in recent years with the end of the debt relief actions.

It is worth noting that the budget support data do not reflect the actual evolution of ODA to Bolivia towards a budget support type of aid as discussed above. This is most probably because the

OECD CRS definition of budget support does not include direct aid to the government earmarked for certain activities, which has been the most common form of aid to the national budget in Bolivia in recent years.

Table 13: Allocation of commitments across sectors, Bolivia (constant 2008 US$ millions)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
All	**1,230**	**1,028**	**1,372**	**1,298**	**1,346**	**754**	**803**	**861**	**579**
Social infra & services	522	602	351	551	435	378	473	425	360
Education	48	63	43	99	146	101	49	64	55
Basic Education	35	26	24	21	116	6	14	14	18
Health	77	85	49	78	45	58	59	26	50
Economic infra and services	45	29	139	248	73	59	13	167	22
Production sectors	148	39	120	142	116	138	117	132	61
Multisector / cross-cutting	58	81	66	99	89	51	50	86	68
Commodity aid / general prog. Ass.	76	79	36	132	106	38	57	28	33
General budget support	26	15	..	43	56	..	11	..	6
Action relating to debt	373	134	643	110	503	67	80	..	3

Table 14: Allocation of commitments across sectors, Bolivia (specialisation index)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	***Avg***
Social infra & services	1.17	1.66	0.74	1.24	0.77	1.44	1.55	1.12	1.56	***1.25***
Education	0.49	0.76	0.37	0.91	1.13	2.20	0.76	0.85	1.29	***0.97***
Basic Education	1.13	0.99	0.81	0.62	2.41	0.40	0.67	0.89	1.46	***1.04***
Health	1.22	1.71	0.70	1.28	0.63	1.46	1.20	0.51	1.65	***1.15***
Economic infra and services	0.22	0.15	0.66	1.49	0.32	0.62	0.13	1.24	0.20	***0.56***
Production sectors	1.46	0.40	0.98	1.44	1.11	2.83	2.23	2.07	1.41	***1.55***
Multisector / cross-cutting	0.56	0.99	0.61	1.01	1.08	1.16	0.99	1.42	1.64	***1.05***
Commodity aid / general prog. Ass.	0.63	1.02	0.40	1.51	1.67	1.18	1.63	0.76	0.86	***1.07***
General budget support	0.34	0.35		0.67	1.43		0.43		0.21	***0.57***
Action relating to debt	4.78	1.78	4.37	0.49	4.57	0.41	0.55		0.08	***2.13***

3.3.2 Aid volatility

Box 5: Measuring aid volatility

Alternative methodologies are available to measure the volatility of aid. We use the most popular measure in the literature (see e.g. Bulir and Hamann (2003), Pallage and Robe (2001), Chauvet and Guillaumont (2009)), which is based on the Hodrick-Prescott filter (Hodrick and Prescott, 1997). The application of this filter allows extracting the trend and cycle components of any flow variable, ODA in this case. The H-P filter decomposes a series, x_t, (where x_t is the logarithm of the observed series X_t) in a cycle x_t^c and in a trend x_t^g by minimising the following function:

$$\sum_t (x_t - x_t^g)^2 + \lambda \sum_t \left[(x_{t+1}^g - x_t^g) - (x_t^g - x_{t-1}^g) \right]^2$$

With the cycle component being defined as $x_t^c = x_t - x_t^g$. We then define volatility as the share of the cycle component in total observable commitment over the period, i.e. $\sigma = \sum_t x_t^c \Big/ \sum_t x_t$ and also in each period $\sigma_t = x_t^c / x_t$. A higher indicator is associated with higher volatility of aid. The indicators based on commitments are likely to be more accurate than those based on disbursement data as the former is based on a longer time period (1995-2008 vs. 2002-2008) and on wider coverage of the data.

Figure 43 presents the evolution of actual ODA commitments vis-à-vis its trend (calculated according to the method explained in Box 5) for the period 1995-2008. The volatility seems to be reducing over time as the trend line is closer to the observed commitments. This is confirmed in Figure 44, which plots the evolution of σ_t over the period.

Figure 43: How volatile is aid? Actual commitment vs. trend

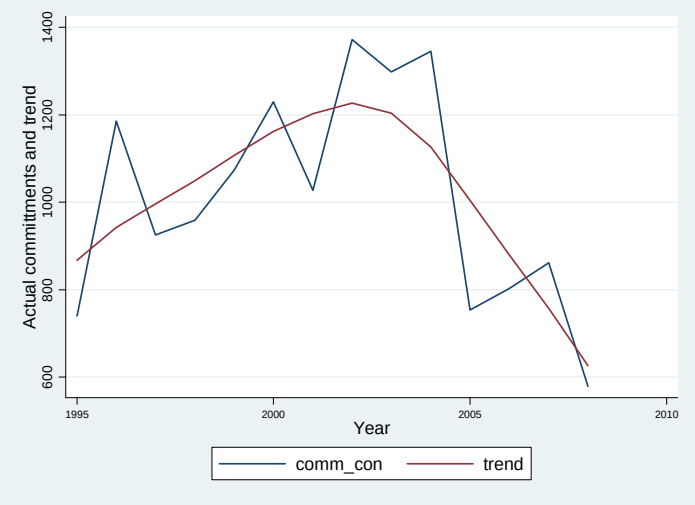
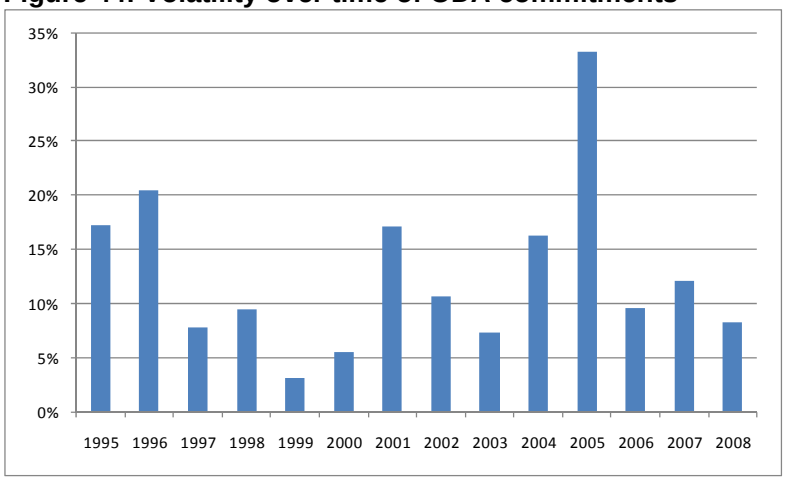


Figure 44: Volatility over time of ODA commitments



3.3.3 ODA and the Paris principles

Aside from the share of tied aid and of aid volatility/predictability, conformity to the Paris Declaration principles of aid alignment, ownership and harmonisation represents another important way to measure the effectiveness of aid in helping to achieve the MDGs. As mentioned above, it is

increasingly clear that the intention of the government to be in the driving seat of the ODA automobile. There are various pieces of evidence in support of this.

First, the government has been increasingly (successfully) asking the donor community to provide funds through its ministries so as to avoid duplication and to increase the alignment of donor interventions to national priorities. One immediate consequence of this has been the increase in the share of budget support-type aid and a reduction in project aid (Rodriguez Carmona, 2009).[8] Another consequence is the recent creation of a working group of the major donors to coordinate the operations of the donor community in Bolivia. Moreover, there has been an evident decline in the use of conditionalities by donors. While this is consistent with a general trend in the aid industry, it is also the consequence of two factors that have played a major role in Bolivia: the progressive end of the conditionalities attached to the debt forgiveness period (the bulk of HIPC II was implemented in 2001-2002 in Bolivia); and the diminished fiscal dependence of Bolivia on external aid (mainly as a result of the hydrocarbon-related fiscal resources boom).

These features are obviously in line with an ODA provision respecting the principles of alignment, ownership and harmonisation and are therefore a welcome trend for the country. Whether this has been the consequence of a clear government vision or of a favourable international context for Bolivia is less clear, but also less relevant in the context of this study.

3.3.4 Effects of the crisis on aid and future perspectives

As shown above, aid to Bolivia has started to decline well before the beginning of the global financial crisis. As ODA by major crisis-affected economies had become already fairly small by the time of the crisis, there was less scope to operate major cuts on aid programmes to Bolivia. Central Bank estimates (IMF, 2010) indicate that that grants to Bolivia (part of total ODA) as a percentage of GDP declined in 2009 to 1.0%, from 1.2% in 2008. However, this is most probably a result of the continuation of a declining trend (e.g. the decrease from 2007 to 2008 was even more marked, i.e. 1.6% to 1.2%) rather than to any crisis-related effect per se.

This is confirmed by our fieldwork, which suggests no signs of cuts in aid programmes as a result of the effects of the crisis in the donors' national budgets. To the best of our knowledge, the only known cases of important cuts in aid to Bolivia in 2009 are in Danish and US aid. However, our information suggests that these cuts are related to strategic decisions on the reallocation of resources across countries (in the case of Danish aid) and to foreign policy issues (in the case of US aid) rather than to any crisis effects.

Diminished dependence on aid is likely to continue in the following years as fiscal revenues are expected to stay relatively high (especially as natural gas-related revenues are fairly sure – unless the international price drops abruptly). However, existing donors are likely to continue to operate in the country and there is no indication that they will scale down their assistance significantly in the near future. Importantly, non-traditional donors such as Brazil and especially Venezuela have signalled their intention to scale up assistance. In this context, the process of increased ownership, harmonisation and alignment may continue in the future.

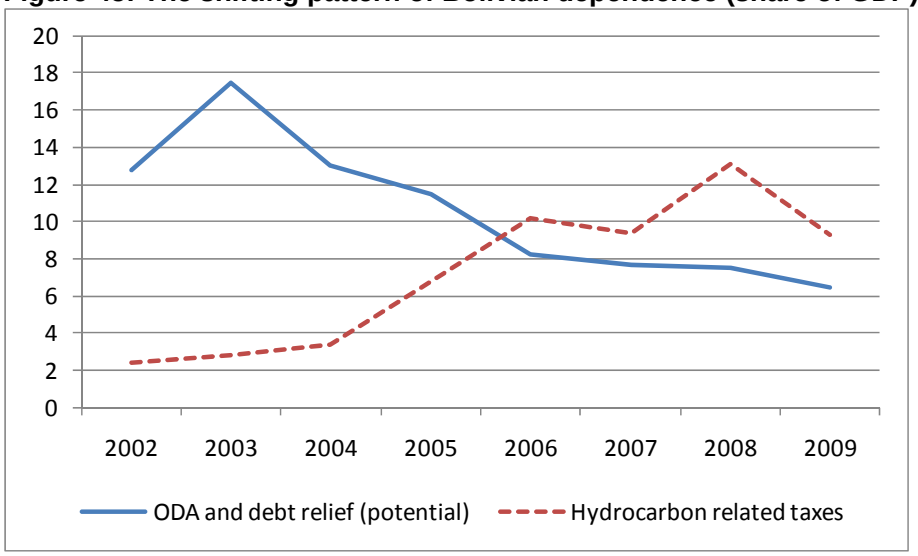
3.4 The shifting pattern of external dependence and the MDGs

From the above analysis, it is clear that the type of dependence of Bolivia on MDG 8-related external flows has changed radically during the decade. The composition of external finance in public expenditure shifted from domination by ODA and debt forgiveness in the first half of the decade to domination by trade, mainly through revenues from hydrocarbon exports. Figure 45 clearly shows this by plotting the evolution of the sum of ODA and the annual potential value of

[8] Collecting hard figures on these shares has proven difficult, but all of the people interviewed concurred that there is an increase in the budgetisation of aid as well as a higher involvement of the government in leading the aid allocation.

debt relief (computed as annual amortisations plus interest on external debt) against hydrocarbon-related taxes (everything as a percentage of GDP). The bonanza of international prices of natural gas along with the introduction of the IDH – an additional tax of 32% on the value of natural gas production – in 2005 has generated a drastic increase in the absolute and relative value of hydrocarbon-related fiscal revenues during the decade. On the other hand, the debt relief operations of the beginning of the decade and declining ODA flows have meant reduced dependence on concessional flows.

Figure 45: The shifting pattern of Bolivian dependence (share of GDP)



Source: Authors' elaboration on IMF (2010) and Bolivian authorities' data.

This shift in the type of external dependence of Bolivia also implies a shift in its relations with the international community, including in its role in supporting Bolivia's achievement of the MDGs. The chronic inability of the Bolivian government to raise its own resources and the persistent fiscal deficit it faced at the beginning of the decade meant that the international community played a crucial role in financing fiscal expenditure, especially social-related expenditure, which is directly related to the achievement of the MDGs. Perhaps the most emblematic sign of this influence was the conditionality imposed through the HIPC II operation in 2001-2002. The agreement implied that resources liberated through debt forgiveness would be allocated to the social sector and this represented a consistent part of Bolivia's social spending in those years. The change in conditions allowed the government to turn its chronic deficit into a fiscal surplus (also with the increase in revenues from indirect taxes linked to GDP growth), along with an important increase in social spending, mainly funded with own resources. As a consequence, the international community has played an increasingly less important role, especially as far as the provision of funds for MDG-related spending is concerned.

4. Partnerships (MDG 8)

The above analysis yields a number of implications in terms of the potential role for the international community in the near future to support the achievement of the MDGs in Bolivia through the partnerships suggested by MDG 8.

4.1 Additional international funding is not the priority

The evidence presented in Sections 2 and 3 goes a long way to support the idea that the provision of additional financial resources may not be the priority with regard to organising support to the MDG achievements. First, Bolivia has finally been able to generate a large flow of financial resources to fund its social expenditure, mainly through direct taxation on an increasingly valuable hydrocarbon production, along with indirect taxation riding on healthy economic growth. This has been accompanied by an increasing government focus on the social sector, whose share in total public expenditure has steadily increased during the past decade (while ODA dependence has declined). At the same time, though, this increase in public spending does not always appear to have had the expected positive effect in terms of achievement of the MDGs, as is the case in education. We have put forth a number of possible reasons for this, such as diminishing returns to public expenditure, especially as the goal becomes closer (e.g. it is more difficult to bring the net enrolment ratio from 80% to 85% than from 95% to 100%) and the inefficiency of the public expenditure (for any given level of resources). In particular, the latter factor may constrain progress towards MDG achievement regardless of the level of resources available.

Second, official projections suggest that Bolivia is on track to achieve most of the MDG targets (and it has already achieved some, such as those related to MDG 3). We have explained the reasons why these data are more optimistic than other data such, as those used by Vos et al. (2009), according to which Bolivia is off track on most of the MDGs. It is also clear that the reliability of the official projections, provided by ministries, may not be assured, but these projections are based on most information available.

A third reason against additional resources is that the recent financial crisis has not caused any major changes in progress towards MDG achievement. That is because Bolivia showed resilience in facing the crisis, which has meant that feared negative impacts on the economy have not been generated, as argued above and more extensively by Jemio and Nina (2010).

Fourth, the favourable international context has not only determined a massive increase in hydrocarbon exports, with associated virtuous fiscal effects, but has also spurred the growth of mineral exports, with associated positive effects on employment and income (particularly relevant for MDG 1).

In the span of a few years, Bolivia has thus become much more able to take its social and economic destiny in its own hands, reducing the need to resort to the international community as mainly a donor community in a relation of vertical dependence. This is not to say that financial support by donors should keep declining or stop in the coming years. On the contrary, this support, especially in the form of grants, represents an important cushion against the eventual vagaries of international markets that may jeopardise Bolivia's fiscal and economic resilience, and with this its progress towards the MDGs. This is especially the case if the horizontal collaboration between the donor community and the Bolivian government keeps being reinforced, avoiding duplications and increasing the alignment of donor and government priorities.

In the same way, the policy option of debt forgiveness has lost some of the importance that it had at the beginning of the decade when fiscal resources were overstretched and the burden of debt in

the economy was large. At present, the potential yearly value of the savings from debt forgiveness is estimated at around $120 million, which is a relatively low figure in today's Bolivia. On the other hand, debt forgiveness is always a relatively easy option to convey additional funds to the country in case of need.

4.2 Help improve the efficiency and effectiveness of public policies

In this context, an important role the donor community has to play in supporting Bolivian efforts towards MDG achievement lies in its provision of technical assistance. This is especially important inasmuch as Bolivia's development partners can build on their experience in devising effective public policies and efficient systems of policy implementation. As noted above, these appear to be key areas in influencing the probability of Bolivia achieving the MDGs. Ineffective and/or inefficient public spending (for instance because it does not target the real needs of the population or does not deliver services efficiently) may hinder achievement of the goals despite an abundance of public resources.

There are increasing numbers of instances in which the donor community has provided this type of support to Bolivia, for example by promoting breakfast for children in schools (*desayuno escolar*). This experimentation was instrumental in devising a system now adopted by several municipalities in Bolivia, which is considered to be an important determinant in the progress towards the primary school completion target. By the same token, the financial and technical contribution by donors has been key in the recent establishment of a school to train public sector officials, whose final objective is to improve the quality of public policies.

4.3 Market access or access to markets?

As highlighted in Section 3, trade has been a boon for Bolivia's economy in recent years, but the role of market access through trade agreements has been limited in determining this bonanza. Proximity to Brazil and Argentina has allowed for hydrocarbon exports, and international prices of the main Bolivian exports, including natural gas and minerals, have produced the recent boom, so important in the country's progress towards MDG achievement. The limited influence of preferential market access on Bolivian exports is further confirmed by the limited effects on NTEs of the end of the ATPDEA with the US. Bolivia already enjoys good market access in its main markets and it is thus not clear to what extent better access in terms of tariffs to international markets would be beneficial.

Given the importance of agricultural products in Bolivia's NTEs, better access through lower non-tariff barriers may be more relevant than improving access in terms of tariffs. This is the case particularly for certain exports, such as Brazil nuts, whose access to developed countries' markets is often reduced by sanitary and phyto-sanitary barriers.

Getting better access in those products could be linked to infrastructure investments, such as enhancing the capacity of national certification agencies. The international community could support these types of investments, which lie at the core of the AfT initiative. Unfortunately, Bolivia has been receiving less trade-related assistance in the past few years (pretty much in line with the rest of the aid sectors), but this could be important to stimulate especially NTEs, which are key for employment and income generation. Similarly, investments in infrastructure, especially transport infrastructure, are still a key part of enhancing the integration of Bolivia into regional and international markets. The international community has been playing a role in this area, with a number of transport projects executed throughout the region. However, aid funds to these types of long-term investments are declining, although the government is currently able to scale up its transport infrastructure investments (although not as much as its social spending). In this sense,

the international community would probably do better to help Bolivia achieve better access to markets (i.e. physical integration) rather than better market access (i.e. better tariff conditions).

4.4 Accessing technology and drugs for development

Bolivia has historically lagged behind its countries comparators (both from the same income group and from the same region) in terms of access to and development of technology. This is true for telephone, internet and personal computers, and applies to measures of access, usage as well as quality, while the country is faring pretty well in terms of affordability, as shown in Table 15.

Table 15: ICT indicators for Bolivia in international perspective

	Bolivia		Lower-middle income	Latin America
	2000	2008	2008	2008
Access				
Telephone lines (per 100 people)	6.1	7.1	13.6	18.5
Mobile cellular subscriptions (per 100 people)	7	49.8	47	80.3
Fixed Internet subscribers (per 100 people)	0.5	2.1	5.6	6.2
Personal computers (per 100 people)	1.7	2.4	4.5	11.5
Usage				
Internet users (per 100 people)	1.4	10.8	13.9	28.9
Quality				
Population covered by mobile network (%)	43	46	77	92
Fixed broadband subscribers (% of total Internet subscribers)	0	17.1	40.4	88.8
International Internet bandwidth (bits/second/person)	2	225	153	1,391
Affordability				
Residential fixed line tariff (US$/month)	—	22.7	4.8	10.4
Mobile cellular prepaid tariff (US$/month)	—	5.9	8.4	9.6
Fixed broadband Internet access tariff (US$/month)	—	33.5	31.4	34

Source: World Bank (2009).

This relative backwardness is obviously problematic in terms of both economic and social development, and only in certain areas does the country seem to be catching up. However, in 2008 only 46% of the population was covered by a mobile telephone network, similarly, only 2.1 of Bolivians had an internet subscription in 2008. These figures hide a large heterogeneity between rural and urban areas, with rural dwellers having really poor access to technology. It is not clear to what extent the recent nationalisation of the national telephone provider Entel (which is the fixed line monopolist and the largest player in the mobile sector) may help in expanding access or the population as well as reducing costs, which are primary objectives of nationalisation.

The international community could have a role to play to try to improve access to technology in Bolivia. This is especially the case through assistance in the development of a regulatory framework in the telecommunication sector, which would help advance the technological frontier in the country. On the other hand, the international community may have a limited role as far as the development of public–private partnerships – often a model called for in developing countries – is concerned, given the current wave of anti-private involvement mood in public utilities in Bolivia.

Similarly, and perhaps more worryingly, access to drugs is problematic for the poorer section of the society in Bolivia. A recent study carried out across six of the nine country's provinces (AIS, 2009) reveals that there is a great shortage of generic drugs, especially in public pharmacies, and the price of both generic and branded drugs is higher than international prices. The costs for almost any type of treatment in Bolivia is substantial for a worker and it becomes prohibitive for certain treatments, such as in the case of respiratory infections.

In light of this scenario, aside from the actions taken independently by the national government, the international community could help Bolivia improve the accessibility of drugs especially for poor people. One viable way to act could be through the establishment of patent pools, in which different patent holders, such as companies, universities or research institutes, would voluntarily make their patents available to Bolivia on a non-exclusive basis (UN, 2009). In exchange for payment of a royalty to the pool to remunerate the patent holders, generic manufacturers can obtain a licence to access patents in the pool in order to produce specific medicines, make further improvements to them and produce and sell them in developing countries at low cost.

Moreover, countries with manufacturing capacity should facilitate both the exporting of generic medicines to Bolivia (exploiting the flexibilities in the TRIPS (Trade-Related Aspects of Intellectual Property Rights) agreement), and, where possible, the exchange of technology transfer between developed countries and Bolivia for the production of essential medicines.

4.5 Summary on development finance flows

Table 16 is an overview table on changes in development finance (flows which finance the balance of payments) over 2008 to 2009. Not all the relevant data are available, but some conclusions emerge on the basis of estimates so far.

Development finance flows deteriorated considerably in the case of Bolivia, by about $820 million. The IMF estimates the decrease in external debt changing inflows as worth 12.3% of GDP. An extension of DFQF to all LDCs would not help Bolivia – it would lose around $72 million in export revenues – but a decrease in OECD tariffs and subsidies on an MFN basis would not harm Bolivia much ($0.7 million). Public debt increased by 2% of GDP over 2008-2009, external debt by 1% of GDP.

Table 16: Bolivia – development finance and other flows over 2008-2009

	Source	**Level in 2008 US$ millions (unless otherwise stated)**	**Absolute change 2008-2009 (or closest annualised number), US$ millions (unless otherwise stated**
Foreign direct investment	Banco Central, 2008 and 2009	508	- 84
Portfolio flows (balance of payments, portfolio investment)	Banco Central, 2008 and 2009	-208	22
International bank lending	BIS Sep 2008-Dec 2009	459	291
Trade balance (goods)	ITC trade map using US, EU and BRIC countries	1836	-1014
Official development assistance	ODA	579	0
Remittances	Forecast (World Bank)	1144	-36
Sum above			-821
Memorandum items			
MDG GAP			
Benefits of DFQF to LDCs by OECD	Bouet et al. (2010)		0.03% decrease in exports (around $72 million)
Preference erosion of a possible Doha round outcome	ODI (2006), Appendix Table 1, upper bound		0.7
Public external debt as % of GDP	IMF's DSA (data as a share of GDP) 2008 data and 2009 forecasts	14.3%	15.3%

Public as % of GDP	IMF's DSA (data as a share of GDP), general government debt excluding state-owned enterprises, 2008 data and 2009 forecasts	37.5%	39.4%
Net debt creating flows (negative is an inflow)	IMF's DSA (data as a share of GDP) 2008 data and 2009 forecasts	-19.3%	-7.0%

5. Conclusions

A favourable international environment along with a greater focus of social issues by the government are two important factors that have helped Bolivia's recent progress in the attainment of MDGs. Except for MDG 2, the country seems to be set to achieve the goals (with gender equality already achieved).

This advance has been achieved in a period of radical change in Bolivia's dependence on MDG8-related external flows (ODA, trade and debt). The composition of external finance in public expenditure shifted from domination by ODA and debt forgiveness in the first half of the decade to domination by trade, mainly through revenues from hydrocarbon exports. The bonanza of international prices of natural gas along with the introduction of the IDH – an additional tax of 32% on the value of natural gas production – in 2005 has generated a drastic increase in the absolute and relative value of hydrocarbon-related fiscal revenues during the decade. On the other hand, the debt relief operations of the beginning of the decade and declining ODA flows have meant reduced dependence on concessional flows. As a consequence, the international community has played an increasingly less important role, especially as far as the provision of funds for MDG-related spending is concerned.

This evidence supports the idea that the provision of additional financial resources may not be the priority with regard to organising support to MDG achievements. The international community should keep financially supporting the country (possibly providing more harmonised and aligned aid) as this represents an important cushion against the eventual vagaries of international markets that may jeopardise Bolivia's fiscal and economic resilience.

But funding is not the scarcest resource in reaching the MDGs in Bolivia right now. Spending efficiently and effectively seems to be a more important area for support in Bolivia. In this sense, the donor community can build on its experience in devising effective public policies and efficient systems of policy implementation.

The limited impact on Bolivian NTEs of the end of the ATPDEA with the US confirms the limited influence of preferential market access. Bolivia already enjoys good market access in its main markets and it is thus not clear to what extent better access in terms of tariffs to international markets would be beneficial. Probably better access through lower non-tariff barriers may be more relevant than improving access in terms of tariffs, given the importance of agricultural products – whose exports are often obstructed by non tariff barriers – in Bolivia's NTEs.

Access to markets would be made easier if Bolivia were better integrated with world markets, with its regional neighbours in particular. As a landlocked economy, this integration could make a real difference for its NTEs. This calls for the support of the international community through AfT, which has instead been worryingly dwindling in recent years.

Finally, MDG8 could be pursued in Bolivia through support for improving access to technology (especially through technical assistance on the regulatory framework) and access to affordable drugs (through patent pools and incentivising exports of generic drugs to Bolivia from countries with manufacturing capacity).

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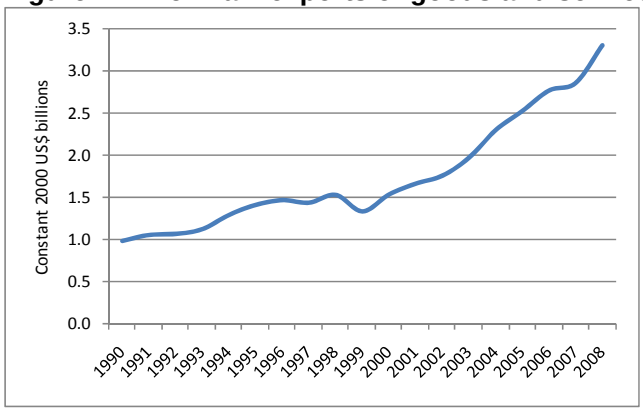
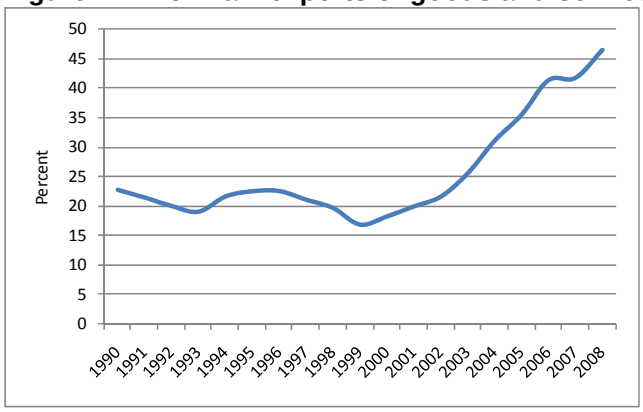
Annex

Figure A1: Bolivia – exports of goods and services, 1990-2008



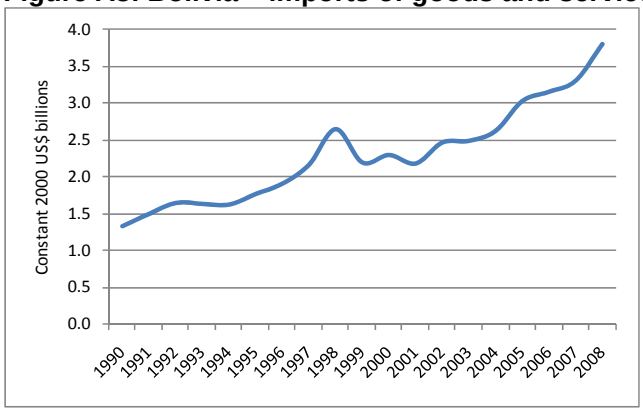
Source: World Development Indicators.

Figure A2: Bolivia – exports of goods and services as proportion of GDP, 1990-2008



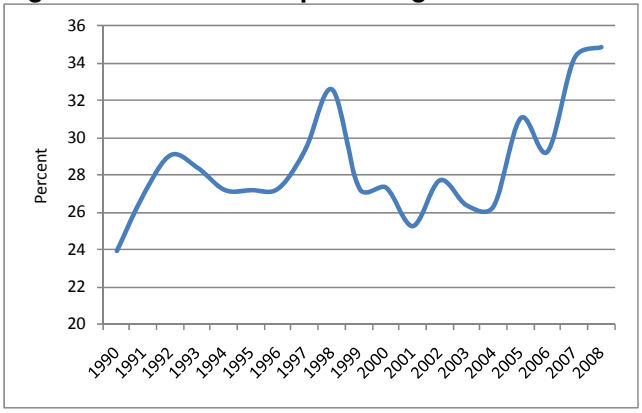
Source: World Development Indicators.

Figure A3: Bolivia – imports of goods and services, 1990-2008



Source: World Development Indicators.

Figure A4: Bolivia – imports of goods and services as proportion of GDP, 1990-2008



Source: World Development Indicators.

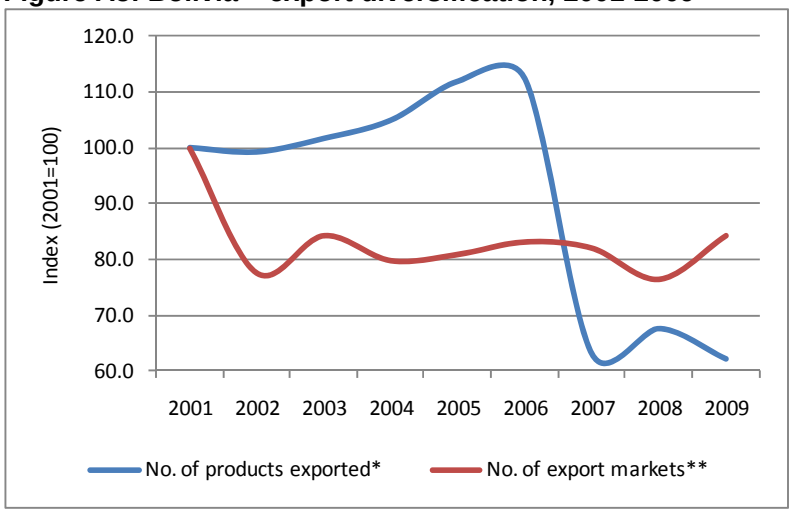
Table A1: Bolivia's main exports and markets

Destination	Share of total export value										Avg. ann. change
	Avg. 2007-9	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	
HS 27: Mineral fuels, oils, distillation products, etc											
Brazil	79.0%	91.1%	92.7%	94.5%	81.4%	73.6%	74.4%	74.5%	83.4%	76.7%	-2.1%
Argentina	13.1%	2.6%	1.9%	1.3%	9.7%	16.0%	15.2%	14.9%	8.8%	18.4%	27.5%
United States of America	3.8%	3.5%	1.4%	1.1%	5.7%	8.4%	2.4%	4.1%	4.0%	3.0%	-2.0%
All developed countries [b]	*4.4%*	*3.7%*	*1.5%*	*1.1%*	*5.7%*	*8.4%*	*2.4%*	*6.1%*	*4.0%*	*3.0%*	*-2.7%*
BRICs/S. Africa	*79.5%*	*91.1%*	*92.8%*	*94.5%*	*81.4%*	*73.6%*	*74.4%*	*74.5%*	*84.4%*	*76.7%*	*-2.1%*
HS 26: Ores, slag and ash											
Republic of Korea	37.1%	0.1%	0.9%	7.1%	19.2%	16.6%	5.9%	18.6%	53.8%	33.2%	103.8%
Japan	22.1%	0.0%	1.1%	6.1%	20.8%	35.4%	46.4%	38.2%	13.4%	19.5%	51.5%
EU27	14.7%	12.7%	13.3%	15.6%	19.2%	11.4%	13.0%	15.4%	11.6%	17.3%	3.9%
Peru	5.3%	5.8%	6.5%	7.2%	7.2%	6.9%	4.9%	4.5%	5.6%	5.6%	-0.3%
Canada	4.3%	3.6%	2.1%	0.8%	2.6%	3.9%	5.0%	4.4%	4.8%	3.6%	0.3%
China	3.4%	1.7%	2.5%	3.4%	6.5%	3.1%	2.2%	2.2%	2.5%	5.3%	15.5%
United States of America	3.1%	2.2%	0.8%	0.8%	0.6%	2.3%	1.7%	1.7%	2.1%	5.1%	11.2%
Switzerland	2.6%	69.7%	64.2%	42.0%	6.7%	8.4%	10.2%	3.4%	1.2%	3.5%	-31.2%
Panama	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	5.0%	1.4%	1.7%	-22.0%
Argentina	1.4%	1.0%	0.8%	4.5%	4.3%	4.0%	3.8%	3.2%	1.1%	0.6%	-7.0%
Malaysia	1.0%	1.0%	2.3%	4.8%	7.1%	4.7%	2.2%	1.4%	1.4%	0.2%	-16.6%
All developed countries [b]	*84.5%*	*88.3%*	*82.4%*	*72.6%*	*69.1%*	*78.1%*	*82.1%*	*81.6%*	*86.8%*	*84.3%*	*-0.6%*
BRICs/S. Africa	*4.3%*	*1.8%*	*2.5%*	*3.6%*	*7.2%*	*3.7%*	*2.3%*	*2.5%*	*2.5%*	*7.2%*	*18.8%*
HS 23: Residues, wastes of food industry, animal fodder											
Venezuela	49.1%	27.4%	51.3%	50.2%	72.2%	59.6%	60.9%	56.5%	40.3%	51.3%	8.2%
Colombia	18.7%	64.0%	41.7%	33.8%	9.3%	28.5%	26.0%	20.7%	16.8%	18.8%	-14.2%
Peru	14.2%	1.2%	1.0%	4.0%	7.6%	5.9%	5.7%	8.3%	14.5%	18.0%	39.9%
Chile	10.6%	1.4%	3.5%	8.5%	8.1%	5.7%	5.0%	9.9%	10.9%	10.9%	29.2%
Argentina	6.3%	0.0%	2.5%	0.4%	0.0%	0.0%	0.0%	2.1%	17.2%	0.0%	
Ecuador	1.0%	1.8%	0.0%	3.1%	0.5%	0.0%	2.1%	2.2%	0.0%	0.9%	-7.7%
All developed countries [b]	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*2.6%*
BRICs/S. Africa	*0.1%*	*0.1%*	*0.1%*	*0.2%*	*0.2%*	*0.2%*	*0.3%*	*0.2%*	*0.2%*	*0.1%*	*-4.9%*
HS 15: Animal, vegetable fats and oils, cleavage products, etc											
Colombia	44.4%	48.0%	34.6%	54.6%	53.0%	67.2%	50.8%	43.8%	38.2%	52.1%	1.0%
Venezuela	25.8%	35.4%	51.0%	31.5%	30.8%	21.6%	38.9%	33.3%	18.1%	29.0%	-2.5%
Peru	9.7%	4.4%	7.8%	8.3%	6.5%	8.2%	6.5%	9.6%	10.2%	9.1%	9.6%
Argentina	8.4%	3.5%	2.4%	1.9%	3.0%	0.0%	0.0%	1.1%	20.2%	0.2%	-28.2%
Ecuador	4.1%	0.7%	1.3%	0.7%	1.3%	1.2%	2.3%	4.5%	3.2%	4.9%	27.3%
EU27	2.4%	0.4%	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%	4.7%	1.5%	16.5%
Chile	2.2%	6.6%	1.5%	1.1%	1.5%	1.5%	1.0%	1.1%	3.0%	2.2%	-12.8%
All developed countries [b]	*2.7%*	*0.6%*	*0.2%*	*0.2%*	*0.2%*	*0.1%*	*0.0%*	*1.2%*	*4.7%*	*1.5%*	*12.6%*
BRICs/S. Africa	*0.8%*	*0.1%*	*0.3%*	*0.9%*	*0.0%*	*0.0%*	*0.2%*	*2.2%*	*0.5%*	*0.1%*	*-1.4%*

Destination	Share of total export value										Avg. ann. change
	Avg. 2007-9	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	
HS 71: Pearls, precious stones, metals, coins, etc											
Switzerland	58.6%	32.1%	57.3%	55.0%	31.8%	51.3%	60.0%	59.2%	60.6%	55.8%	7.1%
United States of America	35.5%	33.4%	39.4%	43.3%	65.4%	45.5%	36.3%	35.8%	33.1%	38.1%	1.7%
Canada	4.4%	0.0%	0.0%	0.0%	0.3%	1.8%	2.5%	3.9%	4.2%	5.2%	77.0%
All developed countries [b]	*99.0%*	*97.3%*	*99.5%*	*99.7%*	*99.6%*	*99.6%*	*99.6%*	*99.6%*	*98.2%*	*99.3%*	*0.3%*
BRICs/S. Africa	*0.2%*	*0.2%*	*0.3%*	*0.2%*	*0.3%*	*0.1%*	*0.1%*	*0.2%*	*0.1%*	*0.3%*	*8.0%*

Notes:
(a) All markets accounting for 1% or more of average 2007–9 total export value.
(b) IMF list of advanced economies, *World Economic Outlook*, October 2009.
Source: Calculated from data obtained from ITC Trade Map.

Figure A5: Bolivia – export diversification, 2001-2009

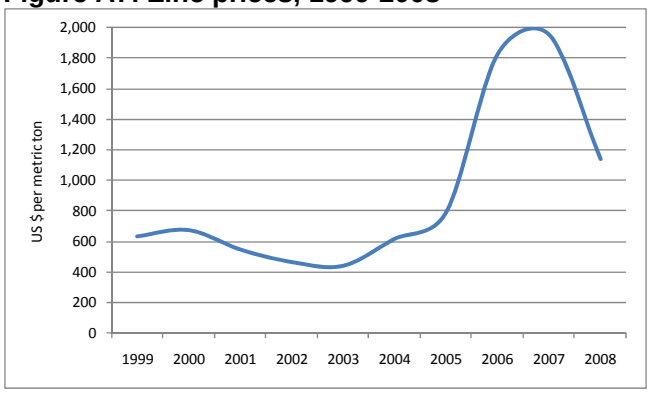


Notes: *index calculated on the number of HS6 subheads exported in each year as a percentage of total number of subheads in whichever version of the HS nomenclature applied in that year (the period 2001-2009 covers three versions of the HS). ** EU countries counted separately; various 'unspecified' markets not included.
Source: Calculated from data obtained from ITC Trade Map.

Figure A6: Bolivian natural gas prices

Source: Central Bank of Bolivia, reported in Jemio and Nina (2010).

Figure A7: Zinc prices, 1999-2008



Source: IMF International Financial Statistics online (descriptor 'Zinc: Bolivia').

Table A2: Bolivia's main markets

Destination	Share of total export value										Avg. ann. change
	Avg. 2007-9	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	
Brazil	38.0%	22.2%	24.3%	30.0%	31.7%	36.3%	37.7%	36.7%	43.8%	31.5%	4.5%
Republic of Korea	8.9%	0.1%	0.2%	1.0%	2.5%	2.2%	1.2%	4.1%	11.8%	9.3%	69.6%
Argentina	7.9%	5.0%	2.0%	3.4%	5.8%	9.5%	9.3%	8.7%	7.1%	8.2%	6.3%
United States of America	7.7%	13.9%	14.1%	14.3%	16.0%	14.6%	9.8%	8.6%	6.9%	7.7%	-7.1%
EU27	7.5%	10.4%	7.1%	6.8%	7.2%	5.8%	5.9%	7.9%	6.1%	9.1%	-1.6%
Japan	5.4%	0.2%	0.4%	1.1%	3.0%	4.8%	8.9%	8.5%	3.1%	5.7%	51.3%
Venezuela	4.8%	7.3%	12.8%	9.4%	10.8%	5.7%	4.8%	5.0%	3.9%	5.6%	-3.1%
Peru	4.6%	5.0%	5.4%	5.4%	6.1%	4.5%	5.9%	4.7%	4.0%	5.4%	0.9%
Colombia	3.8%	14.2%	10.2%	10.3%	5.3%	6.4%	3.7%	3.2%	3.0%	5.2%	-11.7%
Switzerland	2.9%	13.1%	15.7%	10.1%	2.3%	3.8%	5.0%	3.3%	2.3%	3.2%	-16.2%
China	1.9%	0.4%	0.6%	0.7%	1.0%	0.7%	0.8%	1.2%	1.9%	2.5%	26.6%
Canada	1.5%	1.5%	0.6%	0.4%	0.6%	0.7%	1.2%	2.2%	1.3%	1.3%	-1.6%
Chile	1.2%	2.3%	2.4%	2.6%	2.3%	1.5%	1.6%	1.1%	1.1%	1.4%	-5.8%
Memorandum:											
All developed countries [b]	*33.1%*	*39.4%*	*38.5%*	*34.0%*	*32.0%*	*32.2%*	*32.2%*	*34.7%*	*31.7%*	*37.2%*	*-0.7%*
BRICs/South Africa	*38.0%*	*22.8%*	*25.0%*	*30.9%*	*32.8%*	*37.2%*	*38.7%*	*38.0%*	*45.8%*	*34.0%*	*5.1%*

Notes:
(a) All markets accounting for 1% or more of average 2007–9 total export value.
(b) IMF list of advanced economies, *World Economic Outlook*, October 2009.
Source: Calculated from data obtained from ITC Trade Map.

Table A3: Bolivia's most important imports, 2001-2009 [a]

HS	Description	Import value (US$ million)									Avg. ann. change
		Avg. 2007-9	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	
	Total import value	**4,312**	**1,708**	**1,769**	**1,684**	**1,887**	**2,343**	**2,825**	**3,522**	**5,006**	**4,409**	**12.6%**
84	Nuclear reactors, boilers, machinery, etc	637	255	310	265	258	325	460	528	712	670	12.8%
87	Vehicles other than railway, tramway	586	73	91	118	180	226	314	503	711	542	28.5%
27	Mineral fuels, oils, distillation products, etc	436	122	89	123	135	242	277	285	555	469	18.3%
72	Iron and steel	262	54	60	68	94	121	142	194	323	270	22.3%
85	Electrical, electronic equipment	262	155	115	86	124	146	160	229	297	259	6.7%
	Total these product groups	**2,182**	**658**	**665**	**659**	**790**	**1,060**	**1,353**	**1,739**	**2,598**	**2,210**	**16.3%**
	Share of total import value	**50.5%**	**38.6%**	**37.6%**	**39.1%**	**41.9%**	**45.2%**	**47.9%**	**49.4%**	**51.9%**	**50.1%**	**3.3%**

Note:
(a) Top five product groups imported, based on 2007–9 average import values.
Source: Calculated from data obtained from ITC Trade Map.

Table 4A: Bolivia's main suppliers [a] – all imports

Supplier	Share of total import value										Avg. ann. change
	Avg. 2007-9	2001	2002	2003	2004	2005	2006	2007	2008	2009	
Brazil	18.7%	16.2%	22.0%	20.4%	25.8%	21.9%	20.4%	20.2%	18.4%	17.6%	1.1%
Argentina	15.1%	18.0%	17.4%	16.7%	15.7%	16.7%	15.8%	16.9%	14.5%	13.9%	-3.2%
United States of America	11.8%	18.4%	15.6%	18.0%	13.8%	13.8%	12.1%	11.7%	10.5%	13.3%	-3.9%
Japan	8.8%	3.4%	5.5%	5.0%	5.6%	6.1%	7.9%	9.4%	9.9%	7.0%	9.3%
EU27	8.8%	9.5%	8.5%	8.6%	8.6%	9.6%	9.3%	9.1%	8.3%	8.9%	-0.8%
China	8.1%	5.1%	4.8%	5.0%	5.7%	5.8%	6.8%	7.6%	8.3%	8.4%	6.6%
Peru	7.0%	6.3%	5.4%	6.2%	6.7%	6.5%	6.7%	6.7%	7.1%	7.2%	1.6%
Chile	6.2%	8.5%	7.0%	7.2%	5.9%	6.9%	8.3%	6.3%	6.9%	5.4%	-5.6%
Venezuela	4.5%	1.0%	0.8%	0.5%	0.5%	1.7%	2.0%	1.4%	5.1%	7.0%	27.6%
Colombia	2.2%	2.8%	2.4%	2.9%	3.2%	2.4%	2.3%	2.0%	2.2%	2.2%	-2.8%
Mexico	2.0%	2.2%	1.8%	2.1%	1.9%	2.2%	1.7%	1.8%	2.2%	2.2%	-0.2%
Memorandum:											
All developed countries [b]	*32.1%*	*36.2%*	*32.6%*	*34.1%*	*30.7%*	*32.0%*	*32.3%*	*32.6%*	*31.5%*	*32.1%*	*-1.5%*
BRICs/South Africa	*27.6%*	*21.6%*	*27.3%*	*25.9%*	*32.1%*	*28.5%*	*27.9%*	*28.5%*	*27.3%*	*27.0%*	*2.8%*

Notes:
(a) All markets accounting for 1% or more of average 2007–9 total import value.
(b) IMF list of advanced economies, *World Economic Outlook*, October 2009.
Source: Calculated from data obtained from ITC Trade Map.

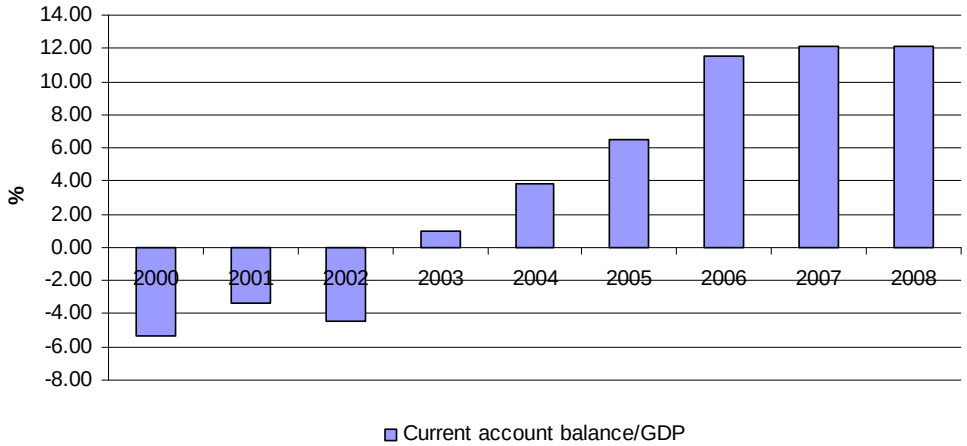
Table A5: Bolivia's main suppliers [a] – most important imports

Supplier	Share of total import value										Avg. ann. change
	Avg. 2007-9	2001	2002	2003	2004	2005	2006	2007	2008	2009	
HS 84: Nuclear reactors, boilers, machinery, etc											
United States of America	25.3%	47.6%	33.9%	34.7%	24.9%	27.9%	28.1%	24.4%	24.6%	26.8%	-6.9%
Brazil	21.2%	9.7%	15.2%	17.8%	34.3%	24.3%	19.0%	21.9%	22.1%	19.5%	9.1%
EU27	17.3%	14.9%	12.5%	15.1%	13.4%	18.7%	17.9%	18.6%	15.6%	17.7%	2.2%
China	8.4%	2.2%	1.8%	2.8%	4.2%	5.0%	4.4%	6.8%	9.8%	8.5%	18.3%
Argentina	8.3%	9.3%	24.1%	11.1%	7.9%	7.5%	4.9%	7.7%	9.0%	8.2%	-1.6%
Japan	5.2%	3.0%	2.9%	5.3%	4.7%	3.0%	4.0%	4.7%	6.4%	4.6%	5.4%
Canada	3.2%	1.4%	0.5%	1.0%	1.7%	2.7%	1.9%	1.4%	3.5%	4.8%	16.8%
Chile	2.8%	1.2%	0.7%	1.9%	1.0%	2.4%	11.9%	4.1%	1.9%	2.3%	7.9%
Mexico	1.7%	2.0%	1.3%	1.4%	1.7%	2.0%	1.7%	1.7%	1.6%	1.7%	-1.8%
Peru	1.4%	1.6%	0.6%	0.6%	1.0%	1.0%	1.1%	1.7%	1.4%	1.0%	-6.3%
Memorandum:											
All developed countries [b]	*53.1%*	*71.8%*	*51.6%*	*58.3%*	*47.2%*	*54.7%*	*54.2%*	*51.2%*	*51.9%*	*56.2%*	*-3.0%*
BRICs/S. Africa	*30.1%*	*12.0%*	*17.1%*	*21.0%*	*38.9%*	*30.4%*	*24.2%*	*29.3%*	*32.3%*	*28.6%*	*11.4%*
HS 87: Vehicles other than railway, tramway											
Japan	52.4%	49.5%	49.1%	49.5%	42.4%	52.2%	58.0%	56.2%	58.7%	42.3%	-1.9%
United States of America	14.2%	17.1%	12.7%	9.6%	8.4%	10.9%	12.0%	12.0%	10.6%	20.1%	2.1%
EU27	11.9%	8.1%	8.4%	6.3%	7.5%	12.5%	10.3%	10.1%	11.7%	14.0%	7.1%
Brazil	8.9%	8.8%	14.3%	20.0%	29.3%	12.5%	7.5%	8.9%	8.7%	9.1%	0.4%
China	4.0%	4.7%	2.9%	2.6%	2.6%	4.6%	4.9%	3.7%	3.7%	4.7%	0.0%
Argentina	3.2%	1.4%	2.5%	4.0%	3.0%	1.8%	2.8%	3.2%	2.5%	3.9%	13.4%
Thailand	1.4%	0.4%	1.0%	1.3%	1.3%	1.0%	0.6%	1.6%	1.2%	1.5%	18.1%
Memorandum:											
All developed countries [b]	*80.0%*	*79.3%*	*74.0%*	*69.2%*	*61.4%*	*78.3%*	*82.0%*	*79.4%*	*82.1%*	*78.5%*	*-0.1%*
BRICs/S. Africa	*13.1%*	*14.1%*	*17.6%*	*22.7%*	*32.2%*	*17.3%*	*12.6%*	*12.7%*	*12.5%*	*14.1%*	*0.0%*
HS 27: Mineral fuels, oils, distillation products, etc											
Venezuela	39.3%	2.6%	1.1%	0.6%	1.2%	10.3%	15.6%	10.8%	42.6%	64.4%	49.3%
Chile	21.6%	12.4%	19.1%	16.2%	11.2%	19.7%	19.6%	22.0%	26.3%	16.6%	3.8%
Argentina	23.7%	65.2%	62.3%	63.1%	64.6%	52.2%	46.0%	52.1%	16.0%	3.1%	-31.7%
Brazil	8.1%	4.0%	3.7%	9.0%	9.5%	7.6%	7.5%	6.7%	8.0%	9.6%	11.6%
Peru	2.5%	5.5%	1.8%	1.6%	1.4%	0.9%	1.4%	2.3%	2.2%	2.9%	-7.7%
United States of America	2.1%	3.8%	4.8%	4.1%	4.5%	2.9%	4.8%	2.7%	1.7%	1.9%	-8.2%
Memorandum:											
All developed countries [b]	*3.0%*	*4.6%*	*5.1%*	*4.4%*	*5.4%*	*4.3%*	*6.4%*	*4.7%*	*2.2%*	*2.1%*	*-9.3%*

Supplier	Share of total import value										Avg. ann. change
	Avg. 2007-9	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	
BRICs/S. Africa	*8.4%*	*4.4%*	*4.2%*	*9.2%*	*9.8%*	*7.8%*	*8.0%*	*7.0%*	*8.2%*	*9.9%*	*10.6%*
HS 72: Iron and steel											
Brazil	48.9%	25.2%	35.2%	41.7%	49.1%	45.5%	47.9%	51.7%	51.3%	43.7%	7.1%
Peru	20.8%	22.5%	20.8%	23.1%	24.6%	20.7%	21.0%	19.5%	21.3%	21.6%	-0.5%
Argentina	12.5%	19.5%	17.9%	15.4%	8.8%	15.8%	15.1%	15.0%	10.3%	12.2%	-5.7%
Mexico	2.1%	1.1%	0.4%	0.4%	0.1%	0.2%	0.1%	0.1%	0.8%	5.3%	21.3%
China	3.6%	0.7%	0.4%	0.5%	0.5%	0.6%	1.4%	1.3%	4.8%	4.7%	26.5%
Colombia	2.8%	7.5%	5.8%	7.1%	6.2%	7.0%	4.3%	2.4%	2.8%	3.0%	-10.7%
Chile	3.2%	4.2%	3.1%	4.1%	5.3%	4.9%	4.3%	5.0%	2.4%	2.3%	-7.4%
India	1.8%	2.3%	2.7%	2.0%	1.6%	1.4%	1.8%	1.9%	1.7%	1.7%	-3.4%
Venezuela	1.2%	11.0%	9.2%	2.7%	1.2%	0.6%	0.1%	0.3%	1.9%	1.4%	-23.0%
EU27	1.1%	1.0%	0.7%	1.1%	1.2%	1.2%	1.4%	1.3%	1.1%	1.0%	-0.3%
Memorandum:											
All developed countries [b]	*2.0%*	*5.0%*	*3.0%*	*2.3%*	*2.3%*	*1.6%*	*2.3%*	*2.4%*	*1.8%*	*1.7%*	*-12.5%*
BRICs/S. Africa	*54.3%*	*28.5%*	*38.3%*	*44.3%*	*51.2%*	*47.6%*	*51.1%*	*54.9%*	*57.8%*	*50.3%*	*7.4%*
HS 85: Electrical, electronic equipment											
Brazil	23.1%	19.3%	16.3%	17.3%	19.5%	27.6%	23.7%	23.2%	21.6%	24.5%	3.0%
China	21.9%	7.9%	8.2%	11.1%	8.8%	11.4%	17.1%	20.1%	23.9%	21.8%	13.5%
United States of America	15.9%	28.5%	27.0%	26.7%	22.1%	26.4%	17.0%	18.8%	13.3%	15.6%	-7.3%
EU27	12.3%	18.4%	19.9%	18.0%	17.9%	15.2%	11.3%	13.1%	12.4%	11.4%	-5.8%
Argentina	3.9%	4.7%	2.5%	5.0%	2.9%	3.6%	4.6%	4.0%	4.1%	3.8%	-2.6%
Mexico	3.8%	3.5%	5.0%	3.3%	2.5%	2.6%	3.7%	3.5%	4.1%	3.7%	0.7%
Chinese Taipei	2.9%	1.2%	1.4%	1.3%	1.0%	1.5%	2.7%	2.3%	3.1%	3.4%	14.0%
Japan	2.8%	1.7%	1.4%	2.7%	4.3%	2.2%	2.3%	1.9%	2.7%	3.8%	10.6%
Israel	1.9%	1.4%	1.3%	0.6%	4.0%	1.0%	1.6%	2.1%	2.3%	1.3%	-1.6%
Colombia	1.6%	0.8%	1.0%	1.4%	7.1%	1.3%	1.0%	0.6%	1.8%	2.6%	16.5%
Chile	1.6%	2.2%	1.5%	1.8%	1.1%	0.9%	2.5%	2.4%	1.4%	0.9%	-10.4%
Cuba	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	1.6%	1.7%	0.4%	164.6%
Memorandum:											
All developed countries [b]	*37.8%*	*55.5%*	*54.0%*	*52.9%*	*52.6%*	*48.0%*	*38.2%*	*40.0%*	*36.2%*	*37.3%*	*-4.8%*
BRICs/S. Africa	*45.3%*	*27.3%*	*24.7%*	*28.5%*	*29.6%*	*39.6%*	*42.0%*	*43.4%*	*45.6%*	*46.8%*	*7.0%*

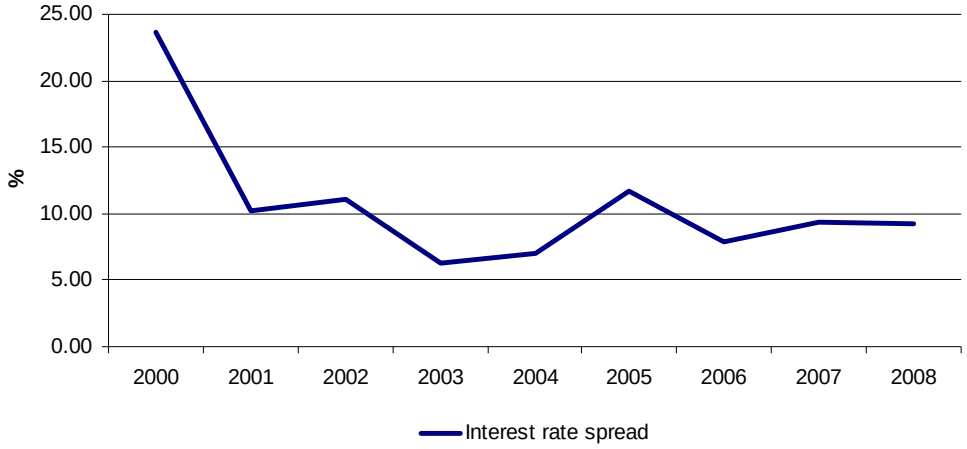
Note:
(a) All markets accounting for 1% or more of average 2007–9 total import value.
(b) IMF list of advanced economies, *World Economic Outlook*, October 2009.
Source: Calculated from data obtained from ITC Trade Map.

Figure A8: Current account balance (% of GDP), 2000-2008



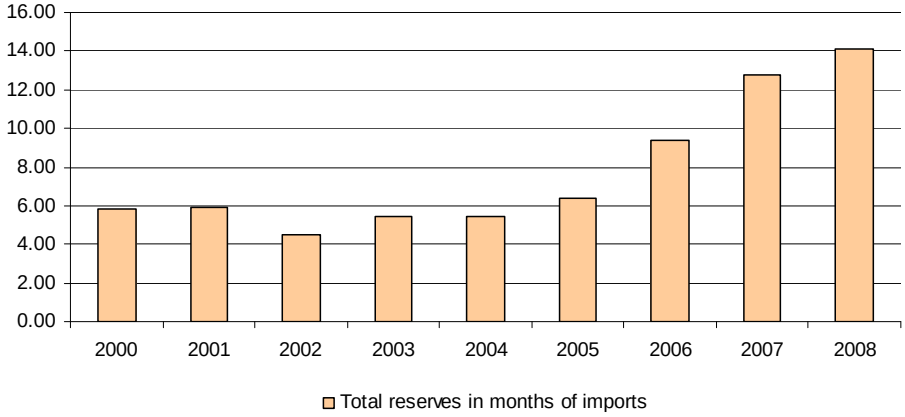
Source: World Development Indicators.

Figure A9: Interest rate spread, 2000-2008 (%)



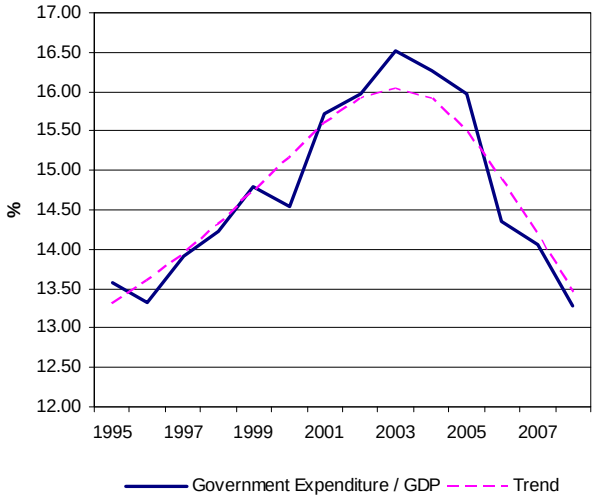
Source: World Development Indicators.

Figure A10: Total reserves in months of imports, 2000-2008



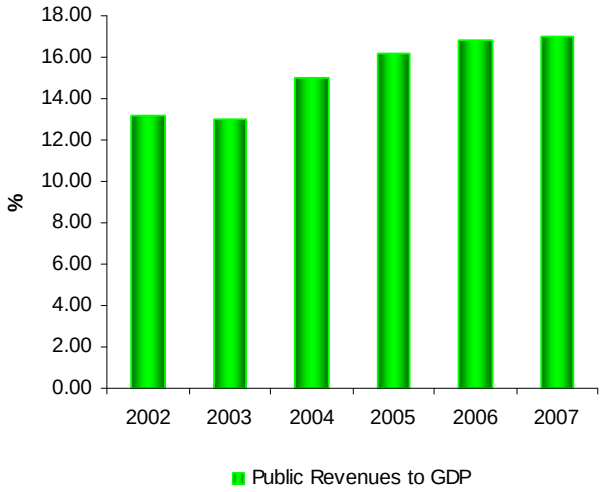
Source: World Development Indicators.

Figure A11: Total public expenditure (% of GDP), 2000-08



Source: World Development Indicators and authors' calculations.

Figure A12: Public revenues, 2000-2007 (% of GDP)



Source: World Development Indicators and authors' calculations.