

THE BRAZIL NUT VALUE CHAIN IN THE NORTHERN AMAZON REGION OF BOLIVIA



The economic and social dynamics of the Northern Amazon in Bolivia originate mainly from the rubber boom period, nearly a century ago. Since the collapse of the rubber industry at the beginning of the 1990s, Brazil nuts have become the main source of job creation and economic activity in the region. Despite expansion of exports in recent years, there has been scant attention to the effects of this activity on the labour market and poverty reduction in the region. The objective of the research is therefore to investigate the impact of Brazil nut-exporting activities on job creation and poverty reduction in the Northern Amazon region.

The region includes a swathe of land of approximately 100,000 square kilometres, bordered by the department of Pando, Vaca Díez province of the department of Beni, and Iturralde province of the department of La Paz. The area is located in the north of Bolivia and the territory is covered primarily by tropical forest (94%), fallow lands (3%) and rangelands (3%). The economic traditions of the region have always been related to economic booms and the demand for forest products, which has arguably gener-

ated a series of perverse dynamics, such as low technological investment, including in human capabilities, and generally limited opportunities for new economic activities. Opportunities for diversification in the regional economy are further restricted by a combination of geographical limitations, and limited demand for additional services in the Brazil nut value chain. Natural obstacles such as geographical isolation result in high costs for basic services.

The regional economy revolves around extractive activities. Rural labour is concentrated in subsistence forestry, agriculture, hunting and fishing, as well as in other miscellaneous activities that make the most of non-timber forest products; in urban areas, a significant proportion of the population is, either totally or partially, employed in services and trade activities. The city of Riberalta is the economic capital and the Brazil nut industry is the economic motor of the Northern Amazon region.

The Bolivian Brazil nut value chain

Bolivia is a major exporter of Brazil nuts to world markets, with a large market share. For example, according



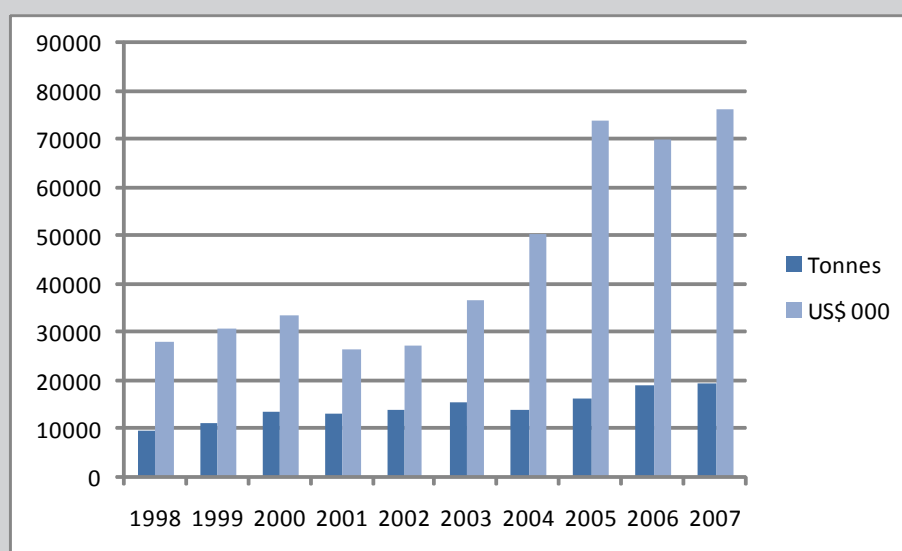
Trade and Poverty in
Latin America

Case study December 2009

Overview

This is an assessment of the impact of Brazil nut cultivation on the labour market and poverty in a region of Bolivia with few other economic alternatives. The study focuses on the terms and conditions involved in jobs created for collectors and processors during the short harvesting season. The impact of Brazil nut cultivation on the rest of the regional economy is highlighted, as well as the dis-enabling environment created by government, with poor economic services (particularly electricity), low education standards, a vague institutional framework around land ownership and a failure to form alliances with the private sector.

Figure 1: Bolivian Brazil nut exports, 1998-2007



Source: FAOSTAT (2009).

to FAOSTAT data for 2007, 35% of world exports of Brazil nuts came from Bolivia, 29% from Brazil and 6% from Peru (and 15% from Indonesia). Nearly 100% of Bolivian exports are shelled Brazil nuts; only 0.8% of the Brazil nuts are exported with their shell. This suggests that the processing of Brazil nuts within Bolivia is a key value addition activity. Brazil nuts accounted for a maximum of 2.9% of Bolivia's total export value in any of the years 1998-2007. Bolivia's top five export markets for Brazil nuts are the US (53%), South Africa (16.5%), New Zealand (7.4%), Spain (4.3%) and Canada (3.5%).

The research team undertook analysis to determine the proportion of value added accruing within country from the harvesting and processing of Brazil nuts prior to export. The distribution of

value addition across value chain nodes is clear: approximately 52% of the value added generated in the Brazil nut chain is attributed to shelling companies, 20% to the landowners and 28% to the collectors and the workers of the processing company. Although an export price is given (FOB - freight on board), purchase and sale prices are not known; the margin of exporters compared with retailers is also unknown. However, in terms of value addition within the country, shelling (processing) is clearly the most lucrative node and also the most labour intensive.

Brazil nut harvesting requires pristine forests. These resources are considered 'finite', given the long time required until trees are able to bear fruit. The legal and institutional framework regarding land ownership is currently weak; the current norm does

Table 1: Value-added distribution, 2008

Processing entity	Purchase price	Sale price	Value added	Contribution
Brazil nut collectors (<i>zafretero</i>)	0.00	2.60	2.60	13%
Landowner (<i>barracas</i>)	2.60	6.50	3.90	20%
Workers in the processing plant (shelling the nuts)	6.50	9.35	2.85	15%
Other processing in the plant (other industrial processes)	9.35	19.50	10.15	52%
FOB price of export	-	-	19.50	100%

not ensure that landowners exercise their rights and obligations. For example, many of the landholders do not have legal documentation that certifies ownership of their land. Moreover, the existence of growing demand for land redistribution among colonised groups and indigenous communities, coupled with the absence of a transparent, strategic and holistic policy regarding the holding of Amazon lands, has resulted in a tense and uncertain socio-political environment for investment. For example, landholders with processing companies are not motivated to invest in the improvement of storage facilities, trails and market entry. Meanwhile, indigenous communities cannot utilise their lands as collateral owing to a lack of documentation on their legal ownership of the land, therefore their opportunities to access financing are rather limited.

Brazil nut collectors' pay depends on both the quantity and the quality of nuts they gather; thus, post-harvest losses result in reduced income for collectors. There is a lack of investment in post-harvest facilities owing to insecure land tenure. Weak links between nodes of the value chain, from collection to processing and export, potentially create risks: there is a need for increased quality control and traceability of Brazil nuts exported to high-value markets such as the EU. However, recent data reported by Bolivia's import partners suggest that the US is a far larger market than the EU (or Spain, in particular).

Focus on poor labourers

Brazil nut collectors (*zafreiros*) earn on average B2.6 per kg from the landowners (around \$0.38). Considering that a gatherer can collect approximately 70kg per day, in a harvest season of 90 days (between December and March), it is possible to earn a total income of B16,380 (\$2,340). Landowners, estate owners (*barraqueros*) or rural communities earn on average B6.5 per kg from processing companies (\$0.94), resulting in a value added of B3.9 per kg (\$0.57). A landowner with an average holding of 50,000 hectares would earn Bs195,000 (\$27,850).

Some processing companies are also landowners. In other cases, collectors own their own land and then sell to processors or to bigger landowners. The nut shellers (*quebradoras*) in the processing companies earn B2.85 per kg of shelled Brazil nuts (\$0.41); on average, a sheller delivers 16kg of shelled Brazil nuts per day. Assuming 25 working days per month, a worker earns a monthly income of B1,140 (\$160). Approximately 90% of a processing company's employees are shellers, who are predominantly women. At the regional level, it is estimated that, throughout the entire production chain, Brazil nuts generate income for approximately 70% of rural homes and 30% of urban homes.

Analysis of household surveys suggests that labour income for most other industries except Brazil nuts increased between 2001 and 2007: the average monthly income increased from \$128 in 2001

Table 2: Labour income by economic activity, 2001-2007 (\$, monthly)

Activity	2001-2002	2003-2004	2005-2007
Agriculture	79	83	111
Brazil nuts	106	164	108
Industry	121	124	156
Construction	137	135	244
Commerce	161	132	180
Services	204	223	263
Other	139	116	111
Total	128	142	186

Source: UDAPE and INE (2005).

References

FAOSTAT (2009) Trade-STAT. Rome, Italy: Food and Agriculture Organization of the United Nations. <http://faostat.fao.org/site/406/default.aspx>

Unidad de Análisis de Políticas Económicas y Sociales (UDAPE) y Instituto Nacional de Estadísticas (INE) (2005) *Pobreza y Desigualdad en Municipios de Bolivia: Estimación del gasto de consumo combinando el Censo 2001 y las Encuestas de Hogares*. La Paz, Bolivia: UDAPE-INE.

About COPLA

Comercio y Pobreza en Latino América (COPLA, or Trade and Poverty in Latin America) is a two-and-a-half year project that explores the linkages between trade, poverty and social exclusion in Latin America.

Find out more on: <http://www.cop-la.net>

Photo credit

Flickr/ Shared Interest

Figure 2: Brazil nuts as they are removed from the shell



Source: Flickr/ heatherlyone

to \$186 in 2007, an increase of almost 50%. This compares with just \$106 to \$108 for the Brazil nut industry. This could owe to the increased quantity of workers joining the sector because of favourable prices in the period from 2001-2007, resulting in a drop in labour income within the sector. Despite this limited growth, workers in the industry typically have higher income compared with those in the agricultural sector.

Increasing the lot of poor labourers

The main implication here for public policy is the need to connect private entrepreneurial activity with public intervention. The areas in which an alliance between firms, the municipality and the community could favour the creation of a competitive social and economic environment include:

- Supporting the focus on corporate social responsibility.
- Dynamising productive municipal activities, oriented towards connections with Brazil nut activities (currently the ability of processors is limited owing to poor quality electricity and fuel).
- Diversifying export markets.
- Establishing the optimal size of lands for sustainable and profitable exploitation of the resources of the forest.
- Developing the capacity and practices of small producers.

This case study summary was prepared by Jodie Keane with Alberto Lemma and Jane Kennan and is based on longer studies originally undertaken by Osvaldo Nina and Pablo Von Vacano at GNTP in Bolivia. The full study is available in Spanish on the COPLA website: <http://www.cop-la.net>.