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THE NEW FACE OF DEBT-PEONAGE IN THE BOLIVIAN AMAZON: SOCIAL NETWORKS AND BARGAINING INSTRUMENTS

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Abstract. The debt-peonage system is an agreement between patrons and laborers in different economic activities worldwide. A common feature is social exploitation of laborers that generate profits to the patrons. In recent literature it has been argued that debt-peonage can be an economically sound arrangement that secures the needs of actors. The paper evaluates to what extent traditionally strong debt-peonage in forest-dwelling communities in the Bolivian Amazon, has developed in a way that better secures the needs and economic interest of multiple actors. Case studies in sixteen communities yielded qualitative information on debt relations between peasants, traders and former patrons. Debt-peonage changed from a mechanism to provide and keep workforce indebted to new social relationships, equitable commercial links, opportunity to access work capital and production chain diversification. This rapid shift was caused by important changes in land and forest regulations.

Keywords: *habilito*, Brazil nuts, community forestry, land reforms, forest policy reforms, *barraca*

INTRODUCTION

Debt-peonage is a form of labor agreement still in use worldwide today. The practice is rooted in the social, cultural and economic heritage in some countries (Barham and Coomes 1994a, Stackley 1999). Debt-peonage is seen by many scholars as a perverse form of social subjugation and exploitation. The practice was reported in the Amazon basin during the rubber boom (Assies 2002, Burberi 2007, Fifer 1970, da Cunha 1957), in Central America on post-colonial haciendas (Brown 2003, Meyers and Carlson 2002, Parrish 1982), in New Mexico in the arrangements between the Spanish-speaking population and the English-dominant society (Knowlton 1962) and in India on the estates that remained from the colonial period (Bhandari 2009).

The authors cited above mostly considered debt-peonage as a form of inhuman treatment, but others interpreted it as: social relations of pre-capitalist production (Weinstein 1986), livelihood strategies based on power imbalances between oppressor and oppressed (Brown 2006, Knight 1986), a relatively effective mechanism to leverage resources difficult to access, or an efficient

type of contract given certain work conditions (Barham and Coomes 1994b). A common element among these different interpretations is its importance to provide for and control workers, according to the requirements of productive activities where labor was needed (Bales 2000, MacDonald and McWhiney 1980, Washbrook 2006).

In all cases where debt-peonage persists it has elements of individual and collective decision-making but entails subjugation imposed by a powerful group in response to a workforce's needs and the opportunities of alternative work available. The acceptance of debt peonage is based on the comparative advantages that this means in terms of the worker's welfare (Bauer 1979, Knight 1988, Martinez-Alier 1977), influenced by the type of relation between laborer and patron. For instance, in Central America, peasant resistance to wage labor was the answer to their preference for a feudal system (Knight 1986). In the Amazon basin during the rubber boom, people accepted debt-peonage to retain the advantages of individual work autonomy characteristic of an extractive model (Barham and Coomes 1994b, Weinstein 1986). In the northern Amazon region of Bolivia during the *barraca* or Brazil nut estate period, debt peonage was seen as a necessary condition to initiate productive work in the field (Bojanic 2001), but also as a way to access credit and reduce transaction costs of extracting and transporting the harvested product (Barzel 1989, Barham and Coomes 1994b, 1994c, Stoian 2006).

In the northern Bolivian Amazon, debt-peonage, locally called '*habilito*' evolved particularly among social actors linked to the productive sectors of rubber, Brazil nut and timber, modifying the levels of dependency between them. Before the second agrarian reform in Bolivia during 1990s, *habilito* allowed patrons to attract workers and ensure their permanence on the *barracas* under conditions controlled by the employer. The second agrarian reform, however, transferred property rights of land and natural resources, including over areas of former Brazil nut estates, from patrons to communities. Since then forest dwellers have greater decision capacity over the use of valuable forest resources, which also allows them to negotiate more favourable terms for the sale of these resources and more favourable loan conditions. As a consequence, *habilito* in the region has become a mechanism to negotiate access to resources where the new form of ownership requires new forms of negotiation.

The current use of *habilito* in northern Bolivia raises some fundamental questions of debt-peonage as a labor negotiation and contracting tool. The classical definition of debt-peonage is the payment of a loan with the labor or services of the debtor (Bauer 1979, Knight 1986, 1988, Washbrook 2006). The typical case of debt-peonage is that both capital and assets requiring labor are monopolized by one party, allowing that party to establish the conditions of compensation for work services provided. However, what happens in the case entrepreneurs intend to use the mechanism of debt-peonage when they do not control the same assets (Rutledge 1975)? What happens when one of the engaging parties controls capital, and the other the labor and the productive assets that require labor? How do early forms of debt-peonage change among former employers and employees when a new regime of property rights replaces an old arrangement where debt-peonage was common? To what extent do these actors who previously accepted debts learn to use their new rights in negotiations in debt-peonage arrangements? The answers to these questions are the innovations that characterize the evolution of *habilito* in the northern Bolivian Amazon, following the regulatory changes that started since the mid-1990s.

This paper consists of seven sections including this introduction. Section 2 describes the methods used to collect and analysis data and the research area. Section 3 analyses debt-peonage during the time of rubber exploitation, and the role it acquired during changes of social relations and the emergence of independent peasant communities. It also reviews the contemporary function of *habilito* in the livelihoods of the rural population and the influence of *habilito* on trade relationships, power and cash flows into communities that engage in Brazil nut production. It furthermore analyses the benefits of *habilito* in the Brazil nut production chain. Section 5 discusses the findings emphasizing the most important aspects of the new culture of *habilito* from a local and international perspective and section 6 concludes.

MATERIALS AND METHODS

We conducted research in sixteen rural communities located in the departments of Pando and Beni in the northern Bolivian Amazon. Communities that engage in *habilito* in the northern Bolivian Amazon are mostly characterized as mestizo settlements (Fuentes et al. 2005). These communities are the result of resettling of the mixed population that migrated into the region ever since the rubber boom started, late 19th century. Initially the rural population of northern Bolivia that was part of the early rubber and Brazil nut sectors mostly lived inside *barracas* until the mid-1950s. Since then many *barraca* residents moved to independent communities, which developed as fairly autonomous villages that engage in agriculture and other tropical forest natural resource use, with different degrees of participation in the regional market economy. Other communities in the region only separated from *barracas* in more recent times, or they were abandoned by previous *barraca* owners since the mid-1990s land reforms. Over the last half century or so, but especially since the 1990s, the region has experienced much intra-regional migration (Stoian and Henkemans 2000, Stoian 2006). The region has a few sparse ethnic indigenous groups that these days own extensive areas of legally recognized indigenous territory, but they have much less engagement with the Brazil nut sector and were not included in our sample.

The sample of communities for research was randomly selected from among mestizo communities, using the basic criterion of dependency on non-timber forest resources, distinguishing between agro extractive and extractive communities (Stoian and Henkemans 2000). Based on our first initial survey, the sixteen communities were divided in those with high Brazil nut production and related labor demands and communities with lower Brazil nut production (Cano 2012) and we selected randomly eight communities of each category. We conducted semi-structured interviews with key informants who were long term permanent residents in their community, knowledgeable of community issues, but also involved in Brazil nut extraction. We also interviewed traders and *barraca* owners before, during and after the harvest season. We observed actual bargaining of *habilito* and sale of Brazil nuts between sellers and buyers. The above information was supplemented by informal interviews with representatives of NGOs operating in the region, obtaining a total of 171 in-depth interviews.

The interviews provided qualitative information on changes of social relations, and the dependency and changes of *habilito* since its early use until today. Analysis of the information focused on risk management in the negotiations of *habilito*, power relations in those negotiations and the use of ideological discourse to impose forms of repayment. It also focused on control of

labor and the emergence of new labor arrangements. We collected data on income and expenditures channeled through *habilito*, and of number of transactions. We only focused on *habilito* transactions linked to communities in the region that engaged in Brazil nut collecting and trade.

The northern Bolivian Amazon

The northern Bolivian Amazon, which contains Pando and the Amazon region of Beni covers 86,261 km² and has a population of 211,572 inhabitants in 2007 (INE 2007). The region is mostly covered with tropical rain forest with a natural abundance of Brazil nut (*Bertholletia excelsa*) and rubber (*Hevea brasiliensis*) (DHV 1993). The most important commercial economic activities today are the collection of Brazil nuts and timber extraction and trade in the regional towns and border regions. Social relations in the region were until recently based on the customs that governed life in the former *barraca*. These were forest extraction production units comprising of a forest estate and a workforce that was tied to the estate through debt-peonage (Ruiz 2005, Stoian 2006).

Brazil nut extraction was until recently the main source of cash among the region's rural inhabitants, more recently complemented with income from timber sales. Agriculture, hunting and fishing are mostly for household consumption although they contribute to cash income in communities near major urban centres (Zenteno 2012). Mestizo communities in the region divide into agro-extractive communities, i.e. those that depend to a larger degree on agriculture and extractive communities, i.e. those that depend more on Brazil nut extraction and timber) (Stoian and Henkemans 2000, Zenteno et al. 2013, de Jong et al. 2013).

Since the late 1980s, Brazil nut extraction became the only non-timber forest product industry in the region, and this was soon followed by far reaching decentralization of the national government, forest legislation reform and a second agrarian reform (de Jong et al. 2006). As a result, rural settlements many of which were located inside old *barracas* acquired for the first time legal status and acquired formal title over their lands (Pacheco 2006). The new forestry law of 1996 changed access rights to forests, bestowing peasants and indigenous people the exclusive right of forest exploitation over land that had legally become theirs (Forest Law No. 1700). However, *habilito* practices and some forms of social relations characteristics of the *barraca* in previous times largely continued as before (del Pilar-Gamarra 2007). The reform process described above triggered a reallocation of rights to access and use of forest resources and land, forging new ties of dependency and mutual cooperation among actors that are described in the following sections.

THE EVOLUTION OF *HABILITO* IN NORTHERN BOLIVIA

Transition of habilito from the barraca to the community

Habilito emerged during the boom of rubber extraction in the Amazon basin. In Bolivia it originated as a merger between coercive servitude in the west of the country and the customs of advanced payments during the period of quinine extraction in the northern Bolivia Amazon before the rubber boom (del Pilar-Gamarra 2007, Stoian 2006). *Barraca* workers maintained long daily work routines and had to buy at credit daily necessities at the company stores.

Barraca owners set the prices for goods and forbid workers to practice agriculture on the estate (Stoian 2000).

After the definite decline of rubber production in northern Bolivia by late 1980s, many of the previous *barraca* residents migrated to the region's major towns, Cobija, Guayaramerin and Riberalta. Since the early 1990s international demand for Brazil nuts increased resulting in a resurgence of the *barraca* and the return of *habilito* (Stoian 2000). The organization of labor also changed as fewer workers reside inside the *barracas* and collectors migrate to the Brazil areas every year from late November and until early March. The means of production remained under the control of the *patrons* but there was a decrease of control that they held over forest workers who now lived in the major towns and independent communities (Henkemans 2001). *Habilito* was revitalized as it allowed patrons to control workers operating in the field. In this new period of the *barraca* – *habilito* organization of Brazil nut production, previous coercive means were replaced by an ideological discourse that helped to consolidate the bonds of dependency between forest workers and patrons (Barham and Coomes 1994a). This discourse was often reinforced by pseudo family ties, as patrons became godfathers of their workers' children (Lyons 2006). The socio-economic ties between patrons and forest workers transformed into a relationship of reciprocity, as it provided a sense of security to workers and ensured a steady supply of raw materials to the Brazil nut entrepreneurs. During this period, joining a Brazil nut extraction workforce and working under *habilito* arrangements was an individual decision enticed by the security offered to rural and peri-urban dwellers and their families. The concurrence of people who worked under a *habilito* arrangement and people who choose a different option confirms this (Henkemans 2000, Stoian 2006).

During the 1990s the Brazil nut production chain started with a private company who managed capital and the market. The second link was mostly of traders, and the last link constituted independent communities and Brazil nut collectors (Figure 1). This reflects a reduction of actors because the *barraca* was no longer a basic operative unit of forest product exploitation as in previous years (Pacheco 1992), but rather had become an area over which Brazil nut entrepreneurs held exclusive harvesting rights. This situation once again changed after the legal tenure reform that began in Bolivia during the mid-1990s and were implemented in the north into the 2000s. As a result, relations of subordination evolved to capitalist trade relations because the old Brazil nut collectors, who only could negotiate based on their control of their own labor, now could negotiate based on their control over forest areas with Brazil nut trees. Since then new opportunities of mutual benefit arose based on the negotiation of rights to access resource in exchange for capital and *habilito* also adapted to these new circumstances.

Figure 1

Habilito in the livelihoods of forest dwellers

Habilito nowadays plays an important role in the livelihoods of remote forest dwellers in northern Bolivia (Assies 1997) as it allows them to obtain consumables that are not otherwise available. However, there are several particularities of the Brazil nut extraction process that also explains the continuing use of *habilito* (McDonald and McWhiney 1980). At the beginning of the Brazil nut harvest in November a family's food reserves are limited. This period coincides

with the completion of the planting season in northern Bolivia (DHV 1993) and products of the annual harvest are not available yet. Thus, the negotiations for advance payments start as requests for food and other daily necessities. The demands vary substantially depending on family needs. Families who manage their agricultural plots for continuous supply may reduce significantly the amount of goods they request as advance payment compared to more opportunistic food producers. The difference may range between US\$ 14 and US\$ 100 that a family receives at the beginning of the Brazil nut harvest (Zenteno 2012).

According to Zenteno (2012), 45 percent of a sample of 239 households had negotiated *habilito* during 2008, when the Brazil nut prices were one third of the value reported from the previous year (Table 1). The group that negotiated *habilito* obtained more than 31 percent of their rice consumption not from their own fields, had 21 per cent less agricultural crops, and owned 56 percent fewer pigs than families who did not rely on *habilito* (Table 1). On the other hand, in spite of the decrease of the Brazil nut price, the population with *habilito* collected 43 percent more Brazil nut boxes, had a 38 percent higher income from Brazil nut sales and 22 percent higher earnings from the sales of timber, than those without *habilito* (Table 1). Dependence on *habilito* continues as long as the receivers of *habilito* continue delivering the raw material that motivates the merchant to assume the risk of investing in *habilito*. The major volume of product gathered by families with *habilito* indicates that they indeed are complying with the terms of the agreement.

Table 1

Habilito in the commercial relations of forest dweller communities

Nowadays, Brazil nut collection is carried out by people living in remote communities and by people residing in the peri-urban neighborhoods of Cobija, Riberalta and Guyaramerin, the region's major towns. Our data indicate that peri-urban residents can earn between \$US 1000 and \$US 2000, during a year with good Brazil nut prices when employed as Brazil nut collectors in communities or in the few areas that are still exploited as *barraca*. A rural family that controls 500 hectares of land (which is the effective area allocated to single families during Bolivia's latest land reform) can at a price of \$US 17 per box (price registered in 2009), obtain over \$US 2550 for 150 boxes of Brazil nut. Information obtained in 2008 on income from Brazil nut sales in communities with variable distance from urban centres (from 10 km to more than 100 km measured in hours of travel to the community), revealed the notable margin of benefits channeled through *habilito*, in spite of the low prices registered that year (Figure 2). According to this information, the price of Brazil nut tends to decrease when access to the community becomes more difficult, because of large distance or poor road connections. On the other hand, communities with this limitation can often compensate this by collecting larger volumes as they may have access to a larger number of Brazil nut trees (Zenteno et al. 2013).

Our findings suggest that nowadays community residents and peri-urban residents in northern Bolivia obtain economic surplus because of an interaction of three factors: (1) the increase of the Brazil nut price; (2) the change of *habilito* as an instrument to impose or accept debt and commitments to assure benefits, into an economic alternative option that is available even for people who do not reside in the forest, and (3) the reassignment of property rights over land and access to forest resources.

We observed that the negotiation of *habilito* between community members and traders has changed. Currently traders cannot access the Brazil nut stocks belonging to communities if they fail to establish good relationships with community members. These relationships are largely channeled, using *habilito* as an incentive. If a trader has sufficient capacity to ensure *habilito* during the harvest season, the more likely he is to develop strong social and commercial ties with communities that control Brazil nut stocks. A trader has to be willing to provide *habilito* during periods of low Brazil nut prices, when expected benefits may be negative, and even out of the harvest season. Under such an agreement, the trader makes a risky investment in exchange for a monopoly access to Brazil nuts in a particular area.

We also observed cases in which traders established a working agreement with members of families who dominated communal economy and politics in eight communities of the total sample. The trader provided substantial amounts of cash or in kind as an advance payment to these dominant family members. The recipients reinvested these funds or goods among other community members, according to their own social rules. The dominant group captured benefits when transferring *habilito* interest to other community members. This transfer takes place more and less the same as in the early *barraca* system, selling overpriced consumables and paying less for the product. We call this mode "second-tier *habilito*", as the first-tier *habilito* is between the trader and dominant community members.

The benefits obtained by the dominant group have a cost. The dominant family members assume a commitment to control communal Brazil nut extraction and enforce the *habilito* in the community. The dominant family members are perceived by the rest of the community as the new patrons as they control both capital, but also strongly the rules of access to land and Brazil nut forests. The benefits, however, are significant. They pay between \$US 0,71 to US\$ 1,43 less for a single box than the traders to whom they resell the boxes. On average, dominant families annually gained \$US 10,700 for operating as *habilito* intermediaries. In addition to paying less for a box of Brazil nut, dominant family members may charge for the right to harvest Brazil nuts or demand a percentage of the harvest for themselves. In one community, dominant family members charged \$US 0.57 for a box of Brazil nut harvested, but which they did not buy themselves from community members. In another community they charged as a fee 10% of the total amount harvested. Opposition to these measures is usually punished by social exclusion from the community. Table 2 shows a classification of interviewees based on their capacity to collect Brazil nuts. The 'large producers' correspond to the dominant families within a community who obtain income from their own land and reselling Brazil nuts from other community which they obtained through the second-tier *habilito*. We observed dominant families controlling Brazil nut trade in communities in 25% of the studied communities. Dominant groups have more and expensive goods than the rest of the community members, enough money to have their kids studying in the regional towns or even own a house there (Zenteno et al. 2013).

TABLE 2

Dominant families who engage in second tier *habilito* default on deliveries or sell their harvest to a different trader than the one who provided the advance payment. They use these funds to have more capital to trade inside the own or neighboring communities. Debts that dominant families

accumulate with traders are commonly compensated by exclusive access of the same traders to Brazil nut stocks within the community. The trader then acquired a virtual harvesting monopoly in exchange for flexibility or forgiveness of existing debts. Interviewees revealed that some traders may have unpaid debts of up to \$US 20.000 under such schemes.

Habilito in the Brazil nut production chain

The breakdown of the former *barraca* structure led to the reconfiguration of local powers and social relations, triggering the emergence of specializations in the Brazil nut production chain, and specific rules to regulate performance of each link. In addition to the reasons given above, this also explains why northern Bolivian forest dwellers continued to depend on *habilito* still controlled by the old patrons. It also partly explains why old patrons stopped their efforts to regain the power that gave them de facto tenure over land and valuable forest products. The adaptation of *habilito* to the new reality of the Brazil nut sector contributed to this diversification and specialization, and recognition of the importance of each actor. For example, peasants have always had the ability to undertake extractive activities. Under the new reality, however, traders and intermediaries, many of who were former patrons, developed the ability to trade. The change in property rights over land and forests forced these actors to master those skills, including seeking mutual cooperation, to negotiate Brazil nut supply.

The security of being able to rely on *habilito* ensures a proper organization of the early stages of Brazil nut harvesting. This is especially the case in remote communities. One month before the start of the Brazil nut harvest, forest dwellers must clear trails, repair roads and fix temporary storage facilities, activities that require at least one month on average (Interviews, 2009). If peasants would have to assure funds for the harvest without resorting to *habilito*, the opportunities for exploiting Brazil nuts would decrease substantially. Forest dwellers are not eligible for bank loans, and even if they were, it would take a prohibitively amounts of time and resources to negotiate such loans. In addition to pre-harvest investment, *habilito* greatly facilitates continued Brazil nut collection. The Brazil nut harvest demands for extended stays in the forest. When daily necessities are exhausted, Brazil nut collectors only make a short trip to restock from the trader, without worry of having to find another source of supply.

Once Brazil nut collection has finished the collector faces the challenge of moving his product to any Brazil nut company located in the regional towns. In riverside communities the movement of 150 boxes of Brazil nut of 25 kg might cost about \$US 700. With the price of \$US 17 per box in 2009, this leaves a positive balance of \$US 1,850. The cost of taking the product out of the forest to the factory is approximately 27 percent of its total value. Because the collector delivers the Brazil nuts to the trader, he does not have to find resources to pay for transportation.

DISCUSSION

Our investigation demonstrates how an anachronistic mechanism of debt-peonage can - under certain circumstances - develop into an economic instrument that plays an essential role in an economic sector that has adapted to new political, social and economic realities. Worldwide, evidence exists on how debt peonage has evolved from a mechanism of social submission to a mechanism that is used in transactions under an economic rationality where partners need to

determine priorities and needs, in order to capture benefits that they are seeking (Barham and Coomes 1994a, 1994b, 1994c, Gild 2006, Knight 1986, Washbrook 2006, Weinstein 1986). In all the cases studied these changes resulted from strategies of adjustment to changes in economic factors that connected the various actors through labor and other productive relations. Nevertheless, in all the same cases to some degree and during variable periods, some elements of the mechanism's original exploitative nature persisted. This can be attributed to economic elite, mostly former patrons, who continue to use *habilito* to further its own interests. The more resource-endowed and powerful actors continue to seek hegemony of the productive chain in which they participate.

According to our research, in the northern Bolivian Amazon property rights over land and the exclusive right to decide over the use of valuable forest resources triggered transcendental changes in the balance of power among actors linked to the former modality of debt-peonage (Cano 2012). In spite of the social tensions at the onset of these changes, a certain degree of awareness was reached among actors with regard to their comparative advantages, stimulating a conduct of cooperation to preserve the new niches of power and assure access to valuable resources. A clear evidence of this is the reconfiguration of rights among on the one hand former *patrons*, traders and businessmen who control the means of production and on the other, rural communities who control the resources. The former labor relationships that marked the pre reform forest product sectors in northern Bolivia have become a commercial, c.q. capitalist relationship adapted to the limits of access and use of forest products.

The new conditions under which *habilito* is applied in northern Bolivia have modified the social, economic and labor relations. Until the recent changes in northern Bolivia *habilito* was mainly used to assure the supply of labor necessary for harvesting rubber and Brazil nuts (Bojanic 2001). Nowadays, the main item that is negotiated is the valuable forest resource that some control and want to sell, and others want to buy. Representatives of the various social sectors linked to the production chain, Brazil nut companies, the union of the Brazil nut collectors and representatives of the government, participate in negotiations of the Brazil nut price, which is done very early in the Brazil nut harvesting seasons to guarantee the transparency in prices and avoid tensions (Bojanic 2001). Traders in the field use this as guidance but adjust the price they pay, depending on their cost benefit assessment, however, without diverting too much from the official price.

Defaulting on the commercial obligations by one of the actors in a *habilito* agreement, which does happen frequently, can be understood from different perspectives: as immoral behaviour, as a legal infraction, or as a manifestation of the rights and power of each of the parties involved in the negotiation process. However, negotiations take place in an atmosphere of mutual tolerance, and not anymore as an imposition of the powerful patron towards the forest workers. But what explains this change in attitude among both groups of actors, for some towards a tolerance previously unacceptable while for others overstepping the limits of socially acceptable behaviour? Beside the spontaneous agreements that arose around the common interest in a particular resource, it seems that the opening of spaces of social individual and collective participation, as well as the exercise of the civil rights in the political arena as stipulated in the Popular Participation Law N° 1551 the Municipalities Law N° 2028, contributed to these changes. As a result of those changes, social conduct of the individual is not constrained

anymore by former rules of submission and subordination, and this resulted in a new perception of social class, which is also reflected the negotiations of *habilito*.

In most of the cases studied, despite the changes in the balance of power, the perception of superiority of the *patron* continues in their relations with the labor class. The division between property rights over the resources and the means of production seems to reduce class differences when both have an interest to negotiate economic benefits from the use of forest resources. The result of this process is an increased respect between classes because of the links that they hold to their material means of production.

Key aspect in this discussion is the valuable forest resources themselves. *Habilito* is intrinsically tied to a great dependency on a particular resource, which partly allowed for the arbitrary control of the patrons over their laborers. Our research suggests that the mechanism can evolve towards more profitable scenarios for both actors, which is directly related to the productive diversification of actors in the production chain. However, it can be argued that the process of adaptation of *habilito* to a transformed Brazil nut production chain is conditioned by only one valuable forest product. Therefore, what can be expected in the future if this link changes radically due to a dramatic decrease of Brazil nut? The dependence on one valuable resource which is the mainstay of the local economy represents an important risk to the society of the region. The development of new productive activities could entail a new accommodation of the social, economic and power balance linked to the current productive activities based on the use of valuable forest resources. However, taken into account the evolution of *habilito* and the influence of legal reforms and economic changes in that process, a new relationship might develop, based on new forms of debt-peonage.

In our view, the study of the evolution of *habilito* in the northern Bolivian Amazon demonstrated the multiple alternatives of a mechanism that previously had the main objective to control and exploit a human group, towards a social mechanism of opportunities for economic benefit of the classes structured under a new social order. It is uncertain in what new ways the *habilito* system will develop in the future. Nevertheless, it is evident that the current productive structure and the economic possibilities for its users would be very different if the Brazil nut production chain were to collapse.

CONCLUSION

A salient characteristic of the end of the 20th century and of the present is the important advances achieved in the spheres of human rights, justice and social equity. The notable adherence of many countries to treaties and international agreements relative to these topics worldwide suggest that slavery, servitude and debt-peonage, as the most typical expressions of the feudal domination of the post-colonial period do not take place in this new age. Nevertheless, there exist multiple circumstances that yet allow the emergence of variants of this type of social relations, through which social exploitation with an economic purpose continue. In most cases the above mentioned variations are simply the result of choices made based on opportunity costs linked to social needs, labor and productive requirements. This is especially the case in developing countries with important structural productive and financial deficiencies, and even

more so in remote regions where a weak presence of the state allows for little compliance of labor standards or similar regulations.

The debt-peonage modality can be considered as an extraordinary phenomenon worldwide, due to the exceptional characteristics that its process of evolution adopted in a short period of time. In northern Bolivia, some transcendental aspects that influenced this evolution were the normative changes linked to the civil condition and readdressing of land property rights and access to natural resources in favour of rural populations. The processes unleashed by these changes concerned the former patron relations and they motivated the emergency of more equitable commercial links, easier access to work capital and the specialization of every social sector within the most important production chain of the region. The mechanism adapted in tandem with shifts to relative social tolerance among actors linked to the resources of interest, but in a new context of proprietary rights. This fact suggests the prevalence of an economic rationality between actors valuing the benefit of decentralizing the production chain on the basis of its respective costs of production.

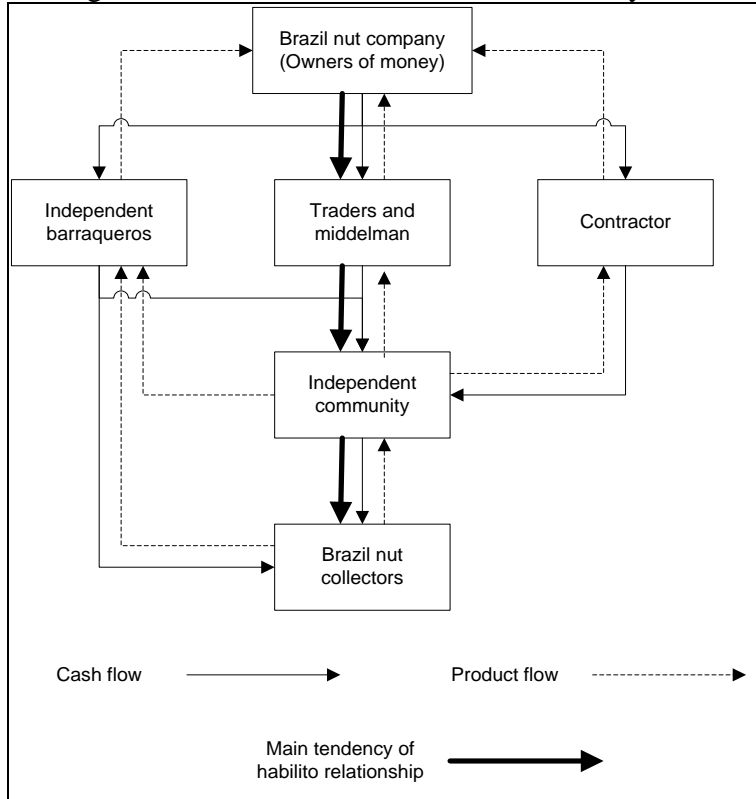
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Figure 1. New scheme of actors of habilito system.



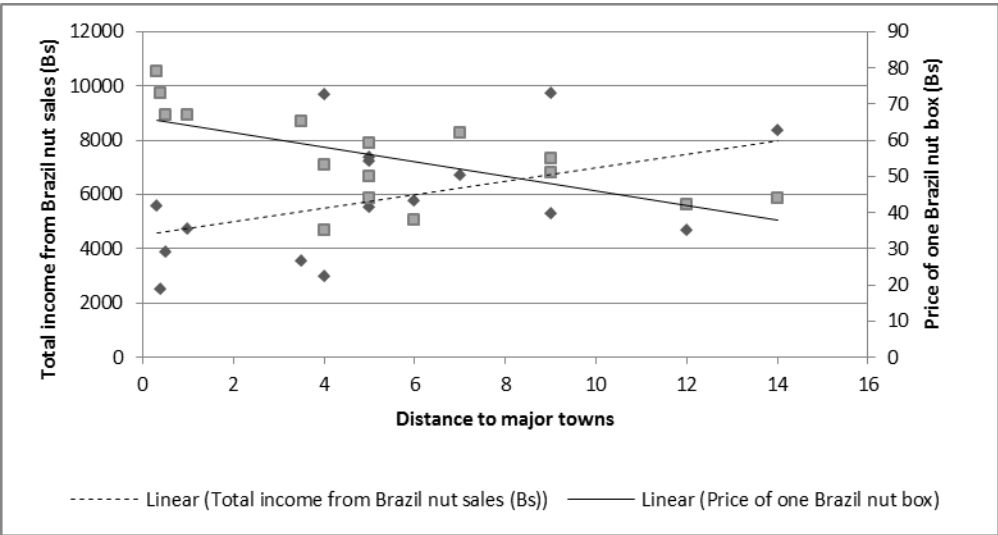


Figure 2. Variation in revenue from Brazil nut sales related to community access. (Lines are based on data regressions)

Table 1

Economic and productive differences between people depending and not-depending on the habilito. Statistical test results (p-values) are based on two-sample t-tests.

Parameters	Sample without habilito (A)	Sample with habilito (B)	Percentage difference, (B-A)/A*100 of B with respect to A	<i>p</i>
Total revenue from Brazil nut sales (Bs.)	4020	6510	38	<0.001
Number of harvested Brazil nut boxes per family	70	123	43	<0.001
Price received per Brazil nut box, 2008 (Bs.)	57.4	52.3	-9	<0.01
Effective days of Brazil nut harvesting, 2008	29	38	23	<0.001
Agricultural crops, 2008 – 2009 (has)	2.07	1.62	21	<0.001
Rice bought, 2008 (arroba)*	8.2	12	31	<0.05
Food used for animals (arroba)	47	20	57	<0.05
Number of pigs per family	1.63	0.71	56	<0.05
Benefits from timber sales from forest management plans (Percentage of familiar total income)	14.7	19.0		n.s

Source: Modified based on Zenteno (2012). *About 15 kg.

Table 2: Classification of interviewees based on their capacity to collect Brazil nuts

Type of Brazil nut producer	Average Brazil nut income (Bs)
Large	32,300
Medium	13,400
Small	3,800

Source: Based on Zenteno (2012)