

Historical Paths In The Market Insertion Of Forest Communities In South Eastern Mexico: First Insertion (1900 To 1944)

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Abstract

The southern state of Quintana Roo, Mexico has been, for almost a century, stage of a colonization strategy based on community forestry. To consolidate this initiative, forest product marketing is of central importance. To understand related problems, it has proven useful to see them as embedded in value chains. The present study aims at understanding the main determinants in the changes in value chains that imply improvement or deterioration in the position of forest communities. To this purpose, a historical approach has been chosen. Based on archival studies and bibliographical research, four aspects of value chain development – land uses, governmental action, value chain actors, and external demand – have been analysed for the first half of the 20th century. Two major value chains were identified for this period. The first concerned the production of chewing-gum base, elaborated from the sap of *Manilkara sapota*, a tree species very common in the region. The second concerned mahogany logs. While communities were able to insert themselves in the first value chain, mahogany log production remained in the hands of private companies throughout the time analysed. The insertion of communities was made possible due to a bold governmental effort and the relative negotiating weakness of international buyers, which were exposed to strong competition in a quickly concentrating market. The insertion in the chewing-gum value chain brought significant income increases for forest communities and its members. It also implied a clearer “interface”, in which negotiations became more market driven, and less dependent on factors like state financing or political will.

Keywords: Forestry, forest product marketing, value chains, Mexico

Introduction

Quintana Roo is a densely forested state in the south eastern Yucatan peninsula in Mexico. For almost a century, its southern region has been the stage for a unique colonization initiative. Scarcely populated since the demise of maya civilization in the 16th century, this region became a target of massive colonization in the early 20th century. But unlike most colonization schemes, which build on small scale agricultural land-use, this region was colonized through the establishment of forest-using communities. These communities, so called *ejidos* proved resilient enough to subsist until today, many still having forest use as their main source of income.

To establish and consolidate community forestry, a central precondition is its financial viability. The forest communities in Quintana Roo depend on revenues from forest product extraction to make a living and to be able to implement the investments in forest production and conservation. Therefore, the form in which these communities insert in markets is very important. Normally, the communities are not connected directly with the end users of their products, but indirectly through several links of trade and processing which as a whole are called value chains. Incomes for forest communities depend on the specific position they have in these chains, especially the power they have to negotiate with their customers.

The factors that determine the position of an actor in a value chain are not fixed. Not only can an actor improve or worsen its position in time, but also the moves of other actors in the same chain may have an impact on its position. Furthermore, external actors like the state may alter the relations among chain members, for example shifting negotiating power from one link to another.

In order to promote community forestry, it is important to understand the factors that influence the market insertion of communities. Only then, financial and marketing promotion instruments may unfold their full potential, targeting not only the communities themselves, but also other actors. In particular, the possibilities of state actors, with their strong normative power need to be fully understood in order to determine feasible ways of action in community forestry promotion.

The determinants for market insertion of forest communities and for the rest of value chains are not easily studied, as they are of very different nature. For example, forest assets can be measured in a very different way than the policies that act on market insertion. In this situation, a historical approach offers several advantages. Through a mostly inductive procedure, the most apparent factors in a certain situation may be easily considered. Furthermore, as value chains change in time, specific factors are more easily determined as having an influence.

The present study analyses changes in the market insertion of communities in Quintana Roo during the first half of the 20th century. It aims to demonstrate the state's capacity of influencing the way communities are inserted in markets.

Methods and conceptual approach

The present study, as most historic accounts, takes an inductive stance to the understanding of processes (Möllerling 2006). The materials used, covering the first half of the 20th century, come mainly from two archives: first, the Archivo General de la Nación in Mexico-City, and second, the Archivo Estatal de Quintana Roo in Chetumal. The archival information was complemented by published bibliography.

The basic procedure has been to describe the range and dynamics of individual elements and then connect these elements for a broader appraisal of market insertion. The elements considered were:

- Land use and land cover change: as a base for all other points, land use and the accompanying land cover changes as a consequence of colonization are described in general terms.
- Ideologies, institutions and organizations: after a brief effort of characterizing ideological strings that were relevant for shaping each phase, its main institutions and organizations have been described, as defined by Scott (2001). The description of institutions encompasses rules (laws, regulations, programs) and norms.
- External demand: a description of national and international demand that exerted influence on the region.
- Production chains: a description of the most important regional production chains in each historical phase.
- Market insertion: an appraisal of outstanding cases of insertion in each historical phase.

As a result, four accounts of path development, seen from different perspectives, appear. These four accounts will later be discussed in order to reach conclusions.

Results: a chronology of market insertion paths

The first half of the 20th century encompasses the beginning of land colonization in southern Quintana Roo, promoted by wood and chewing-gum base extraction and shaped by the efforts of the central Mexican government to enforce the frontier with British Honduras. At the national level, it started with the Porfirian rule, a “modernist”, dictatorial government that promoted private enterprise. It ended with “socialist revolutionary” governments that distributed large forest surfaces to newly established communities during the most important land reform initiative in Mexico: the ejido. With this land

granting, forest communities became actors in the marketing of forest products.

The beginnings of forest use in Quintana Roo in the late 19th and early 20th century

In order to understand the changes in 20th century value chains, it is necessary to briefly survey describe the beginnings of forest use in the 19th century. The history of modern Quintana Roo might be conceived to start in 1847, when a fraction of *maya* peasants and hacienda workers living in edges of the then independent Yucatan Republic rose up against the Yucatán order in a social and religious war that would last more than half a century. In the course of this war, the Maya would retract beyond the agricultural frontier into the forests of eastern Yucatan into what today is central Quintana Roo. There, they would find a speaking cross, establish their capital and start repeated raids against Yucatecan cities and settlements (Reed 1987). To finance their war, the rebel mayas would gain the control of what today is southern Quintana Roo, back then an almost uninhabited region with forests rich in logwood (*Haematoxylum campechianum*) and Mahogany, concessioning these forests to British loggers operating from Belize City, in exchange of money, provisions, or arms (Villalobos-Gonzalez 2006:53).

At the beginning of the 20th century, the rebel Mayas had not been decimated by the enemy, but by hunger and diseases, and the Mexican government, which in the meantime had integrated Yucatán as another Mexican state, started several initiatives to regain control of what it considered part of Mexico. The main elements were increased military actions in central Quintana Roo, an international border treaty with Britain, as the neighbouring British Honduras was still British, that involved ceding the lands south of the Hondo river as a token to end British cooperation with the Maya rebels, and the establishment of Payo Obispo, now Chetumal, as the new territorial capital near the mouth of the Hondo river, then the most important exit for the most important regional commodity: wood (Careaga 1990).

To increase its state control, an explicit colonization policy was started. When Payo Obispo was established, southern Quintana Roo was a virtually unoccupied space. The Mayan revolt and the punishing raids by the Mexican government had forced the few inhabitants of southern Quintana Roo to leave their villages and settle in British Honduras or in the vicinity of larger cities in northern Yucatán (Reed 1987). What remained were scattered “pacific” Maya populations, small villages of tolerated Mexican farmers and a floating population of wood extraction workers along the Rio Hondo employed by Belizean companies (Cesar and Arnaiz 1983:112). From the perspective of the central government’s perspective, this frontier was in need

of a population that pledged allegiance to the Mexican nation. Leaving the Maya population in central Quintana Roo to its own resources, governmental efforts went into the external colonization of the southern part of Quintana Roo (Careaga 1990; Higuera 1997; Macias Richard 1997).

While the colonization policies and the colonization process itself were subject to many detours in the following decades, as a result, southern Quintana Roo, as an example of a recently colonized frontier, is unique in several aspects. First, it is one of the oldest examples in which an almost uninhabited space was colonized under official forest utilization schemes, as opposed to agricultural conversion. Second, it is an example of a colonization in which land was granted to (newly established) communities and not to individuals. Third, the communities created to manage land were not culturally homogenous, but were a motley group in terms of provenance, experiences, and expectations. These aspects set the region apart from other Mexican regions with community forestry, which generally built on long standing communities with established governance and land-use institutions, for example in Oaxaca. Furthermore, most other examples of successful establishment of community forestry in Mexico are located in regions of coniferous forests (Alatorre Frenk 1998; Bray and Merino-Pérez 2004).

Land use

To pursue the consolidation of the frontier with British Honduras in the early 20th century, the Mexican state fostered the extraction of logwood, mahogany and chewing-gum base to promote colonization of the land. While logwood would soon disappear as a commercial product, mahogany and chewing-gum base became the dominant land uses and important motors for economic growth in the state for the first half of the century. For more than three decades, these activities were organized through concessions to private entrepreneurs on state land. Only after 1935, this scheme would be challenged by the establishment of community land ownership.

The concessions granted to private entrepreneurs varied markedly in their characteristics. Under the Porfirian rule, the concessionaires were foreign firms that held large surfaces of forests for 10 to 25 years, often attached to the condition of colonizing and developing the estate, for example through the construction of permanent roads. After the successful Mexican revolution in 1910, extraction rights went to Mexicans, who often acted as front men for foreign firms. Concession areas and granting periods diminished, as did the conditions imposed on concessionaires regarding their efforts of colonization and development.

During the Porfirian rule, most concessionaires in southern Quintana Roo were American or British firms active either in the mahogany or in the logwood business (chewing gum firms would come later). For example, the

Stamford Manufacturing Company was a leading producer of dyes in the US. The Banco de Londres y Mexico was a British Mexican joint venture extracting mainly mahogany, and the Mengel Brothers Company, an American firm, extracted both mahogany and dyewood (Villalobos-Gonzalez 2003:60). Aiming at increasing the extraction radius of operations away from the rivers, these firms invested heavily in infrastructure, for example in railroad lines. As a consequence, they were able to reach spots as far away as 60 km from water bodies. These firms employed a large number of workers. For example, the Mengel Company, holding a concession of 70,300 ha, employed 1500 workers in a time when Payo Obispo had a population of 1000 people (Sánchez and Toscano 1990 [1919]:95). As these companies shipped logs for export into high-end markets, the cutting diameter was high. Therefore, many trees with smaller diameters remained in the forest (Galletti 1993:137).

Normally, firms had to pay fees per concessioned area and per extracted volume. The granting of concessions was derived mainly from political connections. The efficiency, capital endowment, experience or other performance characteristics of a company were of little importance to obtain a concession. During this time lapse, the government showed no interest in whatever silvicultural considerations. Its task was mainly the collection of duties. Although the early logging concessionaires strongly mechanized extraction operations, there exist no evidences of silvicultural considerations in the extraction companies either. Forest workers, be it *chicle* rubber tappers, or wood extraction workers, were the lowest stage in the production scheme (Galletti 1993; Macías-Zapata 2004)

The chewing-gum base (*chicle*), the logwood and the mahogany log extraction operations, dealing with different products, led to different land use patterns and to different commercial systems. Chewing-gum base is obtained from the latex of the *chicozapote* tree (*Manilkara zapota*): the *chiclero* climbs the trunk of the tree with a rope, cutting rhombic incisions in the bark with a *machete*. The obtained sap is then cooked into raw, solid chewing-gum base cubes. *Chicle* is easy to transport and has a high value/weight ratio. Therefore, it could be transported over long distances – in its boom time, it was transported with small aircrafts. As a consequence, its exploitation followed no specific geographical pattern, but was determined by the existence of areas with a high concentration of *chicozapote* trees. Therefore, chicle concessions were issued as elongated rectangles, which were narrow at the waterfront, especially along the Hondo River, and from there went deep into the forest. By contrast, mahogany logs were attached to the vicinity of water flows or to strong investments in log transport infrastructure. As a consequence, log concessions tended to cover large areas along major waterways (Galletti 1993:, p.144; Rosado Vega 1998

[1940]:144). Finally, logwood, whose commercial life as an important dyeing material was fading out in the beginning 20th century, grew on temporarily flooded areas in which mahogany did not grow, often along the coast, was quite easy to transport, as the log diameters usually are reduced, and the required log lengths were also small (Camille 1996:81)

Colonization did not immediately follow these uses. In the beginning, there was a large “floating population” trailing the boom and bust that is typical of many pre-frontier regions (Cesar and Arnaiz 1983:15). People came for the chicle season (during the rainy season) or for the logging season (in the dry months), and then returned to Payo Obispo⁶⁶ or to other Mexican states. This population slowly settled down in Chetumal and in villages that appeared alongside waterways and served as trade and shipping points. Nevertheless, despite a relatively large forest production, the steady population only rose slightly in the first decades, increasing from 3300 in 1910 to 4600 twenty years later (a yearly population growth of less than 2%) (Cesar and Arnaiz 1983:125). The same can be said of the amount of land granted to individuals, groups or state entities. Until 1924, less than 20,000 ha had been declared as private, village or federal land. An overwhelming area remained as “national” land (Galletti 1993:147148, p.147,148).

This situation changed dramatically in the thirties, when Lázaro Cárdenas became president. Cárdenas was a career soldier of the revolutionary army that had become a progressive politician. Together with his appointed governor in Quintana Roo, Rafael Melgar, they set out to change the structure of land use and commodity production: more than 200,000 ha were granted as ejidos in southern Quintana Roo. The unique feature of these ejidos was that they were oriented towards forest use (as opposed to agriculture), the main programmed use being *chicle* extraction. For this purpose, a very large per capita area (more than 400 ha), was established for these *ejidos*, as this was the extension estimated necessary to provide enough income from *chicle* tapping for an *ejidatario* family. As a consequence, the loose forest settlements became officially recognized not only as villages, but also as organized forest and land owners with clearly demarcated areas, with owners living on the land and using its forests (Argüelles 1991; Rosado Vega 1998 [1940]:248).

While these new circumstances had no immediate impact on forest cover or the way forests were used, the newly created actors decisively directed land-use dynamics in the following decades, as a feature of *ejidos* was their implicit capacity of taking communal land-use decisions. Through the *ejido* assembly, logging and chewing-gum permits and other land-use

⁶⁶ At that time, Chetumal, the capital of the territory, was still called Payo Obispo.

issues would at least be discussed (Janka 1985). As will be shown below, the power of the *ejido* assembly changed constantly as a consequence of the shifting political-institutional environment, but the *ejido* assembly as such soon became an institution that could not be bypassed for most land-use issues, forest and non-forest.

In this phase, agriculture in these *ejidos* remained mainly subsistence production. *Chicle* extraction and logging continued to be much more attractive than other land uses for several years, and virtually no marketing channels existed for agricultural products. As this was a frontier connected to the outside world by relatively long waterways, only products with a certain value-weight ratio made it out of the region (Cesar and Arnaiz 1983:118).

The predominance of forest uses in the region endured until the early 1960s. Although no new *ejidos* would be granted for almost 20 years (a hiatus from 1945 to 1964), new arrivals to the *ejidos* as well as adult *ejidatario* sons establishing own families would be easily integrated: most *ejidos* received supplementary lands for that purpose. Although under the Margarito Ramirez rule, governor of Quintana Roo from 1944 to 1959, the political, productive and financial conditions for *ejidatarios* worsened, this did not affect the pillars of this land-use system. Only the change in agricultural and colonization policies in the 1960, as well as the gradual reduction of *chicle* demand and prices after WW2 would lead to modified land use processes (Galletti 1993; Forster 1994).

Ideologies, institutions, and organizations

Ideologies

Government officials that took land-use, production and trade decisions for Quintana Roo in the first half of the 20th century operated under very diverse ideological backgrounds. The modernist state-building of the Porfirio Diaz' rule around 1900 was supplanted by strong swinging ideological courses in the first decades after the revolution. Explaining the drafting of one of the central laws for natural resource management in post-revolutionary Mexico, the Article 27, a contemporaneous observer remarked:

“...living in a world bent on its own destruction, Mexico in 1917 was sucked willy-nilly into the currents of social change she had so long resisted... [and] with her accustomed hospitality, opened wide the doors [for] Henry George, Peter Kropotkin, Karl Marx and the familiar host of their followers. Their ideas and theories, together with the much more familiar and influential figure of Auguste Comte all went into the pot together. To these were added rediscovered principles and precedents from Spanish Colonial law, theories of “rights and justice” derived from a naive reaction to agrarian exploitation, and doctrines of social control learned from the belligerent nations in the World War. The resultant brew was

served up in the 1917 constitution in concentrated form in Article 27” (Simpson 1937:63).

The ideological diversity or even inconsistency reflected in this cite continued for several decades. After the signing of Article 27 (described with more detail below), Venustiano Carranza, a conservative revolutionary and Mexican president from 1917 to 1920, enacted several amendments that thwarted its implementation. Alvaro Obregón, having come to power after Carranza’s assassination and president from 1920 to 1924, retook the course of the reform, but also must be considered a moderate that “exhibited a caution which in the face of the high sounding phrases of revolutionary doctrine and the specific promises of Article 27 amounted to undue timidity if not plain cowardice” (Simpson 1937:87). His successor, Plutarco Elías Calles, in office from 1924 to 1928 and the power behind the throne until the mid 1930s, pressed stronger on the land reform. His vision was a large body of small landholders. Communal land holding was just a step in this direction, as individual peasants were seen as to weak to be able to manage land for themselves. His successor, Lázaro Cárdenas, in power from 1934 to 1940, became the president that most openly sympathized with the ideals of land reform and communal land holding (Simonian 1999).

In general terms, the Mexican revolution brought a more collectivistic spirit in legislation and political program (Simpson 1937:64), but it was not until Cárdenas that this spirit became a moving factor in Quintana Roo. Cárdenas had visited the region during his presidential campaign and would devote special attention to it during his presidency, among others appointing a kindred spirit as governor: Rafael Melgar. In the wake of WW2 and in a time of intense political debate, when for example many leading intellectuals and artists were declared communists (Benítez 1978:185), while the former president and still strongman (Plutarco Elías Calles) was attracted to fascism, Cárdenas had the difficult task to form a mass party, the later Partido de la Revolución Institucional (PRI), integrating both sympathies for communism as well as an increasing conservatism (Delgado de Cantú 2003:208). His ideological “fire exit” was composed of *cooperativism*, syndicalism and the support of land reform through *ejidos*. All three elements would translate into concrete organizations during his term that proved surprisingly resilient in Quintana Roo⁶⁷: Forest *cooperatives* and *ejidos* are still well and alive in the present. The forest worker unions, more short-lived, were still active in the seventies. For example, the logging workers union (Sindicato de Caoberos), formed under

⁶⁷ This conclusion, derived from the present study, stands in contrast to other opinions, expressed for Mexico at large, like Bray, D. B. and L. Merino Pérez (2004). Los Bosques Comunitarios de México. Logros y Desafíos. F. Ford, T. W. a. F. H. Foundation, SEMARNAT et al, Editora Infagon S.A de C.V: 31.

the influence of Cardenas, still was commanding salary negotiations in the forest industry in the 1970s.

After Cardenas, who certainly was more interested and engaged in natural resource conservation than most Mexican presidents before and after him, the long phase of pro-industrialization thinking began, and with it, a certain depreciation of rural production and livelihoods. In southern Quintana Roo, this led to a 20 year long hiatus in the establishment of new *ejidos* from 1945 to 1964.

Besides the debates referred above, there was another notable ideological discussion during the presidency of Cardenas: the one about the purpose of forests. Concerning the two questions of how to conserve forests and how to use them to promote development, the discussions of the Cardenas time were well beyond discussions before and after it. While not exactly reflecting the utilitarian-preservationist antagonism in the United States, the arguments went in similar directions. For Miguel Angel de Quevedo, a forester with a long trajectory in forest conservation and head of the autonomous forest department during Cardenas, the most important function of forests was their impact on soil and water: forests could prevent erosion and floods, two important problems in Mexico. To conserve forests, he favoured restrictive measures, and he rejected the granting of wooded land to *ejidos*: after a trip to Quintana Roo in 1937, he publicly held *ejidatarios* and *chicleros* responsible for degrading and converting forests (Quevedo 1937: cited in Simonian 1995:91) As such, his views were clearly apart from Cardenas', who believed that forests could be conserved through their wise use, and that the monetary value of forest products was an important development asset that could be used to support rural poor. Therefore, while neither of them was a strict preservationist that promoted forest conservation as a means for itself, neither was a strict utilitarian, promoting forest "mobilization" (Westoby 1987:196) or even conversion to kick-start other industries. Several high level officials in the Cardenas administration maintained the later position, calling Quevedo a romantic conservationist and a social reactionary. These utilitarian positions would become dominant after Cardenas (Simonian 1999:77-85).

As a part of the discussion mentioned above, the question arose of where in the official organization chart the forest service should be situated. Should forestry regarded mainly as a productive activity, not too different from agriculture, and therefore integrated in the Ministry of Agriculture? Or should it be regarded mainly under the perspective of its conservation, more like hydraulic resources, and therefore independent from the Ministry of Agriculture? The *Departamento Autónomo Forestal de Caza y Pesca*, created under Cardenas with Quevedo as the head, strongly held the second position, but this proved to be a minority opinion that would take almost half a century

to become dominant. In fact, Cardenas himself decided to close the Department and transfer its functions to the Ministry of Agriculture (Simonian 1999:108; Cervantes and Arriaga 2008:164).

Another important ideological feature of the Cardenas time that would pervade later decades until neoliberalism put an end to it, was the idea of the possibility of a double economy: a traditional economy could flourish parallel to modern sectors. While Cardenas expressly promoted the traditional economy, later presidents would at least respect the organizations of this economy: national and regional peasant's and craftsmen organizations in the umbrella of the PRI.

At the local level, environment culture, as an attitude towards or knowledge about forests, began on a very low point. In 1929, a governmental observer wrote:

"These are the people in Quintana Roo: the employees, the indios, the chicleros, and the merchants. Of them all, only the indio has roots in this soil....The employee does not know nor love the territory. Feeling himself in a temporary exile, it will never occur to him to plant a tree or cultivate a flower. The chiclero and the merchant have no other tradition than that of their own raids. Like a gold digger in a foreign place, they confront the forest without knowing or loving it, just armed with their Mexican stoicism and resistance...Those that now are chicleros were, during the bonanza in Tampico, workers in the oil fields, or railroad workers, soldiers, packers, people without a trade, having had them all..." (Saenz 1990:127)⁶⁸.

As the "indios" to which Saenz refers were Mayas in central Quintana Roo, it might be concluded that in the study region, in southern Quintana Roo, there existed no tradition of forest use, not in individual terms and even less in community terms. This was the typical frontier populated by deportees, adventurers, and the displaced. As such, southern Quintana Roo differs clearly from other regions in Mexico, like Oaxaca, where community land use dates back to colonial times (Antinori and Rausser 2006)

Laws

The legal base for the establishment of *ejidos* is Article 27 of the Mexican constitution of 1917, issued just after the end of the revolution. Having no access to land was one of the main triggers for the insurrection, and article 27 reflects the many facets at play in the issue of land ownership. While the article is very wide, covering for example the nature of property on subsoil resources, an important space is destined to community property and the procedures of agrarian reform. The article differentiates two sorts of communities: those that traditionally had held community property,

⁶⁸ Translation RF

eventually losing it during the long regime of Porfirio Diaz (president-dictator from 1876 to 1911, when the revolution began), and those that never had any property. The large majority of communities of the first group were indigenous, therefore being named *comunidades indígenas*. The second group was named *ejido*. While the strategy for the first was basically restitution, for the second group, lands had to be deliberately expropriated or gained from inhabited regions (Simpson 1937:69).

The proposed legal concept for *comunidades indigenas* was basically the same as for *ejidos*: in both cases, the general assembly obtained clearly limited usufruct rights: no land could be sold, hypothecated, rented or leased. In all cases, the usufruct was over “waters, woods and lands” of the granted area. Obtaining land was a right of all those in need of it, and the state had the obligation of providing it. The development of the concept and its implementation were far from linear, as the revolution in itself had been a disordered undertaking that moved on a trial and error mode (Simpson 1937). Nevertheless, when land distribution finally happened in Quintana Roo almost 20 years after the law was issued, the most important issues had been solved, and the granting of *ejidos* had become a routine. As such, it became feasible to establish forest surface instead of land surface as the main distribution criterion. (Rosado Vega 1998 [1940]).

While *comunidades indigenas* and *ejidos* got very similar internal regulations as derived from Article 27, the communities behind it could not be more diverse: on the one extreme were traditional indigenous communities with hundreds of years of common land use and governance and a strong internal cohesion and having the same cultural background; on the other extreme were groups of landless peasants from all parts of Mexico that had come together just to receive the land and which would have very much preferred to receive individual titles. The case of southern Quintana Roo might be settled somewhere in between, as here there was at least a common land use activity: most *ejidatarios* had come to the region as chicle tappers or logging workers.

In the shadow of article 27 and its important implications for land property and land use, a forest law was promulgated in 1926. This law set up important categories. Among others, forests standing on *ejido* land were recognized as *ejido* property, giving *ejidos* specific rights and duties with regard to them (Art. 12 to 17). Specifically, the use of *ejido* forests was granted exclusively to “*cooperatives* formed by neighbours of the place”⁶⁹. Another milestone was the establishment of a forest service (Art. 41 to 43),

⁶⁹ Art. 16: „La explotación comercial de los terrenos forestal comunales o ejidales solamente se podrá hacer por organizaciones cooperativas formadas por vecinos del lugar.”

the promotion of reforestation (Art. 22 to 28) and the requirement of extraction permits issued by the Ministry of Agriculture (Art. 17, 20 and 51).

While the law certainly was progressive for its time, its impact on land use was limited. As Tom Gill, a student of Mexican forestry wrote in the early thirties: “*One must reluctantly admit that the present forestry law in Mexico has not greatly hindered the vandalization of forests. For laws, for themselves, the history of nations amply proves, possess little force, unless behind them stands the alert police power of government and the good will of a nation’s people*” (Simonian 1999:84). The imbalance of legal parameters and the institutional enforcement weakness would be repeated by posterior laws.

Organizations

In 1934, when Cardenas became president of Mexico, he established the Department of Forestry, Fish and Game at the same hierachic level as the Department of Agriculture. Its first (and only) director became Miguel Angel de Quevedo. With Cardenas’ support, the Department received a significant budget, and was able to start an important reforestation program. During that time, almost 40 national parks were created, that cover 75% of the total area of current national parks in the country (does not include other categories of protected areas, like Biosphere Reserves) (Simonian 1999:94).

Despite its serious efforts, the Department of Forestry was not able to reverse the destruction of forests. Its budget, large for that time, was insufficient for a coercive conservation policy, as envisioned by de Quevedo, who always promoted strict law enforcement. While such a coercive enforcement would have been well beyond the possibilities of the Mexican government, de Quevedo himself saw the problem that the forest policies implemented in his department were more than countervailed by land reform and agricultural policies. His opposition to land reform beyond the agricultural frontier brought him in serious conflict to other politicians. The department was closed in 1940.

In Quintana Roo, the state did not get involved effectively in forest management in the first half of the 20th century. The law of 1926 established a forest service but mainly gave it control functions, therefore leaving management to private entrepreneurs in charge of extraction. This general approach did not change with the next law of 1942, which returned to the establishment of huge concessions for private companies.

As criticized by de Quevedo, in Quintana Roo the dynamics of forest uses were less connected to forest laws, forest policies or the organizational steps for their implementation, but to colonization, land distribution, agricultural and tax collecting policies. Nevertheless, in Quintana Roo, the conversion and clear cutting problems of other regions in Mexico did not

appear in the Cardenas time, because the general design of colonization had been developed around forest production.

In Quintana Roo, far away from the central power, directives were more important than laws. Since forest production was central for the economic life, its handling was a matter of top officials. While formal proceedings existed, the way things finally got organized depended strongly on the character and attitude of these top officials. Rafael Melgar, Cardenas governor in Quintana Roo, seems to have been driven by a strong idealism that implied what later would be called “empowering” rural dwellers. By contrast, his successor in the forties, Margarito Ramirez, started taking forest extraction as a private business and moved himself into the centre of the *chicle* and wood business, strongly centralizing all functions and implicitly disempowering peasants organizations (Galletti 1993).

Production chains

Two basic types of production chains were in place from 1900 to 1950. In the first, private entrepreneurs played a central role in almost all steps of regional value adding. In the second, community organizations, in part with a strong state interference, gained access to controlling several production links. The emergence of the second type occurred in the relatively short period of the Cardenas/ Melgar governments in the second half of the 1930s, and was much clearer for *chicle* production than for wood, as the high investments and technical knowledge required in logging operations inhibited the displacement of private entrepreneurs by community organizations.

In the first three decades of the 20th century, the concession to private companies became the main extraction form for logs and *chicle*. The characteristics of concessions varied strongly, being more long term, larger and more often granted to overseas firms before 1915, this is, before the revolutionary forces gained power. The earliest concessions issued by the Mexican government concerned mahogany extraction. Although small amounts of *chicle* had been extracted already in the 19th century, commercially important extraction did not start until 1917 (Careaga 1990:189). *Chicle* extraction was done by different people than log extraction. As *chicle* was much easier to transport than logs, the geographic definition of concession areas was less important, and the overlapping of concession areas would only become a problem in later years, when the demand started surpassing the regional production potential.

During this period, overseas markets and the firms that represented the doorway to these markets were central for regional production. These companies had complete control over operations until the 1920s, when the foreign firms were displaced from the formal entitlement of operations,

leaving that task to national firms, which they provided with funding in agreements that were strongly binding for the national entrepreneurs, and which often put the latter in the position of front men (Galletti 1993). In the 30s, after the empowerment of community organizations in the *chicle* production, foreign firms ceased to finance and control the operations and a more market-like interface among these actors appeared.

Chicle production

Initially, *chicle* extraction worked through the so-called *contratista* system, a hierarchical system of formally independent subcontractors. The external buyer normally negotiated with regional *contratistas* (jobbers/contractors). On his part, the *contratista* might hire subcontratistas or directly the *chicleros*, paying them an advance at the season's beginning, and providing them with food and working materials as they have to spend several months in the forest, and charging these materials at the end of the season. These supplies would be sold to prohibitive prices, knowing *chicleros* had no choice to buy elsewhere (Beteta 1990:163). This system worked with the capital of the external firms, which would delegate tasks and hand out funds in a well dosed mixture of control and trust:

“In this way, a debt and interest chain becomes established....the *chiclero* is the enemy of the *subcontratista*, his creditor he would like to escape from; the *subcontratista*, for the same reason, is the enemy of the general *contratista*, who himself hates the agent of the American company who extorts him with the *chicle* price...” (Beteta 1990:161).

Under the government of Melgar, and with the support of Cardenas at the federal level, a new structure was added and partially substituted the *contratista* system. Parallel to the establishment of *ejidos*, Melgar conceived a system of production and consumption *cooperatives* delivering their produce to a second level organization: the Federación de *Cooperativas Chicleras*. The *cooperatives* were more of working groups than independent enterprises with own assets, as they were narrowly supervised by the Federación de *Cooperativas Chicleras*. The Federación had the task of financing the operation and negotiate the sales. Basically, *contratistas* and *sub-contratistas* were replaced by the *cooperativas-Federación* structure. The Federación itself received an initial fund, but then started acting as a profitable enterprise with own funds.

The *cooperatives* controlled several links of *chicle* production. All field operations on *ejido* land (scouting of trees, tapping the trees, processing the resin at the field camp, the basic product and production controls, the administration of the individual production accounts, managing the field camp) were now in hand of *cooperatives*. *Cooperatives* also took over supplying the *chicleros*. The transport of the *chicle* out of the forest, its

storage, quality controls, the financing of the operation, the marketing and negotiation of products, and the political lobbying were in the hand of the *Federación de Cooperativas Chicleras*.

The influence of communities in this structure has often been discussed. For the first time, community forest owners had acquired significant influence on the production chain, controlling some of the tasks that were beyond the mere *chicle* tapping. The influence of *cooperative* members in their own *cooperative* was direct and strong, but the decisions that were taken at this level were mostly of logistical nature. The marketing, purchasing and organization decisions were taken in the *Federación*, where *cooperatives* had a much weaker representation. Usually each *cooperative* sent two delegates to the general assemblies of the *Federación*, where they would vote on general issues. By contrast, the technical staff that took the operative decisions did not belong to the *cooperatives*, but was composed completely of “experts” (Rosado Vega 1998 [1940]:351-354).

Coinciding with the critique of paternalism are the relatively few accounts regarding the agency of communities in the process of land granting and the establishment of *cooperatives*. To obtain an *ejido* grant, village members had to make a formal request, therefore requiring a minimal organization capacity. Concession holders tried by all means to frustrate those initiatives, as this would interfere with their concessions. “Whenever *chicle* workers tried to organize to request lands, concession holders....responded in a violent manner, be it by defeating them through hunger, be it by destroying their houses or devastating their fields” (Villalobos-Gonzalez 2004:223).

Some other mentions do suggest that *cooperatives* were an unknown idea for *chicleros*. A decree from the territorial government, issued Dec.3rd, 1937, states: “creation of socialist Saturday celebrations....that help publicize all matters pertaining the implanted *cooperative* system” (Careaga 1990:246). Gay and Pérez (1937) wrote: “the workers have....started trusting a system of undeniable benefits, but that, having been distorted too often, had not been able to become rooted in their proletarian consciousness” (p252)

Log extraction

The log extraction in the 20th century started with large overseas firms and the granting of formal, geographically well defined concessions. Before the revolution, four large concessions, covering from 70,000 to 700,000 ha were issued (Cesar and Arnaiz 1983:63)⁷⁰. These were large,

⁷⁰ Concessions were issued to the Stamford Manufacturing Co., the Mengel Brothers Co., the Banco de Londres y México, and the Plummer & Reyes Co., or to Mexican front men.

capital intensive operations that normally were strongly vertically integrated, controlling the complete operation from the search of trees to the sale of lumber. These companies had no supervision besides fiscal controls at the main transport bottleneck, the mouth of the Rio Hondo. Having acquired the concession, their main problems on site were those connected to the technical tasks of extraction, very often associated to the land transport of logs. As mentioned above, contrary to other regions in Mexico, these companies invested heavily in extraction infrastructure and machinery (roads, skidders, cranes, railroads, piers, etc.), and made important progress in the land transportation of logs, thus being able to enter deep into the forests to extract mahogany. From the perspective of production, this implied high entry barriers attached to high returns. Therefore, the dominant opinion was that only large companies would be able to use the richness of the forest.

As the foreign companies lost their concessions in the twenties, the whole concession system changed, and so did the production. The new concessionaires were ex-contractors of the foreign firms, which now did the extraction on their own, funded and partly controlled by the foreign firms. Smaller concession areas and shorter concession times appeared. Concessionaires reduced investments in infrastructure and machinery, and their ability of land transportation of logs diminished, leading to an increased exploitation of areas located near the water. As these areas got exhausted faster, concessionaires had to move frequently. For the new entrepreneurs, the main problem was actually *obtaining* the concession, as their assignation depended on personal connections to government officers, and not on a formal bidding process (Aguirre 1990 [1925]:117; Galletti 1993:147).

This new structure of smaller, locally appointed concessionaires remained practicable until the 1970s. Nevertheless, the area this type of concessions covered diminished constantly, as more and more ejidos were granted after 1930. During the Melgar time, the logging concessions were not seriously questioned, although Melgar promoted the establishment of logging worker unions that effectively uniformed and improved wages for different tasks. Melgar established two *cooperatives* in the wood processing, but neither of them was able to develop a lasting working concept (Rosado Vega 1998 [1940]:350).

Through the double change in land ownership from the state to the newly created *ejidos*, and in the production chain, replacing *chicle contratistas* with the *cooperative* structure, the Cardenas/ Melgar governments firmly established forest communities in the production chain. With modifications, this structure has survived until today. “Unfriendly” moves in the next decades would shift the power relations in the production chains, therefore altering the share of value for the actors along the chain, but they would not be able to change the chain altogether. One aspect had not

been conclusively defined: the *ejido* ownership, which was formally a usufruct right, had not expressly been extended to cover the rights on standing timber. The next decades would be characterized by the efforts of different actors to close this gap in their favour.

Markets and market insertion

During the 20th century, international demand for *chicle* and mahogany followed different paths. *Chicle* production expanded until WW2, to slowly fade out afterwards. By contrast, mahogany production stalled around 30,000 m³ a year – with strong yearly variations -- until WW2, to consistently grow in the decades after.

While no consolidated numbers exist for *chicle* demand, its strong growth in the first three decades is apparent, especially in the US, where it went from 3.8 billion sticks (39 per person) in 1914 to 13.3 billion sticks (109 per person) in 1929 (Landon 1935:185). It seems that the first demand peak was achieved in the late 1920s, *chicle* gum-base imports to the US surpassing 35,000 tons (Mathews and Schultz 2009:55). During the economic depression in the early 1930s, demand for gum-base fell below 10,000 tons. Production recovered with the beginning of the war, but its growth was limited as very soon, several ingredients for the chewing gum manufacture, most importantly sugar, were strongly rationed (Mathews and Schultz 2009:60), forcing the main companies to focus exclusively on supplying the army (Wrigley 2006). On the other side, *chicle* production had increasing difficulties in meeting demand as Manilkara stands had been overused and tropical forests were increasingly converted to other land uses.

In this time, the US chewing-gum industry, by far the most important worldwide, was involved in a strong concentration process. From 74 firms in 1914, the number went down to 29 in 1929. In 1935, three firms produced 95% of chewing gum in the US. The William Wrigley Jr. Company produced around 60%, the Beech-Nut Packing Company 20% and the American *Chicle* Company, a consortium controlled by John Adams, 15%. This concentration was attributed to three main causes: the investment cost of machinery, the difficulty smaller firms had matching the larger firms advertising, and the difficulty smaller firms had in buying gum-base:

“...to ensure a supply of *chicle*, a concession must be obtained from some Latin American government. Some *chicle* is sold by brokers and native gatherers, but a manufacturer cannot depend upon these market channels for a sufficient supply” (Landon 1935:183).

In this phase, *chicle* gum-base was mainly produced in Mexico and Guatemala. These two countries usually counted for more than 70% of world production. As demand for *chicle* gum-base increased, American firms searched for other sources, but had little luck. Natural *chicle* substitutes proved inadequate for chewing gum, and *chicle* gum-base coming from other

Latin American countries remained expensive and of bad quality (Ponce Jiménez 1990:32). In Mexico, production progressively concentrated in the Yucatán Peninsula, mainly in the states of Campeche and Quintana Roo, as the production in other states, like Veracruz, the first state to produce commercial *chicle* (Schwartz 1990:140), had stalled. In the 1930s, Campeche and Quintana Roo produced 97% of the total Mexican production (Heuer 1945).

Chicle prices fluctuated greatly. The export price (fob export harbour) seems to have remained stable at a low level in the beginning thirties. By contrast, during the pre-war and war years, the gum-base more than seven folded its price (Heuer 1945). This increase has been explained with the raising demand after the depression and during the war (Ponce). On the other hand, several authors have highlighted the overuse of Manilkara stands, although not connecting it to the price increase. At the level of *chicleros*, prices also changed greatly. The available information refers to prices *chicleros* received for raw gum-base at camp-site in Quintana Roo: in 1929, the *quintal*, an old mass measure equivalent to little more than 46 kg, brought between 50 and 60 Pesos (Villanueva 1975), this is, between 34 and 41 US cents per kg. In 1932, this price had dropped to 17.50 Pesos (12 US cents per kg), fuelling discontent and emigration (Careaga 1990:193). In 1934, prices had risen to 20 to 25 Pesos per *quintal*, in part as a consequence of a peso devaluation, to reach 75 to 80 Pesos (46 to 49 US cents/ kg) as cooperatives consolidated (Rosado Vega 1998 [1940]:356).

Production in Quintana Roo closely reflects the market tendencies described above. Starting in 1918, the production soon increased to reach a first peak in the 1927/28 season when almost 2,900 tons were produced. The collapse of the production in the early thirties and its continued increase after 1935 both echo international demand. As a consequence of the great depression, production fell below 1,000 tons (Cesar and Arnaiz 1983:220), or, after other accounts, even as low as 300 tons in 1934 (Careaga 1990:190).

During this time, the relative importance of Quintana Roo for the total Mexican exports increased. While in 1934, Quintana Roo produced roughly 25% of the Mexican gum-base, in 1937 it had reached 58% and in 1940 almost 70%, to recede to around 50% in the following years(Cesar and Arnaiz 1983:222).

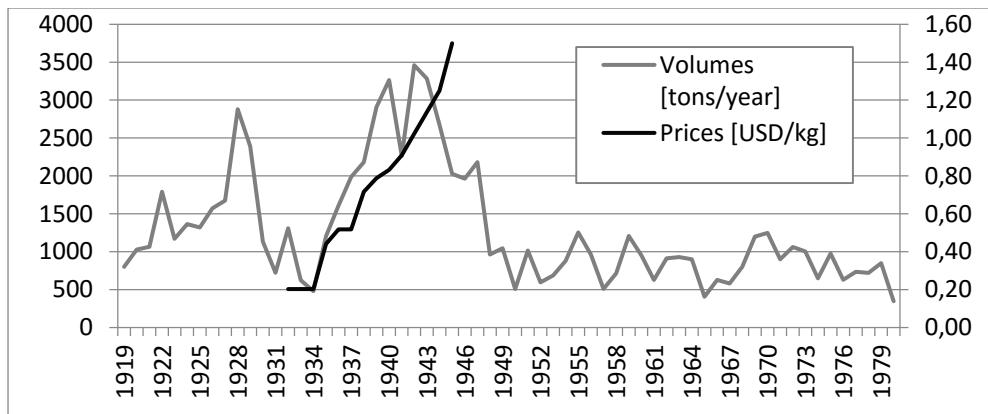


Figure 1 Volumes and prices in Chicle production

*) Left schale: tons/year. Right schale: USD/kg. Prices refer to the prices negotiated among *contratistas* and chewing gum companies at a national level (Heuer in Ponce). Source does not specify point of handover, most probably free on board at Mexican shipping port (see Ponce p.82). Original quote in USD/quintal. To convert to kg, the American Shorthundredweight has been used: 1 Quintal = 100 Pounds = 45.359 kg.

Source for volumes: Cesar Dachary

As described above, between 1918 and 1935, production in Quintana Roo (and Campeche) was not directly vertically integrated, but normally worked with a hierarchical subcontracting system. At the top of the hierarchy were the US-firms or their Mexican branches, like the Mexican Exploitation. Their direct counterparts were a handful of regional contractors, which often delegated work to subcontractors. Smaller contractors would often request a concession and then cede it to larger contractors under several arrangements. Through the payment of advances, US-firms had a strong influence in the system. Nevertheless, the costs of change were reduced, at least from one year to another: regional contractors, being the formal concession holders, would negotiate with different US-American firms, therefore achieving a certain negotiation power. Contractors and subcontractors were organized in independent state-wide organizations. The number of contractors with the control of large concessions was reduced, perhaps less than ten, and as such, they were important players in the production chain (Ponce Jiménez 1990:15).

When in the thirties, the two-layered structure of *cooperatives* and Federation of *cooperatives* partially replaced the *contratista* structure—Melgar had left the *contratista* structure intact outside the *ejidos*—the power balance ostensibly shifted towards production. The *Federación de Cooperativas* achieved a strong horizontal concentration of production, obtaining a negotiation mass of over 800 tons of gum-base. Furthermore, this organization was not forced to negotiate under the pressure of advances received from *chicle* buyers. Its bargaining power was further enhanced by

the fact that the *Federación* received full support from the state and federal governments. Although the traditional *contratistas* as a group still were producing almost three times as much *chicle* as the *Federación*, individually, none of them had the volumes and the negotiating power of the *Federación*. As such, as soon as it was created, the *Federación* became the preponderant player in the region.

For external buyers it was almost impossible to bypass or out negotiate the *Federación*. While the two main overseas buyers, Wrigley (officially, the William Wrigley Jr. Company) and *Mexican Exploitation*, certainly were large, powerful organizations (Rosado Vega 1998 [1940]:352), they had difficulties in establishing alternative supplies: the two other supplier regions, Belize and the Petén, were controlled by other companies. Moreover, these other regions produced smaller amounts of *chicle*, Mexico having a market participation of approximately 75% in 1929. Plus, all gum-base volumes were needed (Reyna, Gramajo et al. 1999:41).

The new structure also brought a clearer transaction border in the sense of an “interface” (Williamson 1987:1): instead of different degrees of control that external firms held over regional production through financing, logistics, and quality control, now the exchange of product against money became central, this is, the market characteristics of the commercial interaction increased. This clear interface was enabled, among others, by the fact that the product, raw gum base, was relatively simple to handle. There was only one quality with clear and easily verifiable definitions, high traceability of individual lots, and little technical requirements to achieve the quality (Forero and Redclift 2006:75).

The basic relationship among *cooperatives*, as represented by the *Federación*, and the overseas buyers was determined by the reduced complexity of required transactional information, the good possibilities to codify requirements, and the relatively high operative capabilities at the side of the *cooperatives*. After Gereffi, Humphrey and Sturgeon (2005), these are good preconditions for the development of relatively egalitarian market relationships. As the state and federal governments has solved the problem of financing, the relationship among *Federación* and American raw gum-base buyers became centered upon a relatively clear market transaction.

Summing up, communities achieved market insertion in a very short time, as a consequence of several parallel efforts. First, communities became officially acknowledged as such and at the same time obtained official recognition of forest ownership. Then, they were organized in production *cooperatives*, receiving technical assistance and start-up capital, and, shortly after, obtained support in establishing a second level organization to manage all financial, marketing, general logistical, purchasing, and organizational tasks. Additionally, the strong governmental support in confronting

contratista interests, adjusting norms, creating support organizations and providing working capital was critical.

Such an account again neglects the activities initiated in the communities to improve their market insertion. About this subject, little is known beyond a trip several members of *cooperatives* did in 1943 to the US in order to negotiate the prices of *chicle* gum-base with representatives of several chewing-gum producers (Mathews and Schultz 2009:58). No further documents were discovered that could provide a deeper appreciation of community initiatives, and the contemporary witnesses that could contribute to an understanding could not be found.

The impact of the new institutional setting for communities was manifold. In a vertical sense, the inception of the new structure brought the opportunity to skimming value-added. The first *cooperative* that was established sold 6 tons in 1936, tripling the incomes for the gum base from 0.15 USD/kg to almost 0.40 USD/kg. This increase is not related to external price increases, devaluations, or other external changes, but came from the different production chain involvement of the *cooperatives*. Another part certainly came from subsidized services the government started providing, like financing or storage of products. As can be seen in Table 1, the different incomes did not come from higher external market prices (achieved in the 37-38 season), and the original quote in Mexican Pesos (Rosado,1948[1940]:258) was neither a result of a different exchange rate. Another important impact was on the side of *chiclero* expenses. *Contratistas* had had the privilege of selling all working tools and other supplies needed in the forest to the *chicleros* charging elevated prices. Now, these items were supplied by the *cooperatives* to a much lower price. (Beteta 1990:259)

Table 1: chicle gum-base prices in the 1930s

	Exchange Rate Pesos/USD	USD/kg*	USD/kg**	Value participation
1935-1936	3.60	0.52	0.12	27%
1936-1937	3.60	0.52	0.39	75%
1937-1938	5.19	0.72	na	Na

Original quotes in Mexican Peso/quintal or USD/ quintal. To convert to kg, the American Shorthundredweight has been used: 1 Quintal = 100 Pounds= 45.359 kg.

*) fob price paid by American companies to main regional *contratistas*.

**) Incomes received by *chicleros*

Sources: (Rosado Vega 1998 [1940]), (Ponce Jiménez 1990), (Careaga 1990)

Logs: as with *chicle*, the main change in the market insertion of communities came with the Melgar/ Cárdenas administration, when the loose settlements of *chicleros* became officially *ejidos*. As described above, the land grants were explicitly conceived for forest use, primarily the non-timber use of *chicle*. As the *ejido* land grant was basically a usufruct right that

included forests, and as the use of timber had not been explicitly granted to the *ejidos*, a legal grey zone appeared. Although no one denied that *ejidos* had the usufruct rights on forests, concessions continued to be conceded by the government, and it was also the government that set and charged the concession duties (Galletti 1993:149).

“Socializing” log production was a lot more difficult than *chicle* production: the investments, knowledge and working capital needs were much higher in the timber business than in *chicle* tapping. Melgar clearly took the strategic decision to tackle *chicle* production while leaving log production in its old forms (Rosado Vega 1998 [1940]:48)⁷¹. Nevertheless, two *cooperatives* related to wood extraction and processing were created. Unlike the chicle *cooperatives*, none of them had a direct relation to a specific *ejido*, both working on federal forests. Their member homogeneity, the fact that most members weren’t actually wood workers, and the fact that the *cooperatives* were located in Chetumal soon made them difficult to defend, but a signal had been sent that logs could eventually be managed by communities (Rosado Vega 1998 [1940]:352)

Discussion

The results show that during the first half of the 20th century, land-use in Quintana Roo was centered around forest uses, mainly the commercial extraction of chewing gum-base, mahogany logs and logwood. While the latter would soon disappear as a commercial product, the first two were important products throughout the five decades described in this paper.

Building on these land-uses, clearly defined value chains appeared. On one side, the extraction of mahogany started as a vertically integrated regional chain which would later split into several links. On the other, the chewing gum-base chain held several production links from the beginning, and changes were more about which actor controlled a certain value link.

Only in the second chain did forest communities succeed in entering. Here, the bold intervention of the state government certainly was the central determinant. The initiative of establishing ejidos and organizing its members with cooperatives, and furthermore creating a second-level organization to manage all chicle extraction and marketing activities until its export, was the central change in the late 1930s.

Despite the general recognition of this policy, the steps taken by Melgar and Cardenas have often been criticized by contemporary scholars. Several researchers have criticized the double levelled *cooperative* structure as paternalistic (e.g. Bray and Merino Perez 2004:6), implicitly rejecting the

⁷¹ In the timber business, Melgar had an impact through the establishment of minimum wages.

participation of the state in peasants organizations. Others point out that Melgar's paternalistic style, for example his acceptance to become the President of the *Federación*, would allow his successors an easy play in co-opting the organization for their own interests (Forero and Redclift 2006:83). Galletti (1993:154) states that this structure implied a "weapon of direct control" of the *cooperative* movement. Villalobos-Gonzalez (2004:229) argues that in central Quintana Roo, where the insurgent Maya had defended a precarious autonomy for several decades, Melgar used the land granting to break up the Maya fiefdoms that had developed during the caste war (Careaga:104), by conceding *ejido* grants to individual villages of each Maya fiefdom instead of to the whole fiefdom, and later establishing *cooperatives* for each *ejido*. Forero and Redclift (2006) sustain that "the new relationship towards indigenous peoples was resisted and resented by the Maya, as paternalistic and dependent" (p81).

Embedded in his time and first-hand informed about the process of developing the *cooperative* structure, Rosado Vega (Rosado Vega 1998 [1940]) writes:

"The *chiclero*, an expert in all that is related to his rough material work, was and could not be technically prepared to defend his concerns....therefore, there existed the necessity of guiding him.....as behind him those large interests still are searching revenge.....as such, the direction and commercial management of the business were left in the hands of experts in the matter....although the worker always had immediate interference in all issues." p.382

The defensive tone in the second part of the argument suggests that the critique of paternalism was not unknown to the political decision takers during the Melgar government. Rosado goes on affirming that in 1939, all tasks in the *Federación* would be transferred to members of the *cooperative*: "...this is, even the direction and the administration. Two reasons propelled this transcendental step: first, to consider the worker's business knowledge sufficient, and second, that, as both [Cardenas and Melgar] neared the end of their term, wanted to see their work finished...." p.383. Although there is no evidence for this transference, it seems evident that the decision to promote government leadership was not taken lightly or as a result of a certain *Zeitgeist*, but was the result of a careful deliberation of what was possible and effective in terms of community participation in the *chicle* business⁷². In any case, a few years later, the whole structure would become a hostage of Margarito Ramirez, who would place his friends in decisive posts in the

⁷² Modern producer organizations in Europe work with similar labour divisions as the *Federación*: management is delegated to "experts", which are often state employees.

Federación and as presidents of the *cooperatives*, therefore erasing most of the influence of communities.

Conclusion

It can be concluded that at the regional level, the central factors that shaped value chains came from actors not directly involved in production, i.e. they were outsiders to the chain. On one side, governmental efforts succeeded in establishing a whole new regional chain that involved forest communities. On the other, the varying demand for the products determined the power relations among the chain members. All value chain actors had to subdue to these two factors. By contrast, individual efforts normally led to short-term improvements that had no larger relevance for the value chain.

State support meant huge increases in incomes for forest workers and their communities. It is safe to conclude that the interest and the possibilities of forest communities to maintain the forest cover under their control increased with the new incomes.

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