

# Shared Value Chain in RECA: Study Founded on the Scenario Analysis

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Received: December 6, 2021

Accepted: January 21, 2022

Online Published: March 15, 2024

doi:10.5430/ijba.v15n1p49

URL: <https://doi.org/10.5430/ijba.v15n1p49>

## Abstract

This research is based on the supply chains of inclusive value, a creative approach of shared value through development (productive, social and economic). The objective of this study is to understand the shared value chain in the Dense Consortium Economic Reforestation (RECA), through sustainable products developed in the Brazilian Amazon. Seeking to understand the principles that govern sharing and present a diagnosis of how cooperative members are benefited in relation to the value chain. This is a qualitative study, with primary data from interviews. The results demonstrate the existence of the value chain, as the cooperative members are well assisted by the association and that the shared management model has achieved great success and satisfaction from most members, it is noteworthy that the Consortium Economic Reforestation/RECA has a system of independent activity, gained efficiency, has a differential, expands its market and has social responsibility, reinforcing the characteristics of the shared value chain.

**Keywords:** RECA, inclusive value chain, shared, product processing

## 1. Introduction

Inclusive value chain development is increasingly being embraced by governments, donors, non-governmental organizations and the private sector to spur economic growth while alleviating rural poverty and maintaining healthy agricultural systems in environments with marked territorial inequalities (Devaux et al., 2016:8).

Considering the principles that govern sharing according to Devaux et al. (2016), that is, the interdependence between company and society, the social consequences of their actions, in order to identify new opportunities inserting the company in production chains with sustainable practices and aimed at improving the well-being of It is the communities involved in this process that we developed this study, since the Consortium Economic Reforestation (RECA) is supported by these principles (Santos et al., 2018)

In response to the rapid changes in the agrifood sector in the last two decades, the participation of smallholders Farmers in often global/value chains (VCs) has emerged as a new strategy for poverty alleviation (Ros-Tonen et al., 2019).

Governments see it as a way to increase farmers' access to markets, inputs and credits and to improve productivity and efficiency by assuming positive effects on livelihoods, food security, climate resilience and gender equality. Accompanied by a changing aid structure and a changing role for public and private (profit and non-profit) actors, such strategies assign a key role to partnerships that increasingly move 'beyond the chain' (Ros-Tonen et al., 2019).

These cross-sector partnerships have been labeled CV collaboration, public-private partnerships (producer), or insertion. Often driven by companies' need to secure future supplies, they aim to support the organization and security of farmers' livelihoods and improve the sustainability of production, often through voluntary certification and verification standards (Ros-Tonen et al., 2019).

The focus on smallholders who make up the majority of agricultural commodity producers, but are the group that benefits least from Cvs, is in line with the 2030 Agenda for Sustainable Development goal of 'leaving no one to behind' and Sustainable Development Goals 1 (No poverty), 2 (Zero hunger), 5 (Gender equality), 8 (Decent work and economic growth), 10 (Reduce inequality), 12 (Responsible consumption and production), 15 (Life on Earth), and 17 (Partnerships for the goals) (Ros-Tonen et al., 2019).

Companies widely adopt the 2030 Agenda, which assigns a fundamental role to them in achieving the goals, I reflected.

tioning its increasing expansiveness to society's concerns along its own interests economic and Creating Shared Values (Ros-Tonen et al., 2019). Michael Porter's Value Chain is a model that helps to analyze specific activities through which companies create value and competitive advantage. In other words, it is a set of activities that an organization performs to create value for its customers (Porter, 1989).

How the activities in this chain are carried out determines costs and affects profits. The primary activities are directly related to the physical creation, sale, maintenance and support of a product or service (Porter, 1989). These primary generic activities are as follows:

- (i) Inbound logistics: All processes related to reception, inventory control, transport scheduling. At this point, the relationships they have with suppliers are a decisive factor in creating value;
- (ii) Operations: includes machinery, packaging, assembly, equipment maintenance, testing and other value-creating activities that transform inputs into the product to be sold to customers;
- (iii) Outbound logistics: activities associated with the delivery of your product or service to the customer, including collection, storage and distribution systems and can be internal or external to the organization;
- (iv) Marketing and Sales: These are the processes that the company uses to convince customers to buy its products or services. The sources of value creation here are the benefits it offers and how it conveys them;
- (v) Service: the activities that maintain and increase the value of products or services after purchase. This includes customer support, repair and/or installation services, training, updates etc;
- (vi) Support activities help the primary activities. Here we can find: Infrastructure: These are the support systems the company needs to maintain day-to-day operations. It includes general, administrative, legal, financial, accounting, public affairs, quality etc. management;
- (vii) Human Resource Management: The activities associated with the recruitment, development (education), retention and compensation of employees and managers. Since people are a significant source of value, companies can create great benefits if they use good HR practices;
- (viii) Technological Development: includes technological development to support value chain activities, such as Research and Development (R&D), process automation, design, etc;
- (ix) Acquisition/Purchase: All processes that the company performs to acquire the resources necessary to work: acquisition of raw materials, services, buildings, machines, etc. This also includes finding suppliers and negotiating the best prices.

In this article, the value chain concept is used as a sequence of interconnected agents and markets that transform inputs and services into products with attributes that consumers are prepared to buy (Devaux et al., 2018). Thus, this study intends to demonstrate the value chain of the RECA Project, based on the Porter model, therefore, it is necessary to contextualize the RECA Project.

RECA is located in the District of Nova California, micro-region Ponta do Abunã in the extreme west of Rondônia, Municipality of Porto Velho, about 150 km from Rio Branco (Acre) and 350 km from Porto Velho (Rondônia) (Couto et al., 2016). RECA is framed as a Rural Settlement Project in the Amazon, as a form of colonization of the region after the collapse of the rubber economy in the Amazon in the 1960s/1970s (Franke et al., 2008).

The RECA Project began in the 1980s, formalizing itself in 1989 through an association “with the mission of being a social, productive and family-based community organization, referenced by its solidary path that promotes sustainability and good living, respecting the Amazon's socio-biodiversity and contributing to a more humane and just society” (Pinto et al., 2013). In addition to the association, the Agricultural and Forestry Cooperative (COOPER-RECA) was created in 2006 to facilitate the marketing of the project's products (Vailatti, 2020)

The members of the RECA Project are immigrant farmers from the south, southeast and northeast of Brazil country, which were settled in a demarcation of the National Institute for Colonization and Agrarian Reform (INCRA) in the late 1970s and early 1980s, in the former Santa Clara rubber plantation, entitled Alto Madeira Settlement Project (Maciel et al., 2018). The settlers later organized themselves to raise funds from national and international institutions to start the project. Initially, they met in their own backyards, later an office was built and, in 1992, the organization obtained land with a large shed, where artisanal fruit processing began. Since then, the families have been settled in lots that have one to one hundred hectares (André 2017; Vailatti, 2020).

Study by Teixeira et al. (2015) point out, among others, the Value Chain produced and marketed by RECA, the Açúcar Chain, a line in the food sector of RECA, where 100 to 200 tons of fruit pulp is processed per year and has an adequate infrastructure for the good functioning of the organization, with a team composed of 31 permanent employees, and during the harvest period this number rises to 60. The author clarifies that RECA has as its main focus the sustainable development allied to the conservation of the Amazon, which is the main Organic sustainability and production standard, which already obtained certification in 2006. It also highlights participatory community management, with the purpose of generating income and promoting decent working conditions for its members and partners.

It is observed that the business model practiced by RECA is similar to the proposal for an inclusive business model carried out by the United Nations in 2006 and propagated by the United Nations Development Program (UNDP). Pinheiro and Limeira (2015) clarify that this model aims “to build links between companies, social enterprises and the vulnerable and low-income population, generating a relationship of mutual benefit”, following the logic of sustainable development.

In this context, the problem outlined here is to describe the scenario based on a shared and inclusive chain in RECA through 3 (three) main products processed by the Project.

To answer the research question, a general objective was defined, which is to describe the shared and inclusive value chain in RECA, if any. And three specific objectives that will help in reaching the answers in this study, namely: observing the management carried out in the project; verifying the existence of a shared value chain; and describe this shared value chain.

In addition to this introduction, the article is structured as follows: theoretical framework, which discusses the shared and inclusive value chain and the RECA project, method used, results and discussion, final considerations and references.

## **2. Theoretical Framework**

### *2.1 Agribusiness Productive Chain*

In this study, the intense transformation that has affected agricultural activity is considered, initially the rural agricultural activity was subsistence and self-sufficient, however today it depends on the market and on the input industries and their processing. Including the entire web of relationships between the actors that benefit and add value to the products so that they reach the end consumer (Neto, 2000).

On this path, the term agribusiness was born, which is a methodology for the study of agricultural problems with a systemic view and which brought the concept of the production chain as a total sum of production and distribution operations of agricultural supplies, storage, processing and distribution of agricultural products and items produced by them. It is cited: The sum of all operations involved in manufacture and distribution of farm supplies, production operations on the farm, and the storage, processing, and distribution of farm commodities (Davis & Goldberg, 1957).

From this concept derives the production chain that adds value to a final product, forming links or networks of connected activities (Vorst, 2000; Brasil, 2017). The characteristics highlighted in a production chain must be highlighted, namely: stages of vertical intra- and inter-organizational coordination; the existence of independent companies that are connected in a managerial relationship; the inclusion of a bidirectional flow of products and information between managerial and operational activities and the achievement of goals to provide high value to the customer with optimized use of resources (Cooper & Lambert, 2000).

Thus, the production chain is a production sequence, an essential tool that monitors the evolution of a product from its raw material, research and analysis of technical and economic characteristics, innovation of by-products, policies and strategies that support the improvement of the process productive (Tedesco, 2020). Stands out the figure and the representation of actors from every sector of the production chain, see:

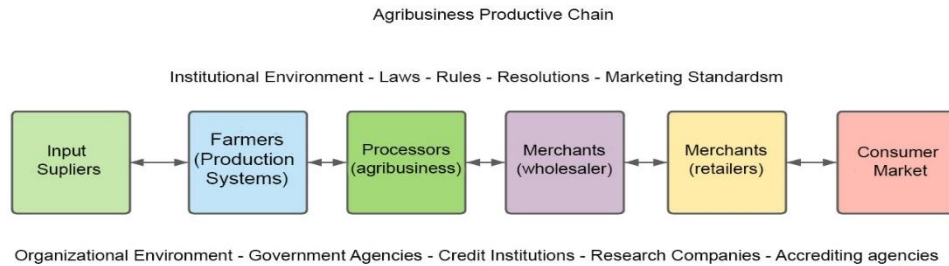


Figure 1. Agribusiness Production Chain

Source: Prepared with data from the research EMBRAPA

Extract it is the figure that the commodity input suppliers to producers, such as seeds, materials for land preparation and management, animal feed and other agricultural and technological implements, are rural producers, who use the land for the production of commodities (wood, cereals, oilseeds) as well as milk and meat and other products, through production systems made up of several sites and small producers. Processors are the agribusinesses responsible for processing or processing the products delivered by farmers. Wholesalers distribute and supply the retailers who sell the products to the final consumer. It should be noted that this entire relationship takes place in the institutional environment and in the organizational environment, which make up the "rules of the game".

Thus, after comprehensive considerations about the evolution of the study of the subject, the study of value chain concepts became essential, since it is based on reaching an understanding of what the value chain is, which is directly linked to cost management and organizational strategy.

## 2.2 Value Chain

The value chain concept presupposes a set of activities that add value to the product from the sources of basic raw materials, passing through the entire production chain to the final product sold to the consumer, the activities range from logistics, operations, marketing, sales, services, even technology development, management, infrastructure and other support activities (Shank & Govindarajan, 1997).

For Santana (2011), this concept permeates the understanding of how a strategic network of companies is articulated so that their product is taken from primary production to the final consumer. Schneider et al. (2009) considers Michael Porter to be the author which contributed the most to the industrial economy within the theme, and have had a predominant influence on strategy research

Organizations face major impasses to maintain sustainability and still achieve economic growth, since there is great difficulty in balancing variables such as human capital, knowledge produced, technologies used and others.

Given the above, it is known that the Value Chain is an instrument that provides the coordination of the efforts necessary for the emergence of the competitive advantages that one intends to achieve. The concern with the value chain has become a way for managers to train and qualify the competitiveness between the activities and links that make up the value chain, from the origin of inputs to the final consumer (Silva, 2004).

For Barney and Hesterly (2011) "a company's value chain is a set of business activities to which it is dedicated to develop, produce and market its products or services". According to Porter (1986), a company is a Value Chain, represented by a series of interrelated processes. Thus, in order to understand the company, an effective understanding of the relationships between the processes that comprise it is necessary and, in addition, also recognizing that a company must be seen within the context of a global chain of activities, where value is generated.

In Porter's (1989) original model of the Value Chain, there is a division into primary activities and support activities, as shown in the following figure.

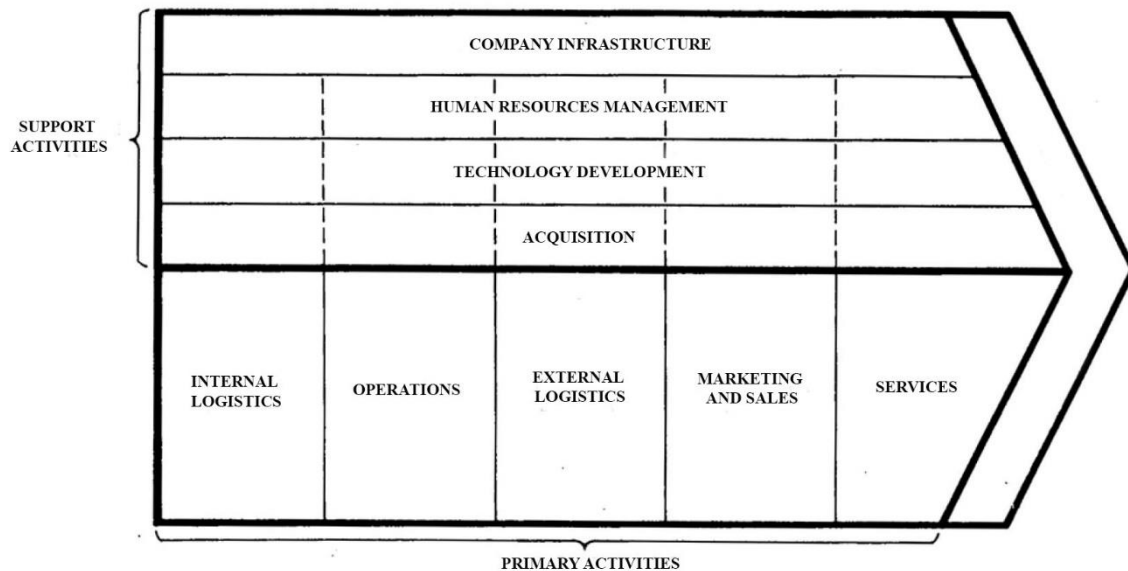


Figure 2. Porter's Value Chain Model

Source: Porter (1989).

The primary activities in general refer to: internal logistics, production, external logistics, marketing and sales and services. The support activities consist of: company infrastructure, human resources management, technology development and acquisition. Each of these axes must be analyzed in detail in each company and the value of each one must be perceived, according to the specificity of the business. Studying all processes and identifying which of these will have the greatest value for your customers and even which of these activities can generate greater competitive advantage (Porter, 1989)

Porter (1989) highlights that business success also depends on the organization's ability to efficiently and effectively manage its internal activities and articulate itself externally as one of the agents that make up a certain segment of activity. According to Porter (1989), "the Value Chain disaggregates a company in its activities of strategic relevance so that it is possible to understand the behavior of costs and the existing and potential sources of differentiation." He also states that "every company is a meeting of activities that are performed to design, produce, market, deliver and sustain its product. All these activities can be represented, making use of a Value Chain" (Porter, 1989).

In order to have a successful Value Chain, it must be structured so that each set of activities in the organization adds value to the subsequent set of activities.

Shank & Govindarajan (1993) summarize the method for analyzing the value chain based on four pillars: (1) links with suppliers (interaction to benefit the entire supply chain); (2) links with customers (exploring and improving relationships with distribution channels); (3) links of internal activities (improving processes and internal activities); and (4) links of the company's business units (improving business units).

The Value Chain must support the strategy formulation process, such as the use of a Swot Matrix and support the strategic management process (Hansen & Mowen, 2001).

The value chain is a useful framework for diagnosing ways to improve agricultural value chains and facilitate the inclusion of smallholders, so it is important to talk about an inclusive value chain (Lie et al., 2018), as it involves the ecological and social dimensions (Lazdinis, Angelstam & Pütz, 2019).

In this sense, Porter's (1990) value chain concept is related to the purpose of evaluating the competitive dynamics of companies with a given product, so that the chain's profit margin reflects economic feasibility, based on the dynamics of its evolution, where gains, maintenance and loss of competitiveness are evaluated (Porter, 1990). Initially, the value chain concept aimed to understand the behavior of costs, existing sources and potential for differentiation of the company from the fragmentation of activities of strategic relevance (Porter, 1990). It is considered that Porter's (1986) criteria conceptualize the use of the value chain as an analysis tool, allowing the identification of ways to generate value to achieve the fluidity of production processes (Cajamarca, Bueno Sagbaicela & Jimbo D ás, 2019).



Given the concepts presented, it is clear that the better structured an entity's value chain, the greater the results, as it is already a common practice of organizations to focus their efforts on what they do best and what makes them different. However, with the mapping of the value chain, it will enable stronger management and an increase in the competitive potential of organizations.

Considering that the object of study is a consortium project and that starts from cooperative principles, which benefit several families and small farmers, we need to understand the concepts of a shared value chain in order to carry out the research and answer the initial problem.

### *2.3 Shared Value Chain*

Porter and Kramer (2011) state that to be successful an organization needs to create a differentiated value proposition that meets the needs of a target set of customers. The organization gains a competitive advantage by how it configures the value chain, or the series of activities involved in creating, producing, selling, delivering and supporting its products or services. Over time, organizations missed opportunities to satisfy fundamental needs of society and failed to understand the impact of social ills and deficiencies in the value chain.

When trying to understand the business environment, the manager focuses his attention on the sector, or on the specific area in which the organization competes. This is because the structure of the industry has a decisive impact on an organization's profitability. What has been overlooked, however, is the profound effect that localization can have on productivity and innovation. The organization did not understand the importance of the larger business environment surrounding its core operations (Porter & Kramer, 2011)

Attempting to find shared value in operational activities and in the social dimensions of the competitive context has the potential not only to promote economic and social development, but also to change the way in which organization and society interact. Porter and Kramer (2011) report that NGOs, governments and companies should stop thinking about "corporate social responsibility" and start thinking about "corporate social integration".

Seeing social responsibility as generating shared value rather than harm containment or public relations campaigning will require a radically different rationale in the organization. We are sure, however, that CSR will be increasingly important for success in the market.

The organization is not responsible for all the problems in the world, nor does it have the resources to solve them all. Each can identify the specific social problems it is best equipped to help solve and from which it can benefit most competitively. Facing social issues with the generation of shared value lead to self-sustained solutions that do not depend on private or public subsidies. When a well-run organization applies its vast resources, expertise, and managerial talent to problems it understands and has an interest in, its impact on the social good can be greater than that of any other institution or philanthropic organization (Porter & Kramer, 2004).

A company can create economic value by creating social value, and for this Porter and Kramer (2011) state that there are three different ways to do this: redesign products and markets, redefine productivity in the value chain and set up sectorial support clusters in the locations from the company. Each of them is part of the virtuous circle of shared value; improving value in one area opens up opportunities in others.

The concept of shared value redefines the boundaries of capitalism. By better connecting business success with society's progress, it opens up many ways to meet new needs, gain efficiencies, create differentiation and expand markets.

The ability to generate shared value exists in both advanced economies and developing countries, although the specific opportunities are distinct. Opportunities also vary markedly between different sectors and companies, but in every company there is. And its variety and scope are far greater than hitherto recognized.

According to Porter (1989), considering that value activities are the building blocks of competitive advantage, related through links within the value chain, they form a system of interdependent activities. The links result in a competitive advantage by optimizing and coordinating to obtain the same global result and generate a shared value chain, which can be used by all members involved in the cooperative.

The links, which are usually unnoticed when talking about companies, become essential in the agricultural environment, since it is through them that relationships and information sharing will be established and the search for progress for that population.

To most effectively exploit the links, you must have the information that determines their optimization or coordination. Therefore, information systems are fundamental in the cooperative environment to obtain competitive advantages that originate in the links which undergo innovative actions. Administering links is a more complex task than managing

valuable activities, due to the difficulty of recognizing and managing them, especially in rural areas, where there is a greater scarcity of information and resources to measure. Thus, the concept of shared and inclusive value is necessary in this research.

#### *2.4 Shared and Inclusive Value Chain*

The concept of the inclusive value chain (CVI) emerged as a way of positively or desirable interventionist integration of the value chain between companies, low-income farming families and the poor, in order to commercially include and generate opportunities, bringing social benefits such as poverty reduction for small farmers, income and employment generation, economic growth, environmental performance, gender equality and other development goals (Chamberlain & Anseeuw, 2018; Devaux et al. 2018; Dijkxhoorn et al., 2019; Mgeni, Müller & Sieber, 2019; Praton, 2019; Doherty & Kittipanya-Ngam, 2021; Mtimet et al., 2021).

Inclusive value chain development is increasingly being embraced by governments, donors, non-governmental organizations and the private sector to stimulate economic growth, while alleviating rural poverty and maintaining healthy agricultural systems in environments with marked territorial inequalities (Devaux et al., 2016:8).

It can be considered that the value chain is a set of processes that involve several social organizations that work in a network, from obtaining raw material, logistics, processing to making it available to the final consumer (Porter & Kramer, 2011). Inferring that its objective is to create or spread value (monetary and non-monetary) at each stage among those involved, maintaining the inclusion and sharing of all processes and links in the chain.

Based on this cultural strengthening network and the generation of services based on socio-biodiversity, Simoni (2010) states that “adding value to products arising from socio-biodiversity values ways of life and knowledge intrinsic to local nature, allowing maintenance beyond mere survival, of social groups and their relations with the physical and cultural environment”.

According to Capra (2002), when a group of people establish contacts and create bonds, it gives rise to a network of relationships around common objectives, community and democratic qualification processes, forming a new value system there. Where there is an integrated value system, there is a structure that tends to imbalance, an opening to the evolutionary process, a flexibility for adaptive transformation or restructuring of structural couplings, for consistency and dynamic evolutionary flexibility, avoiding fixity, loss of energy and fostering connections with creative, pleasurable, vital, and harmonizing processes (Siqueira, 2018).

In order for the inclusion of small farmers to be successful, trust is a key factor, when the relational context between the actors, trust is built in an interactive way, and mutually reinforces each other, this will result in a positive acceptance of trust, favoring the implementation of a CVI (Dijkxhoorn et al., 2019).

### **3. Methodology**

Research is characterized as descriptive, as it is recognizing the phenomenon of the Inclusive Value Chain (CVI) as it occurred in Brazil, specifically in the RECA Organization located in the Western Brazilian Amazon, and describing this value chain object of this study.

As a Methodological Procedure, a Case Study was carried out. In Gil (2006)'s view, the case study is the verification of a contemporary fact within its real situation, where the boundaries between the fact and the situation are not clearly perceived. a broad study of the object is necessary to allow detailed and detailed knowledge.

For this purpose, the company RECA was selected, a cooperative of farmers in the Amazon, founded in 1989 and currently has more than 300 families of farmers who work on behalf of the cooperative. It is developed between the states of Acre and Rondônia, even reaching the limits of the state of Amazonas, it can be considered a successful experience in production with environmental conservation. The proposal to use the forest as a source of income, combining agroforestry crops such as peach palm (*Bactris gasipaes*), cupuaçu (*Theobroma grandiflorum*) and Brazil nut (*Bertholletia excelsa* HBK) in the so-called SAF's (Agroforestry Systems), allied to its participative management model, reflects the improvement in the quality of life of the farmers, as well as the expansion of the exercise of citizenship.

The RECA project has 3 (three) agro-industries in its infrastructure, one of pulp, one of peach palm and one of oil. It also has a coordination center that, in addition to the offices of the execution team, has a large auditorium. This auditorium is used for meetings, meetings, lectures, courses and several other activities, some of which we had the opportunity to witness during the visit.

There is a pantry and kitchen area, in addition to accommodation with two bedrooms (male and female), used both by members who live far from the RECA headquarters and participate in the activities developed, as well as by visitors

that the association receives, whether students or researchers or others. There is also the project's marketing center, which is used for the sale of handcrafted products produced by RECA members – such as honey, liqueurs, sweets, jellies, chocolates, etc.

An interview was conducted via google meet on November 5, 2021, with the senior management and with the farmers who make up the production chain of peach palm (*Bactris gasipaes*), cupuaçu (*Theobroma grandiflorum*) and Brazil nuts (*Bertholletia HBK*). This tool was chosen due to the Covid 19 pandemic.

The interviews were open, with semi-structured questions, related to issues related to the Inclusive and/or Shared Value Chain, so that it could be identified how each adopted measure acts on the strategy. Thus, data analysis was qualitative in nature.

The steps of the interview and data analysis followed the following steps: A theoretical study was carried out on RECA, a historical survey about the project. Then, an interview was semi-structured and an on-site visit was scheduled to interview the company's administrators to identify the main products sold. The visit was not possible and the interview took place via google meet. Those responsible for each link in the value chain were interviewed for these products, and we kept the names confidential to avoid exposure by those interviewed. After conducting the interviews, the data were tabulated and systematized. Then, the data were analyzed and presented to the administrators. After the feedback, the perceptions and new analyzes were extracted to follow the conclusions.

**4. Results and Data Analysis**

RECA can be considered a successful production experience with environmental conservation and the presence of a shared value chain was identified. The proposal to use the forest as a source of income, combining agroforestry crops such as peach palm (*Bactris gasipaes*), cupuaçu (*Theobroma grandiflorum*) and Brazil nut (*Bertholletia excelsa HBK*) in the so-called SAF's (Agroforestry Systems), allied to its participative management model, reflects the improvement in the quality of life of the farmers, as well as the expansion of the exercise of citizenship.

Based on this assumption and the interviews carried out, we identified the presence of a shared value chain in the cultivation of cupuaçu, peach palm and Brazil nuts, as it is through this that the members improve the socioeconomic conditions in the community in which they work.

After carrying out the steps defined in the methodology, we infer that there is a value chain within RECA that can be better represented in the figure below.

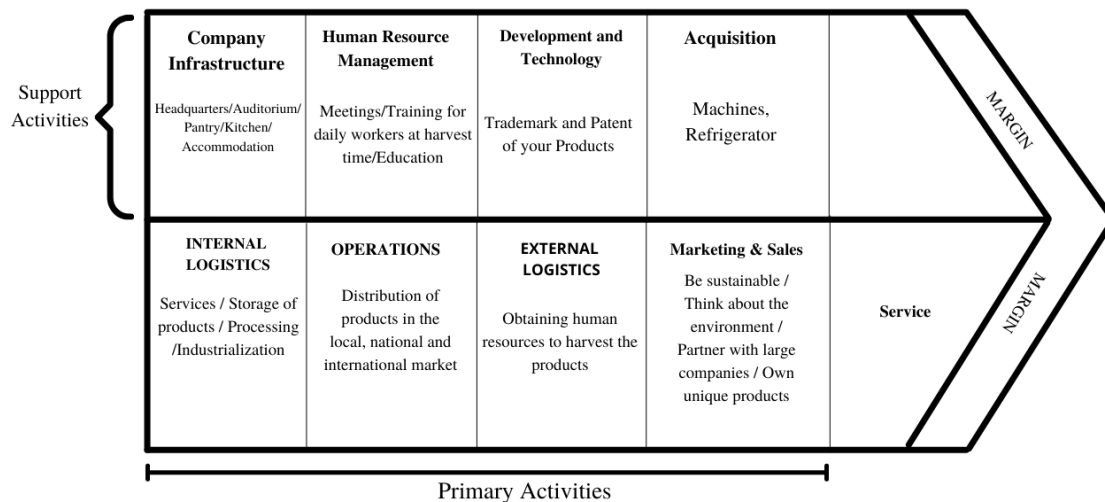


Figure 3. RECA Value Chair Model

Source: Prepared by the author (2021).

In view of the analysis of Figure 3, we find that the cooperative members are well assisted by the association and that the shared management model has been very successful and satisfied by a large part of the members.



Based on the analysis of Figure 3, we identified that the infrastructure value chain is observed through the coordination center which, in addition to the offices of the execution team, has a large auditorium and the three agribusinesses of the aforementioned products, the importance of infrastructure. This auditorium is used for meetings, meetings, lectures, courses and several other activities, some of which we had the opportunity to witness during the visit, especially the organization of activities.

It offers a pantry and kitchen area, in addition to accommodation with two bedrooms (male and female), used both by members who live far from the RECA headquarters and participate in the aforementioned activities, and by the visitor that the association receives, whether students, researchers or others. There is also the project's marketing center, which is used for the sale of handcrafted products produced by RECA members – such as honey, liqueurs, sweets, jellies, chocolates, etc. It seems that it is something that should exist, however the result of a lot of effort.

A fact observed during the visit was that the project can be considered financially self-sustainable and we can understand that this reflects the generation of shared value, since the main pillar cited by Porter (1986) is that we can obtain financial gains through social and the social relations and the bonds created between the members confirm this theory.

In the analysis of Figure 3, we observe for Human Resources Management that management is fully participatory, so that all members feel part of RECA, this feeling is given because all decisions are taken in groups, through meetings that are constant in the daily lives of members. The producers, during their first months at the Association, learn the need for these meetings for the best development of the project. Everyone participates in the meetings, even to get their interests taken care of.

Among the objectives established in the statute of the Small Agroforestry Association of the RECA Project are: Settlement of families in the countryside through mutual help; organization of families of small agroforesters into groups for studies, work, mutual help and fraternal coexistence; implementation of an educational system suited to the rural reality; training of members to manage and manage their businesses and those of the association; joint sale of agroforestry and extractive production in local, national and international markets; search for alternatives to help in the conservation and preservation of the environment and its biodiversity; classification, standardization, storage, processing, industrialization, and registration of the brands of its products; among others, completing the chain with Technological Development, as shown in Figure 3.

It should be noted that the general objective of the bylaws is for everyone to walk together and for the help to be mutual for the success of all the families involved. Based on this objective and based on participatory management, they divide members into 12 groups whose formation and composition are generally defined based on the proximity of the members' properties, that is, the group is composed of people whose properties are located close to each other, in the so-called branches, with a few cases of producers joining a certain group for reasons of affinity and identification with the other members, even though their ownership is distant. Group members meet monthly, usually during the first week of the month, to exchange ideas, monitor production, the progress of project activities, discuss the group's demands and seek ways to meet them, among various topics.

All members have the obligation and commitment to participate in the meetings of their group, and, according to the organization's bylaws, the producer who misses three consecutive meetings without presenting a plausible justification, is automatically excluded from the project, however rarely this happens, bringing a level of maturity to members. Some groups differ from the others in several aspects. For example, there are groups where the degree of interaction between members is remarkable, creating strong emotional and even family bonds, while other groups have not established this interpersonal relationship. There are also groups that demonstrate a strong community feeling, being concerned not only with themselves and their property, but with the development of RECA. By observing the issues raised in group meetings, these small differences can be seen, which often seem to make certain groups develop more socially and economically and/or have greater internal visibility in relation to others.

In the analysis of Figure 3 in terms of acquisition, according mentioned above, the current structure of RECA has agro 3: peach palm 01, 01, 01 and pulp oils. The operation and production process of each factory will be described below.

Based on the Porter value chain, has a fundamental point Internal Logistics, as can be seen in Figure 3. At this point, the description of the pulp agroindustry to carry out the work of receiving, processing and packaging cupuaçu and açai pulps. It has 3 (three) permanent employees, and during the harvest period it employs around 30 daily workers. Cupuaçu, which is the product worked on a larger scale at this factory, is received with the fruit still whole, usually through freight forwarders. Upon receipt, the fruit has its weight noted on the receipt control form. The entire process is controlled through spreadsheets and, later, the values are entered into the stock control system. Organic fruit is

processed first, followed by conventional cupuaçu. The good fruits are separated, which are manually broken and placed in the pulping machine, which separates the pulp from the seeds, these will be used in another production process.

The processed pulp is filled in packages of 1 and 5 kg and weighed manually on an electronic scale. After this process, it goes to the cold room for storage and conservation. At the end of production, based on sales, the producer is paid for the raw material delivered to the factory.

R\$ 0.40 per kg of good fruit is paid, R\$ 0.20 per kg of stone that comes from the farm and R\$ 0.15 per kg of stone of fruits that are received spoiled (the stone of spoiled fruit is used in the oil industry). Throughout the delivery period, agroforesters receive product receipt control sheets, through which they can monitor and check the quantities of cupuaçu delivered and, thus, calculate the amount to be received.

The açu is received at the factory, washed and heated in a pot to release the pulp from the seed, a process that takes an average of 20 minutes. It is then cooled and taken to the pulping machine, which can process up to 100kg of product/hour. The pulp is packed in 1kg and 5kg bags and taken to the cold room. From then on, the benefited product is ready for sale.

In the agroindustry of oils, the extraction and processing of cupuaçu, Brazil nut and andiroba oils, used as raw material for the cosmetic industry, are worked on. Cupuaçu oil is extracted from the seeds, which come from the pulp agribusiness. Such seeds undergo a fermentation process, remaining for about seven days in troughs, a procedure that also helps in the elimination of pulp residues that may be added to the seed. After fermenting, the seeds go through the drying process, being exposed to the sun in barges. They can stay on the barges for around 15 days, this period varying according to weather conditions.

The drying process is completed in a screen dryer, heated by a boiler. Soon after, they go through a press that separates the oil and the cake – remains of the seeds that are currently used for fertilization, but which can be used for the production of cupulate (cupuaçu chocolate). The oil is taken to another machine, where it is filtered. Finally, it is packaged in 45 liter drums and, after natural cooling, it becomes cupuaçu butter, which is also a commercialization operation. The seed productivity ratio is given in the proportion of 3kg of green seed to 1kg of dry seed and 3kg of dry seed to 1lt of oil.

Cupuaçu oil is the product used on a larger scale in this agribusiness and its main customer is the cosmetic company Natura. This company is now responsible for purchasing a good part of the cupuaçu butter and chestnut oil produced by RECA. In addition to being a customer, Natura also offers training courses for producers, as well as encouraging their forest certification through financing. This relationship is yet another way of observing the shared value chain, through the company-consumer link, since by offering courses, Natura itself is improving the work of the products it buys.

Brazil nut oil is processed on a smaller scale, according to market demand. The nut is received from the producer, the drying process is carried out in a covered shed – unlike other almonds, the nut cannot be dried in the sun to avoid the appearance of toxins. The removal of the almond shells occurs manually, an activity that uses an entirely female workforce. The oil extraction step is similar to cupuaçu. The almonds are heated and taken to a press, which separates the oil from the flour (edible product). The oil is filtered and packed in 45 liter drums. In addition to being used by the cosmetic industry, chestnut oil is edible and can be used as an excellent quality olive oil.

Andiroba oil is the product used on a smaller scale in this agroindustry, with cosmetic and medicinal use. Its extraction process is practically the same as that of cupuaçu, with the difference that it does not go through the fermentation step in the troughs.

The processing of peach palm hearts begins with cleaning the entire location where the process will take place and washing the glass. During the harvest, an average of three thousand peach palm stalks are processed per day. During this period, from December to July, about fifteen day laborers work in the agroindustry, an interesting aspect of choosing day laborers is the hiring, preferably, of the same people between the years, so that the employees, despite being temporary employees, deeply know the beneficiation process.

The stalks are delivered to RECA by the producers themselves in the manner established by each group independently. After going through a kind of window with a container with water to clean the palm heart, it is received by the daily workers and the heads are separated from the palm stem, the first will give rise to the processing in slices and therefore it is already placed in pots, while the second is peeled again and transferred to another table where it will be cut into smaller pieces.

This palm stalk, when divided into pieces, will give rise to several improvements according to the possibilities of the raw material itself. The most voluptuous stalks give rise to toletes, the medium ones to the palm heart in band and the smaller ones to pieces and balls, currently made to order only.

With the palm hearts inside the glasses, they are cleaned once more with only and the glasses are filled with brine. After this step, the glasses are closed and placed in stainless steel baskets in which they will be baked. The step described is essential in the management of hearts of palm, as it avoids, together with the correct ph and proper hygiene, cases of salmonella. Throughout the process, there is a concern with the quality of the heart of palm, for which a project technician, Eunice, held a course specializing in the production of heart of palm.

As seen in Figure 3, the model is completed with sales operations, external logistics and marketing that are very present in this process, it is also observed the inclusiveness and sharing.

Considering the principles that govern sharing, that is, the interdependence between company and society, considering the social consequences of their actions, identifying new opportunities by inserting the company in production chains with sustainable practices and aimed at improving well-being of the communities involved in this process, we understand that the RECA Project is included in this model.

## 5. Conclusion

To use Potter's Value Chain, he first suggested identifying the sub-activities for each activity, creating value, as direct activities create value by themselves, while indirect activities allow activities to run smoothly. Then comes the security guarantee activities that ensure the previous activities meet the necessary standards, as seen in the Palmito product.

We move on to identifying in this model the sub-activities for each support activity, for example, how human resource management can create value in inbound logistics, operations, outbound logistics, etc. Here, too, you should try to find direct, indirect and quality assurance activities. Then we have to identify the sub-activities that create value in the company's infrastructure. On the other hand, in the links between all identified value activities, it takes time, being important for increasing the competitive advantage of the value chain structure. So, opportunities are sought to increase value, which is by reviewing each of the sub-activities and identified links, improving strategies market performance.

In view of the above, in the view of Devaux et al. (2016), on principles that govern sharing, the interdependence between company and society is perceived by the value of its products and the way in which it is sold, combines profitability goals and economic growth with social and environmental goals.

Development programs are increasingly supporting inclusive value chains, in which resource-poor farmers are included in commercially viable opportunities. Strengthening social capital elements among venture capital actors is critical to improving farmers' livelihoods. Also in line with one of the principles that govern sharing according to Devaux et al. (2016), namely: the social consequences of their actions, in order to identify new opportunities by inserting the company in production chains with sustainable practices and aimed at improvement of the well-being of the communities involved.

We concluded that the research objectives were achieved when we observed the management carried out in the RECA project chain, thus responding to the objective of the research.

We suggest forresearch futurethe elaboration of a strategic map and identification of positive and negative points of management, based on the SWOT matrix, so that from them improvements can be proposed for the organization; as well as expanding studies on inclusive or shared value chain, which is still very incipient in this field, needing to be further explored. links researchers.

This work was carried out with the support of the Coordination for the Improvement of Higher Education Personnel Brazil (CAPES) – Financing Code 01.

We are grateful to the Federal University of Rondônia Foundation/UNIR, Universidade da Amazônia/UNAMA and CAPES that through the project PROCAD/AMAZÔNIA made this study possible.

**Acknowledgments**

No additional data are available.

**Authors' contributions**

No additional data are available.

**Funding**

No additional data are available.

**Competing interests**

Sample: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

**Informed consent**

Obtained.

**Ethics approval**

The Publication Ethics Committee of Sciedu Press.

The journal and publisher adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

**Provenance and peer review**

Not commissioned; externally double-blind peer reviewed.

**Data availability statement**

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

**Data sharing statement**

No additional data are available.

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**References**

- Barney, J. B., & Hesterly, W. S. (2011). *Strategic management and competitive advantage*. Midori Yamamoto translation (3. ed.). São Paulo, Pearson Prentice Hall.
- Brazil. (2007). *Decree No. 6,323 of December 27, 2007*. Regulates Law No. 10,831 of December 23, 2003, which provides for organic agriculture, and other measures. Official Gazette of the Union, Brasília.
- Cajamarca, E. S., Sagbaicela, W. R., & Jimbo D ás, J. S. (2019). From wax to money: La basura as the main source for an inclusive recycling business in Cuenca–Ecuador. *STRAIGHT. Revista de Ciencias de la Administración y Economía*, 9(17), 71-87.
- Capra, F. (2002). *The Hidden Connections: Science for Sustainable Living*. Ed. Cultrix. Sao Paulo-SP.
- Chamberlain, W. O., & Anseeuw, W. (2018). Including businesses and land reform: Corporatization or transformation?. *Land*, 7(1), 18.
- Chemin, B. F. (2020). *Univates manual for academic work: planning, elaboration and presentation*. Lajeado, Editora Univates.
- Couto, W. H., et al.. (2016). Soil attributes and resistance to penetration in agroforestry system areas in southwestern amazon. *Forest Science*, 26(3), 811-823.

- Davis, J. H., & Goldberg, R. A. A. (1957). *Concept of agribusiness*. Boston, Division of Research, Graduate School of Business Administration, Harvard University.
- Devaux, A., et al. (2018). Agricultural innovation and including value-chain development: a review. *Journal of Agribusiness in Developing and Emerging Economies*, 8(1), 99-123.
- Devaux, A., Velasco, C., & Jager, M. (2016). *Integrating Agricultural Innovation and Inclusive Value-Chain Development: Introduction*. Innovation For Inclusive Value-Chain Development.
- Dienstmann, J. S., et al. (2014). Innovation management and performance evaluation: structured literature review process. *Online Production Magazine*, 14(1), 2-30.
- Dijkxhoorn, Y., et al. (2019). Trusted sorghum: simulating interactions in the sorghum value chain in Kenya using games and agent-based modeling. *Journal of Development Effectiveness*, 11(2), 146-164.
- Doherty, B., & Kittipanya-Ngam, P. (2021). The Role of Social Enterprise Hybrid Business Models in Inclusive Value Chain Development. *Sustainability*, 13(2), 499.
- Franke, I. L., et al. (2008). *Socioeconomic analysis of agroforesters in the Consortium and Densed Economic Reforestation project (RECA), in Nova California, Rondônia*. In XLVI Congress of the Brazilian Society of Economics, Administration and Rural Sociology, 2008, Rio Branco.
- Gil, A. C. (2006). *How to design research projects* (4th ed.). São Paulo. Atlas.
- Grandson, B. S. B. (2000). *Cooperative Agribusiness*. Agrifood Business Economy & Management. São Paulo, Pioneira.
- Hansen, D. R., & Mowen, M. M. (2001). *Cost management: accounting and controls* São Paulo. Pioneer Thomson Learning.
- Lambert, D. M., & Cooper, M. C. (2000). Issues in supply chain management. *Industrial Marketing Management*, 29(1), 65-83.
- Lazdinis, M., Angelstam, P., & Pulzl, H. (2019). Towards sustainable forest management in the European Union through polycentric forest governance and an integrated landscape approach. *Landscape Ecology*, 34(7), 1737-1749.
- Lie, H., et al. (2018). An empirical evaluation of policy options for inclusive dairy value chain development in Nicaragua: A system dynamics approach. *Agricultural Systems*, 164, 193-222.
- Maciel, R. C. G., et al. (2018). Rural family production and income inequality in the Amazon: a study of the reca project, in Porto Velho, Rondônia. *Journal of Social Studies*, 19(39), 3-18.
- Marconi, M. A., & Lakatos, E. M. (2008). *Research techniques*. São Paulo, Atlas.
- Mgeni, C. P., Müller, K., & Sieber, S. (2019). Sunflower value chain enhancements for the rural economy in Tanzania: A village computable general equilibrium-CGE approach. *Sustainability*, 11(1), 75.
- Pinheiro, S. M., & Limeira, T. M. V. (2015). *Inclusive Value Chain and Ribeirinho Microentrepreneurs: the case of the Rio Negro reserve*. São Paulo, Fundação Getúlio Vargas.
- Pinto, L. F. G., et al. (2013). Characteristics, potential and limitations of different types of socio-environmental certification for agroforestry systems. *Cadernos de Ciência & Tecnologia*, 30(1/3), 11-32.
- Porter, M. (1989). *Competitive advantage: creating and sustaining superior performance*. Rio de Janeiro, Elsevier.
- Porter, M. (1990). *Competitive advantage of nations*. Rio de Janeiro, Campus.
- Porter, M. E., & Kramer, M. (2004). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78-92.
- Porter, M. E., & Kramer, M. (2011). The Big Idea: Creating Shared Value. *Harvard Business Review*, 89(1-2).
- Pratono, A. H. (2019). Cross-cultural collaboration for inclusive global value chain: a case study of rattan industry. *International Journal of Emerging Markets*, 15(1), 149-170.
- Roesch, S. M. A. (2007). *Internship and Research Project in Administration*. São Paulo, Atlas.
- Ros-Tonen, A. F. M., et al. (2019). Conceptualizing inclusiveness of the integration of the small producer value chain. *Current Opinion in Environmental Sustainability*, 41, 10-17.



- Santana, A. C. (2011). *Diagnosis of sustainable and inclusive value chains of marajó: açaí cassava, artisanal fishing and livestock*. GEDADS: Productive Chains, Markets and Sustainable Development. UFRA. Bethlehem.
- Santos, A. Q., et al. (2018). *RECA Project (Consortium and Dense Economic Reforestation): a reference in agroforestry systems*. Agroecology Notebooks, X CBA Annals, 13(1).
- Schneider, A. B., et al. (2009). Competitive strategy: Michael Porter 30 years later. *Journal of Administration of UFSM*, 2(2), 298-326.
- Shank, J. K., & Govindarajan, V. (1993). *Strategic cost management: the new tool for competitive advantage*. New York, The Free Press.
- Silva, C. L. (2004). *Competitiveness in the value chain: an economic model for business decision making* (2nd ed.). Curitiba: Juruá
- Simoni, J. (2010). *The Revitalization of Extractivism: Solidarity Economy and Sustainability Practices*. In IPEA, Solidarity Economy and Public Policies. Labor Market Bulletin, 42, Brasília.
- SIQUEIRA, J. A. S. (2018). *The açaí value chain: a systemic strategy in the conservation of Amazonian agroecosystems in the municipality of Carauari-AM*. Manaus.
- Tedesco, G. A., et al. (2020). The Juçara pulp production chain in Santa Catarina: actors and production activities.
- Teixeira, A. I. T., et al. (2021). *RECA Project – Dense Consortium Economic Reforestation. Local Connection Project – Final Report*. Getúlio Vargas Foundation. Retrieved April 26, 2021, from [https://pesquisa-eaesp.fgv.br/sites/gvpesquisa.fgv.br/files/conexao-local/1\\_-\\_reca\\_2.pdf](https://pesquisa-eaesp.fgv.br/sites/gvpesquisa.fgv.br/files/conexao-local/1_-_reca_2.pdf)
- Vailatti, F. (2020). *Study: Sustainability patterns in the açaí and nut chain*. Interviews given to Renata Guerreiro Costa/Instituto Terra