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FOREIGN DIRECT INVESTMENT AND DEVELOPMENT: THE CASE OF BOLIVIA

Foreign direct investment (FDI) has become a hotly debated issue around the world. This is also true of FDI in Bolivia. FDI has flowed into the country, but progress in attracting it has coincided with controversy on the impacts of certain FDI projects. The purpose of this briefing paper is to go beyond individual projects and discuss the effect of FDI on development in general in Bolivia. It will consider the impact of FDI and policies that may improve its developmental impact on the basis of findings arrived at at a seminar held in La Paz in October 2002 organised by the Institute for Socio-Economic Research (IISEC) of the Catholic University of Bolivia in La Paz and the Overseas Development Institute (ODI) in London.

The paper first discusses the size and structure of FDI flows into Bolivia in the Latin American context. It will then evaluate the effects of FDI; this is important because attracting FDI is a means towards achieving development objectives. The paper undertakes an evaluation of FDI in two dimensions: economic growth and income distribution. While there are many policies that can improve the developmental impact of FDI in principle, the paper concentrates on those that were discussed during the seminar.

FDI in Bolivia

Most of Latin America has long attracted FDI. A series of economic reforms and privatisations in the past decade have provided further incentives for transnational corporations (TNCs) to set up operations in the region.

For most of the 1990s, the Bolivian economy experienced sharp increases in the levels of FDI. Although the stock of FDI is one of the smallest in Latin America, it represented the largest average annual ratio of FDI to GDP (see Table 1). During the period 1990-2000, most FDI into Bolivia came from the US (39%), Europe (28%) and South America (27%). FDI from the neighbouring countries Argentina (11%), Brazil (7%) and Chile (5%) is also important. Over the same period, the hydrocarbons sector attracted around 40% of total FDI inflows, while the services sectors attracted 26% (mostly finance, constructions and transport), utilities and telecommunication 17%, manufacturing 9%, and mining 7%.

Chart 1 shows that the interest of foreign investors in Bolivia accelerated in the second half of the 1990s, when the Second-Generation Structural Reforms (SGSR) improved the economic policy framework. The new set of reforms constituted a deepening of the original First Generation Structural Reforms (FGSR), launched at the same time as the stabilisation programme in 1985. The reforms established a favourable regulatory framework for FDI by relaxing rules

Key findings

- The capitalisation process has been directly and indirectly responsible for much of the rapid growth in FDI inflows experienced in Bolivia since 1995.
- The growth in FDI has had only a limited impact on per capita GDP growth and adverse distributional effects.
- There is a need for economic policies conducive to FDI that is more beneficial to development, which could consider the importance of appropriate investment in human capital, physical and communications infrastructure and an adequate institutional framework supportive of businesses operations and the adoption of new technologies.

Content

regarding market entry and foreign ownership and improving the treatment accorded to foreign firms and the functioning of markets.

An inappropriate policy framework can in part explain the slow growth of FDI in the early 1990s. The FGSR, which included goods markets deregulation, and fiscal, trade and financial reforms, appear not to have been focused on the locational decisions of foreign investors. Moreover, political instability and the uncertainty regarding the success of the stabilisation programme constrained both foreign and domestic investment. Although clear rules for foreign investment were set out already in the early 1990s, mainly through the Investment Law (1990) and the Privatisation Law (1992), foreign investors did not really become interested until strategic state monopolies were opened up to private investors.

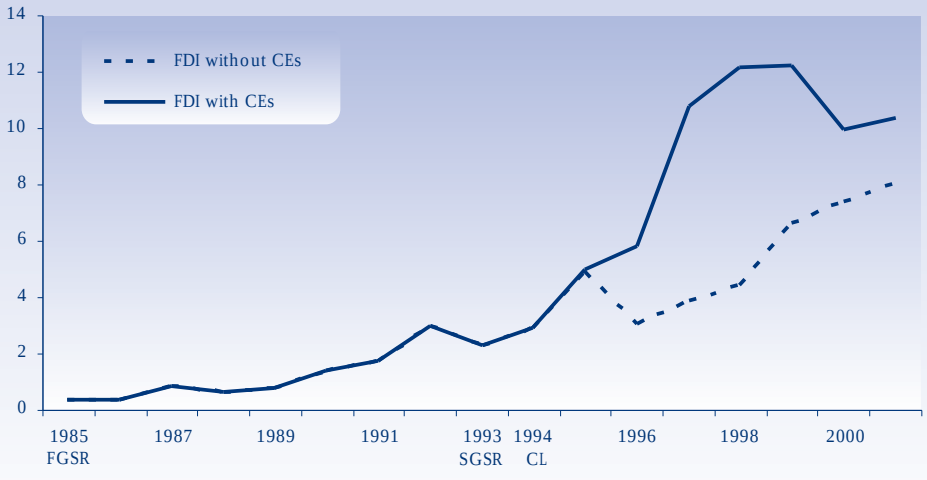
Table 1
Net Inflows of FDI, 1990-2000

Region or Country	Accumulated Stock		Annual Average	
	(US$ m.)	Share (%)	(US$ m.)	(% of GDP)
Latin American & Caribbean	453,558	100.0	41,233	-
South America	328,012	72.3	29,819	-
Argentina	79,795	17.6	7,254	2.7
Bolivia	4,730	1.0	430	5.6
Brazil	137,494	30.3	12,499	1.9
Chile	36,308	8.0	3,301	5.2
Colombia	20,406	4.5	1,855	2.2
Ecuador	5,264	1.2	479	2.9
Paraguay	1,491	0.3	136	1.7
Peru	16,016	3.5	1,456	2.8
Uruguay	1,374	0.3	125	0.6
Venezuela	25,134	5.5	2,285	2.7

Source: *World Development Indicators*, World Bank.

The Capitalisation Law (CL) was launched in 1994 and is considered the centrepiece of the SGSR. It established the economic and legal conditions for capitalising (Bolivian term for privatising) large state-owned companies and promoting foreign capital inflows. Under the capitalisation process, the six principal state-owned enterprises, YPFB (oil and gas), ENDE (electricity), ENFE (railways), ENTEL (telecommunications), LAB (aviation) and EMV (mining and smelting), were put up for sale by international tender and the winning bidders gained management control and a 50% stake in the enterprise, while the government retained the remaining 50% share. In addition, unlike traditional privatisation schemes where funds are transferred to the government, capitalisation required the successful bidder to invest the money in the company itself over a stated period, effectively securing fixed capital investment.

Chart 1
FDI inflows in Bolivia
(In percent of GDP)



Source: Central Bank and Ministry of Foreign Trade and Investment of Bolivia.

The process has had a considerable impact on FDI because it has promoted the creation of firms backed by foreign capital or capitalised enterprises (CEs) and produced investment commitments worth around US$ 1.7 billion in the period since 1995. In addition, the policy framework has given enterprises the opportunity to access abundant natural resources, such as hydrocarbons and water, and control of companies with monopoly power, such as electricity and telecommunications.

Capitalised enterprises were responsible for almost 40% of all inflows to Bolivia in the period 1995-2001. While the investment

boom in the CEs is now coming to an end, FDI in other sectors shows a continued upward trend, partly encouraged by the liberal investment climate demonstrated by the capitalisation process. However, the end of the wave of capitalisations coincided with a worldwide economic crisis as well as increased political and economic instability in Bolivia, all of which deterred FDI inflows.

FDI and Growth

FDI is generally believed to promote economic growth in the recipient country by increasing total investment and improving efficiency through the introduction of new technology and better management practices. Nevertheless, the realisation of these benefits depends crucially on the existence of certain channels through which technological and management spillovers can be effected, such as through demonstration-imitation, backward-forward linkages, competition or education and training.

In the case of developing countries, the empirical evidence shows a positive relationship between FDI and growth, but there is no agreement on whether FDI leads to growth or vice versa. Cross-section evidence supports the hypothesis that FDI requires preconditions to promote growth. For example, Borensztein et al. (1998) point out that FDI has a positive effect on growth when the country has a minimum threshold stock of human capital; and Alfaro et al. (2002) find that FDI promotes growth in economies with sufficiently developed financial markets.

Although the international evidence for these complementary effects is relatively strong, it is difficult to find such effects for a time-series analysis in the case of Bolivia. Our regression results show that neither education nor financial market development interact significantly with FDI in their effect on growth. Trade, on the other hand, does seem to have a complementary effect on FDI. Only when the ratio of trade to GDP is more than 52%, will FDI raise growth. This suggests that policies that promote exports (e.g. reducing the fixed costs of exporting by supporting transport infrastructure and distribution networks) would improve the impact of FDI. When interactions are omitted, FDI is not significantly correlated with growth.

The lack of complementary effects between FDI and education and FDI and financial market development indicates that the contribution of FDI to economic growth may have been limited by local conditions. A low level of human capital limits the capacity to absorb new technology and apply modern management techniques, while underdeveloped financial markets limit the economy's ability to exploit potential FDI spillovers, because, in order to take full advantage of new knowledge, firms will generally have to do some restructuring, which will require financing (Alfaro et al., 2002). The commercial banking system in Bolivia is characterised by very high real interest rates, short-run loans, and requires a 200% real estate collateral.

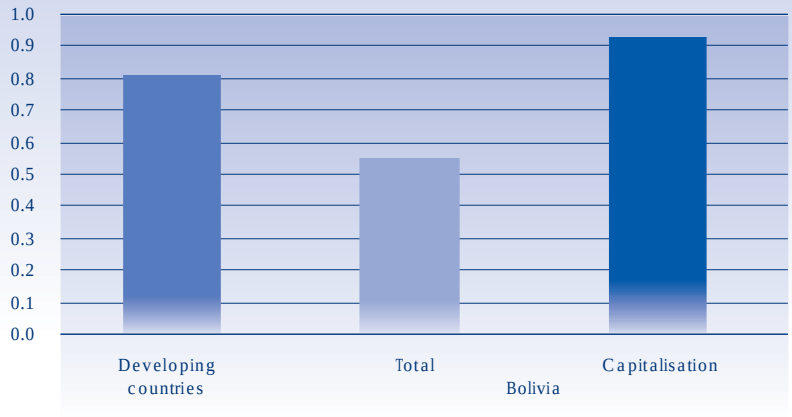
The economy's ability to exploit potential FDI spillovers may also depend on its sectoral distribution. Table 2 shows that the most important destination of FDI has been capital-intensive and skill-intensive sectors, like hydrocarbons, telecommunications, and electricity. While the hydrocarbons sector did experience the introduction of new processes, advanced technologies, managerial skills, employee training, international production networks, and access to markets, it created relatively few linkages with the local economy and thus fewer possibilities for significant spillovers. Similarly, FDI has contributed to the modernisation of telecommunications and electricity services, but the linkages

Table 2
FDI and export compositions by sector (%)
(Accumulated Stock: 1996 – 2001)

Sector	FDI Share	Export Share
Primary	35.5	42.6
Hydrocarbons	34.1	11.6
Mining	1.3	20.3
Agriculture	0.1	10.7
Manufacturing	8.0	57.4
Food products and beverages	3.3	22.8
Refined petroleum products	2.1	0.9
Non-metallic mineral products	0.8	0.2
Furniture and jewelry	0.7	6.4
Basic metals	0.3	15.7
Chemicals and chemical products	0.3	0.7
Paper and paper products	0.2	0.2
Other manufacturing	0.2	10.4
Service	56.1	0.0
Telecommunications	14.1	
Construction	10.2	
Electricity	7.3	
Transport via pipeline (natural gas)	5.3	
Financial intermediation	4.7	
Transport	3.3	
Other services	11.3	
Total (US$ m.)	4,965	7,090

Source: National Institute of Statistics of Bolivia

Chart 2
The Impact of $1 of FDI on total domestic investment



Sources: Developing Countries: Bosworth and Collins (1999) – Period 1979 - 1995.
Bolivia: Own estimations – Period 1976 - 2000.

with local suppliers are weak. As more than half of all FDI over the period 1996-2001 was directed into sectors with relatively few linkages, there may be fewer benefits of FDI to Bolivia than was expected by looking at the experiences of FDI in many East Asian countries where spillovers and linkage creation often related to manufacturing sectors such as electronics, automobile and garments and textiles. In Bolivia, only 8% of FDI went into manufacturing during 1996-2001, thus limiting the possibilities for reaping the advantages of potential spillovers.

On the basis of the results of a survey conducted with executives of foreign companies in Bolivia, Nina and Rojas (2001) find that access to natural resources and regional markets was amongst the main motivations for FDI. Recently, FDI in natural gas has helped gas to become the main export, accounting for 17% of total exports in 2001. However, Andersen and Faris (2002) argue that the effects of a substantial increase in natural gas exports due to capitalisation may lead to a temporary (but not permanent) increase in GDP growth during the few years of rapidly expanding export volumes.

Since FDI does not automatically lead to growth, public policies may be required to attract FDI and create an enabling environment to benefit from it. Vidaurre (2002) points out that the government needs to pay attention to additional factors that influence investors' locational decisions. He suggests a range of business facilitation measures that seek to reduce costs through a combination of improvements in communications infrastructure and the creation of larger markets. He also mentions that the manufacturing sector would benefit from a clear investment policy, since technology diffusion is not an automatic consequence of the presence of some knowledge stock.

One of the channels through which FDI can enhance economic growth in host countries is by increasing total investment. FDI can crowd in or crowd out domestic investment. However, on average, Bosworth and Collins (1999) find that an increase of a dollar in FDI is associated with an increase in total domestic investment by an average of 80 cents in developing countries. In Bolivia, data analysis suggests that only half of FDI translates into an increase in total domestic investment (see Chart 2), although this increases to a one-for-one increase in total domestic FDI investment through the capitalisation process. In the remaining sectors, the impact of FDI on total domestic investment has been very low, and it has encouraged little if any complementary local investment.

FDI through capitalisation may also have reduced the need for local public investment and this may have enabled a reallocation of public investment from the productive to the social sector. This reallocation can partly compensate for the lack of spillovers, as it allows the government to invest directly in people, including those outside the foreign companies. However, the role of government should extend beyond reallocating public funds. For instance, privatised natural monopolies, such as water and electricity, require strict regulation to protect consumers.

FDI and Inequality

The effects of FDI on income inequality can be analysed through the effects on wage inequality and non-wage inequality. According to Velde (2003), the effects of FDI on wage inequality can be analysed by looking at (i) composition effects (foreign firms may have different skill intensities from domestic firms), (ii) skill-specific technological change (FDI could induce faster productivity growth of labour in both foreign and domestic firms), (iii) skill-specific wage bargaining (skilled workers are usually in a stronger bargaining position than less skilled workers), and (iv) training and education (foreign firms generally undertake more training than local counterparts). The effects on non-wage income

could be indirect, for instance through public policies or partnerships between foreign firms, governments, and local communities.

The empirical evidence shows that some Latin American countries have experienced an increase in wage inequality as a result of FDI. In the case of Bolivia, Velde (2003) finds that FDI may have accounted for a significant part of the observed increase in urban wage inequality during the period 1987-97, with FDI correlated with lower real wages for skilled and unskilled workers. Recently, Vedia (2002) found that the capital-intensive sectors have significant positive correlations with the fifth quintile of urban income distribution. Furthermore, as Table 3 shows, the real wages of workers in the capital-intensive sectors have experienced a revival since 1996. Workers in these sectors tend to be the more educated workers. FDI is also concentrated in these sectors.

The results can in part be explained by the fact that FDI has gone into the skill-intensive sectors, thus creating a relative shortage of skilled labour. The TNCs have had to train their workers intensively, and subsequently pay them higher salaries to prevent them depart in with that newly acquired knowledge. These findings are supported by Andersen and Faris (2002), who find that the expansion of the hydrocarbons sector mainly benefits the groups that initially earned the highest incomes, i.e. skilled workers. Similarly, Jemio and Wiebelt (2002) find that FDI worsens income distribution slightly.

There are valid reasons for concern about the deterioration in income distribution caused by FDI, particularly as there is no evidence of significant poverty reduction. There are, however, various public policies available that can help to improve the distributional effect of FDI. One is to use fiscal revenues for social investment (e.g. education) in the long-run development of the poorer segments of the economy. However, there are also private sector policies that can help to improve the developmental impact of FDI.

Villalobos (2002) gives an important example where a mining company tried to improve the distributional effects by creating a partnership with the local government to develop the community in a sustainable manner. Inti Raymi's mine at Kori Kollo, the most important mine in Bolivia, is a highly visible operation, and a pioneer in FDI in the Bolivian mining sector.

Inti Raymi has had a substantial development impact on the local and regional scene. In addition to improving the local infrastructure, the company's presence has helped raise the living standards of the communities surrounding the mine. Wages in the company improved more during the past two decades than wages in mines not under foreign ownership. A unique feature of the project was the establishment of the Inti Raymi Foundation, a private non-profit institution to finance social programmes (see Box 1).

Although projects in the extractive industries can have serious environmental impacts and be socially disruptive as well, Inti Raymi has improved lives throughout the local

Table 3
Employment, real income and educated workers: 2000

Sector	Employment share (%)	Educated workers[a] (%)	Real wage[b] (Bs./month)	Annual growth (1996-2000)	
				Employment	Real Wage
Agriculture	38.9	1.0	160	-2.0	-11.9
Hydrocarbons and mining	1.4	19.9	2,494	-4.7	28.3
Manufacturing	10.1	10.5	612	-1.4	-2.8
Electricity, water and gas	0.5	24.5	1,759	7.6	9.9
Construction	6.6	7.7	907	9.2	4.3
Transport and communications	4.3	19.3	1,160	1.5	-0.5
Financial intermediation	0.5	77.3	2,517	2.2	6.8
Other services	37.6	27.8	754	2.9	0.0
Total (Persons)	3,637,048	509,187			

Source: National Institute of Statistics
Note: [a] Workers with more than 13 years of education. [b] Measured in Bs. of June 1996.

Box 1
The Inti Raymi Foundation

In 1991, the Inti Raymi Foundation was established as a Community-Oriented Foundation. It is a private non-profit institution financing social programmes for the 1,132 families living in the 25 communities around the Inti Raymi's mine at Kori Kollo. The foundation's activities are concentrated in three major areas: health care, rural education, and training. While accepting donations from domestic and foreign sources, the foundation is sponsored primarily by annual contributions of about $840,000 from Inti Raymi. So far, the foundation has spent nearly $16.2 million on regional development programmes. The distribution was as follows:

Programs	Share (%)
Social Investment	24.8
Education	10.4
Health	4.5
Agriculture	9.9
Productive Investment	53.3
Loans	3.0
Microenterprise	22.8
Grants	27.5
Development & Research	12.9
Management	9.4

The foundation provides primary health care to the surrounding population through the company-financed health clinic. This programme is directed mainly at cutting the area's high maternal and child morbidity and mortality. The foundation has also tried actively to improve the quality of education in 18 surrounding rural schools (1,394 students and 87 teachers). In addition to financing social programmes, the foundation finances community-originated projects, for example micro-enterprise initiatives. The management of the programme will be transferred to the local government. As fiscal decentralisation evolves, local governments should ensure that fiscal revenues are able to take over the foundation's functions.

and regional economy, alleviating a tradition of resentment of foreign ownership. However, the expected benefits of such partnerships in general sometimes fail to materialise or are not distributed equitably. It would also be worth asking whether higher taxes and higher government spending would have worked better.

What next?

In order to attract FDI that is more beneficial to development in Bolivia, the government would need to formulate a set of economic policies with the deliberate objectives of creating favourable conditions for investment and improving the impact of FDI. This framework should consider the importance of human capital, the physical and communications infrastructure and an adequate institutional framework. Moreover, spillovers are more likely to occur if local firms are given access to credit, technical assistance, human resources and information. Policies could also aim to attract export-oriented FDI, where firms can more easily imitate technological and managerial innovations and also learn to penetrate export markets.

Public policy may seek to solve the general problem of under-investment in good quality and appropriate human capital, in order to obtain the full benefit of existing FDI and attract more and better FDI. This would also improve the distributional effects of FDI. In addition, policy could be concerned with the general business environment in Bolivia, with the purpose of supporting the adoption of new technologies, creating distribution networks and facilitating easier access to foreign markets.

References

Alfaro, L., A. Chanda, S. Kalemli-Ozcan, and S. Sayek. 2002. 'FDI and Economic Growth: The Role of Local Financial Markets'. Paper presented at Joint Conference of the IDB and World Bank on 'The FDI Race: Who Gets the Prize? Is it Worth the Effort?', Washington, DC.

Andersen, L., and R. Faris. 2002. *Natural Gas and Income Distribution in Bolivia*, Working Paper 02/2002. La Paz: Instituto de Investigaciones Socio-Económicas, Universidad Católica Boliviana.

Borensztein, E., J. De Gregorio, and J-W. Lee. 1998. 'How Does Foreign Direct Investment Affect Economic Growth', *Journal of International Economics* 45: 115-135.

Bosworth, B.P., and S.M. Collins. 1999. *Capital Flows to Developing Economies: Implications for Saving and Investment*. Brookings Papers on Economic Activity 1, Washington, DC: Brookings Institution.

Jemio, L.C., and M. Wiebelt. 2002. 'Orientando la Política Macroeconómica en Favor de los Pobres: Resultados de Simulaciones Seleccionados'. Paper presented at the IISEC-IFK-IIDEE Seminar on Poverty Impacts of Macroeconomics Reforms in Bolivia, La Paz.

Lora, E. 2001. *Structural Reforms in Latin America: What Has Been Reformed and How to Measure it*, Research Department Working Paper 466, Washington, DC: Inter-American Development Bank, Research Department.

Nina, O., and F. Rojas. 2001. *Atractivo de Bolivia a los Inversionistas Extranjeros*, Working Paper 06/2001. La Paz: Instituto de Investigaciones Socio-Económicas-Universidad Católica Boliviana.

Velde, D.W. te. 2003. *Foreign Direct Investment and Income Inequality in Latin America*, Working Paper 04/2003. La Paz: Instituto de Investigaciones Socio-Económicas, Universidad Católica Boliviana.

Vedia, J.L. 2002. 'Análisis de los Cambios y Determinantes en la Concentración del Ingreso Urbano en Bolivia', *Estadísticas & Análisis* 1:149-250.

Vidaurre, G. 2002. 'Inversión Extranjera en la Industria Boliviana'. Paper presented at the IISEC-ODI Seminar on Foreign Direct Investment and Development, La Paz.

Villalobos, J. 2002. 'Políticas para Mejorar el Impacto Distributivo y de Desarrollo de la Inversión Extranjera Directa'. Paper presented at the IISEC-ODI Seminar on Foreign Direct Investment and Development, La Paz.

For further information contact the principal authors:

Osvaldo Nina
Coordinador
Area Macroeconómica
Grupo Integral srl
onina@grupointegral.bo

Dirk Willem te Velve
Research Fellow
International Economic Development Group
Overseas Development Institute
dw.tevelde@odi.org.uk

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More information:
Overseas Development Institute
111 Westminster Bridge Road
London SE1 7JD
UK
Tel: +44 (0)20 7922 0300
Fax: +44 (0)20 7922 0399
E-mail: odi@odi.org.uk
Website: www.odi.org.uk

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Paseo de Gracia No. 200
Cota Cota
La Paz
Bolivia
Casilla: 4081
Teléfono: 591-2-2796456
Fax: 591-2-2796456
E-mail: consulta@grupointegral.bo

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