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Capital social como fator de sucesso nas cooperativas mexicanas Caso: Cooperativa "Las chiquihuitecas" produtor de grana cochinilla

Social capital as a factor of success in mexican cooperatives Case: Cooperativa "Las chiquihuitecas" producer of grana cochinilla

Resumo

*O principal objetivo deste trabalho é refletir a importância do capital social no estabelecimento e crescimento das cooperativas no México, caso específico do "Os Chiquihuitecas" cochonilha cooperativa produtora de grana (*Dactylopius coccus* Costa). O método de pesquisa utilizado foi aplicando plenamente análise documental qualitativa e entrevista em profundidade como uma ferramenta para coleta de informações. Como foi obtido um resultado que a capital tem sido o elemento chave na formação e desenvolvimento da cooperativa.*

Palavras-chave: capital social, cooperativo, grana-cochinilla

Abstract

The main objective of this work is to reflect the importance of social capital in the establishment and growth of cooperatives in Mexico, specifically the cooperative "Las Chiquihuitecas", producer of cochineal insect (*Dactylopius coccus* Costa). The research method used was totally qualitative applying the documentary analysis and the interview in depth as an instrument for the collection of the information. As a result, it was obtained that social capital has been the key element in the formation and development of the cooperative.

Keywords: Social capital, cooperative, cochineal insect

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1 Introduction

In many rural areas of developing countries, a large proportion of the population lives below poverty levels. The improvement of their income and welfare levels depends to a great extent on the possibilities of generating productive self-employment and value-added opportunities for agricultural production (Ruben and Heras, 2012; Anriques, 2007).

Cooperatives established in developing countries frequently face problems, since many of them are based on political criteria by external actors as part of public investment strategies or rural development programs launched by international agencies and by the farmers themselves (Ruben and Heras, 2012). Bernard, Gabre-Madhin and Taffese (2007) argue that because of these government policies most cooperatives have a high level of distrust among members, in addition to the important constraints they face in order to be more effective in improving their production, Marketing and therefore the welfare of the partners.

Recent studies on the role of cooperatives in improving farmers' well-being have, however, conflicting results. Johnson and Berdegué (2007) conclude that many cooperative organizations are not well integrated in global markets and only a small part of them are able to achieve their objectives. Bijman (2007) and Valentino (2003) refer both to external factors (i.e. poor adaptation to market demands) and internal factors that affect cooperative economic organization and its social cohesion. Bhuyan (2007) rightly states that these factors are not isolated but interdependent, implying that cooperatives must carefully balance member interests and business requirements.

Another study, such as that of Francesconi (2008), pointed out that Ethiopian cooperatives have been created in response to government plans and are only intended to attract public subsidies rather than being competitive in the market. Such top-down cooperation is likely to induce limited real solidarity among members and tends to diminish their interest in substantive efforts to improve production and yields.

This article presents the analysis of a cooperative producing cochineal grain, focusing attention on the theme of social capital, the social norms that govern it, trust, reciprocity and the

internal and external networks that it has. The central objective of this work is to identify the development of social capital in a cooperative and the importance of it in the growth and survival of the association.

2 History of cooperatives

In 1820 cooperativism was born in England as an economic system, when workers sought to overcome their social conditions. The Cooperative of Rochdale is mentioned by several authors as the first exercise of cooperatives in the world, formed by 28 workers in 1844. The weavers faced miserable working conditions and low wages, and could not afford the high prices of food and household items. They decided that joining their scarce resources and working together could access basic goods at a lower price.

Initially, there were only four items for sale: Flour, oatmeal, sugar and butter. Each client became a member and grew (International Co-operative Alliance ICA, 2017a). Subsequently, in 1985, the International Co-operative Alliance (ICA) was founded, establishing the principles and values on which the functioning and development of cooperatives would be based (Center for Social Studies and Of Public Opinion CESOP, 2016). The ICA is an independent non-governmental organization that is established to "unite, represent and serve cooperatives around the world"; serving as a voice and global forum for knowledge, experience and coordinated action for and about cooperatives (International Co-operative Alliance ICA, 2017b).

The ICA defines cooperative as "an autonomous association of persons voluntarily united to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise." The values it defined as the basis of any cooperative are: self-help, self-responsibility, democracy, equality, equity, solidarity, honesty, openness, social responsibility and caring for others. And the principles are voluntary and open membership, democratic control of members, economic participation of members, education, training and information; Cooperation among cooperatives and concern for the community (ICA, 2017b).

Today it is estimated that the sector has about 1 billion members. Cooperatives employ, directly or indirectly, 250 million people worldwide. The

world's first 300 cooperatives alone have an estimated global turnover of \$ 2.53 trillion, as revealed by the International Co-operative Alliance ICA, 2017b.

3 Cooperativism in Mexico

Cooperatives in Mexico was an idea coming from Europe that reflected the dreams and desires of the workers of Mexican industry, who in the situation of slavery they lived are organized and form the Workers' Circle of Mexico. In 1937 they organized the First Cooperative Workshop from which the first Cooperative Society of Mexico (26 tailors of the Mexico City) would emerge (Izquierdo, 2009). In 1939 in Orizaba, Veracruz was founded the first Savings Bank with the characteristics of a cooperative society (Izquierdo, 2009). The example of the cooperative society of tailors gave rise to other mutual societies of that time becoming cooperatives (carpenters and hatters).

Although it is clear that in Mexico in the indigenous community's collective work and communal property already existed before, under the name of *calpullis*. Under revolutions and political instability prospered the cooperatives in the country and in 1927 appeared in the Official Journal of the Federation the first General Law of Cooperative Society recognizing the agricultural, industrial and consumer cooperatives. Accepting the Raiffesen system for agricultural cooperatives and the Shultse-Delitzch system for industries, particularly the concept of partner responsibility (Izquierdo, 2009).

In order to amend the deficiencies of the previous law, in 1933 in the Official Gazette a new order was published whose validity was 5 years, since in 1938 the new version was published, which was in force until 1994 when the General Law Of Cooperative Societies was enacted (Izquierdo, 2009).

The General Law of Cooperative Societies, published in the Official Gazette of the Federation (DOF) in 1994, regulates cooperative enterprises in Mexico (Center for Social Studies and Public Opinion CESOP, 2016). According to the General Law of Cooperative Societies (LGSC) of Mexico, Article 2, mentions that a cooperative society is a form of social organization composed of natural persons based on common interests and the

principles of solidarity, self-effort and mutual help, with the purpose of satisfying individual and collective needs, through the realization of economic activities of production, distribution and consumption of goods and services (DOF, 1994, p.1).

The principles that must be observed for its operation are the freedom of association and voluntary retirement of the partners, a democratic administration, limitation of interests to some contributions of the partners when it is agreed, distribution of the returns in proportion to the participation of each partner, promotion of cooperative education and solidarity economy, participation in cooperative integration, respect for the individual right of members to belong to any political party or religious association and promotion of an ecological culture (Article 6, LGSC, DOF , 1994).

For its constitution, Article 11 (LGSC, DOF, 1994) establishes that each member will be recognized one vote, regardless of their contributions; will be of variable capital, there will be essential equality of rights and obligations of its partners and equal conditions for women, will have indefinite duration and will require at least five partners for their integration (Fraction V, reformed DOF 13-08-2009, LGSC). In addition, the constitution must be held at a general meeting held by the interested parties, which will draw up a record of the general information of the founders and the names of the people who have been elected to integrate councils and commissions for the first time; as well as the constituent bases of it (DOF, Art. 12, LGSC, 1994).

The type of regime (limited or supplemented responsibility) and category of the cooperative (of consumption of goods and / or services, producers of goods and / or services, and savings and loans) are also specified in the minutes (DOF, Art. 14 and 21, LGSC, 1994, respectively).

Once the constitutive act has been signed and registered in the Public Registry of Commerce corresponding to their domicile, the cooperative societies shall have legal personality, have their own assets and may celebrate acts and contracts, as well as freely associate with others for the attainment of their Social object (DOF, Art. 13, LGSC, 1994, page 3). But it can also be dissolved by the will of two

thirds of the members, by reduction of the partners to less than five, because the object of integration was consummated, because the economic situation of the society does not allow it to continue operating or by the executory resolution issued by the courts referred to in Article 9 of this Law "(DOF, 1994, Art. 66, LGSC, page 18).

For the subject of the present investigation, only cooperative societies of producers are defined, where the case of study enters. According to Article 27 of the LGSC (DOF, 1994, pp. 5-6), are cooperative societies of producers, those whose members are associated to work together in the production of goods and / or services, providing their personal work, physical or intellectual. Regardless of the type of production to which they are dedicated, these companies may store, transport and market their products, acting in the terms of this Law.

Regarding the operation and administration of cooperative societies, the LGSC establishes that its general management, administration and supervision will be in charge of the general assembly, the board of directors (when companies are smaller than ten members it will only be necessary to appoint An administrator, Article 43, LGSC, DOF, 1994), the supervisory board (in societies smaller than ten members, it will suffice to appoint a commissioner of oversight, Art. 45, LGSC, 1994) and the commissions and committees that this Law establishes And the others designated by the General Assembly (Article 34, LGSC, DOF, 1994). Likewise, the functional areas or divisions of the cooperative will be established based on the activities carried out and what is best for the good performance of the cooperatives (Article 48, LGSC, DOF, 1994).

As for the capital of the cooperative, it will first be made up of the contributions of the partners at least the value of a certificate (cash, rights or work) and with the returns that are destined to increase it according to the decisions of the Assembly General (DOF, 1994, Art. 49, 50 and 51, LGSC).

4 The social capital

Cooperatives represent a hybrid combination of a voluntary association and a business enterprise (Levi and Davis 2008, Bijman and Hendrikse 2003, Ruben and Heras, 2012). The members of the cooperative expect to gain advantages from

belonging to a group, but must commit to the corresponding responsibilities. Commitments are based on mutual trust and reciprocity between them (Ruben and Heras, 2012).

Social capital theories provide important evidence that trust, reciprocity and networks play a key role in overcoming the limitations of collective action (Putnam et al., 1993, Coleman 1987, Grootaert 2001, Ostrom 1994, Woolcock 1998). In addition, Olson (1965) argued that some coercion and internal incentives are required to control free driving behavior. Ostrom (1994, 2000) outlined four essential elements for the analysis of the dynamics of social capital, namely: (1) trust and (2) reciprocity, (3) networks and (4) rules or institutions. Trust and reciprocity are the fundamental links between networks and collective action and are considered to be the most relevant factors in promoting voluntary cooperation.

The term social capital is a broad and complex concept that has been gaining ground in social and economic research. According to Putnam (2000) his origin dates from 1916 with Lyda Judson Hanifan, in a study on rural education and the role of a community involved in school success, where he anticipated all elements of the term, but his invention did not draw attention And disappeared without a trace (Azuerro, 2009).

At that time, Hanifan defined social capital as: those intangible components that count a great deal in the daily lives of people, that is, goodwill, camaraderie, empathy and social relations between individuals and families that make up a social unit ... If [an individual establishes] contact with Its neighbors and these with other neighbors, there will be an accumulation of social capital that possibly satisfies at once their social needs and entails, in turn, a sufficient social power to generate a substantive improvement in the conditions of life of the whole community (Hanifan, 1916, p. 130, quoted by Lanzini, 2006).

In the eighties, the psychologist Pierre Bourdieu presented the theme of social capital, being the object of a more detailed analysis. From this moment diverse definitions and the realization of investigations were developed trying to measure it. It is when Pierre Bourdieu, James Coleman and Robert Putnam become the classic precursors in social capital (Azuerro, 2009). Bourdieu (1985: 248) defines social capital as the aggregate of real or potential

resources linked to the possession of a durable network of more or less institutionalized relations of mutual recognition.

Subsequently, the sociologist James Coleman (1988) defines it as the socio-structural resource that constitutes a capital asset for the individual and facilitates certain common actions of those who make up that structure ... Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and facilitate the realization of certain actions for the actors, whether individuals or corporate actors, within the structure (Coleman, 1990, p.103, quoted in Azuero, 2009).

Putnam (1993) conceptualizes this term in terms of membership in civil associations and aspects of social organizations, such as networks, norms and trust facilitate action and cooperation for mutual benefit. Social capital increases the benefits of investing in physical and human capital (Azuero, 2009, p.153). At the moment, Putnam emphasizes social capital as something communitarian and not just as an individual element (Azuero, 2009). Each one of these authors develops their postulates about social capital, but putting their attention in different aspects having their works deep differences between them, except few very general coincidences.

The social capital of a social group could be understood as the effective capacity to mobilize productively and for the benefit of the whole, the associative resources that reside in the different social networks to which the members of the group in question have access (Perlbach, Calderón and Rivers, sf). As a consequence, social capital can be assumed to be a resource. Kaztman (2001) mentions that social capital refers to resources installed in a network that can be mobilized by those who participate in it to achieve individual and collective (cited in Atria, 2003, page 50). Sunkel (2001) and Atria, (2003, p.50) establish five variables of social capital: participation in networks, reciprocity, trust, social norms and proactivity.

As for the applications of social capital, Rodríguez and Román del Río (2005) mention that social capital has been used and linked in different fields of research, such as economic development, community life, organizations and work, democracy, government quality (Education, health, environment, crime, violence, among many other areas).

5 Cooperatives and social capital

Several empirical studies have been carried out applying the theories of social capital in the performance of cooperatives.

Durston (1999) conducted a study in the rural communities of Chiquimula in Guatemala on how the creation and strengthening of social capital through the implementation of public policies could support the overcoming of poverty and political exclusion of rural communities in the Americas Latina. He discovers that the communities that were the object of his study showed an individualistic culture, with little participation in community organizations; but they had a set of clear rules that allowed them to carry out their solidarity and reciprocal practices. The networks were composed of relatives and neighbors with a common ancestor. In this place, the PROZACHI project was implemented, which concludes that, although it seemed that there was no social capital in the communities, through training and external support, past practices were rescued and opportunities for growth and community development emerged (Pejkovic, 2009).

Miranda and Monzó (2003) carried out a comparative study on social capital and public policies in the Chilean peasant villages Cerro Blanco and Ajial de Quiles, on the one hand, and La Cruz on the other. In the first they discovered that kinship, cultural identity, neighborhood and historical memory were the triggers of social capital. In addition, they conclude that each community reacts in a particular way to the effects of the interactions that take place between its multiple actors and to the external influences of systems that overlaps or coexists, strengthening or weakening community cooperation (Miranda and Monzó 2003, 40).

Just as the authors conclude: which, in order to overcome poverty, fails to detect capital or to evaluate the social capital of the groups, as the international financing agencies postulate it. In addition, it is necessary to understand and correct, where necessary, the forms of articulation between the State and the community (Pejkovic, 2009, 29).

Perlbach et al. (S.f.) carried out a study on the relation of social capital as a growth factor in Mendoza. The indicator used was that the greater

number of cooperatives would be operating in the municipality greater social capital would have. They concluded that the verification of the aforementioned assumption, where there was greater number of cooperatives greater growth had.

Ruben and Heras (2012) explored the performance of coffee cooperatives in Ethiopia and their relationship to social capital. They used four different dimensions: trust, reciprocity, internal and external network. The results they found were that productive and economic performance is greatly improved by intra-community social capital, but affected by extra-community social capital. They conclude that cooperatives with more social capital shared by their members are better able to build a community response to critical external constraints, are more resistant to adversity and are better able to regain access to resources.

Pejkovic (2009) identified that the precursors of social capital in Río Gallegos, Argentina were the similar needs and demands of associates at the moment of joining a cooperative. These are kinship relations and their participation in cooperatives in the National Congresses of Cooperatives. They also found that the absence of a common past, traditions or cultural identities in common constituted a difficulty for the development of social capital.

6 Methods

The present work has a qualitative approach through an understanding of the phenomenon it is a question of deepening the relation between the cooperatives object of study and the importance of social capital as a factor of success. Firstly, documentary research on social capital, its relationship with cooperatives and empirical studies on the subject was carried out. In the same way, it is investigated the corresponding to the cochineal, origin, characteristics, production, etc. Subsequently, an in-depth interview was conducted with the leader of the "Chiquihuitecas" cooperative to obtain field information.

7 The cochineal (Grana-Cochinilla)

Cochineal cultivation in Mexico is in the state of Oaxaca, where the Indians cultivated it as a complementary activity to their subsistence agriculture and in the colonial era gained importance

in the then growing European textile industry (Tovar, 2000). Cochinilla is a natural colorant that can be used in different branches of the industry, does not cause any damage to man and today, due to the need to use natural dyes in the industry, and is having a very significant boom.

Insects of the genus *Dactylopius* develop in some species of cactus (Tovar, 2000) and produce a compound called carminic acid, which is mainly used in the food industry (dairy products such as yogurt and ice cream, candy derivatives, chewing gum, fruits, gelatines, jams, soups and sauces, cosmetics for lipstick, blushes and shadows, as dye for natural textile dyeing and in medicine (Méndez et al., 1994; Aquino, sf). According to Muóóz (2011), the food industry worldwide uses 75% of production. 15% of production is channeled to the cosmetics industry. The remaining 10% of production is divided between the pharmaceutical industry and the textile industry.

There are two types of cochineal, the wild and the fine. The first is a complex of eight species that grow as a pest in the orchards of nopal. It is distinguished from fine because its body is covered with a skein of white "milkweed" difficult to detach from its body, instead of the white powder of the easy cochineal easy to separate. Their dye is of poor quality and low concentration, contrary to the fine (Méndez et al., 1994; Tovar, 2000; Aquino, s.f., Muóóz, 2011). This insect lives in different species of nopales of the genus *Opuntia* and *Nopalea*, lately they have preferred the Castilla variety because it has no spines and facilitates the management of the penca (Tovar, 2000).

The importance of the use of the grana worldwide is due to the carminic acid produced by the cochineal thin is characterized by its safety in public health, its high stability and coloring power (Tovar, 2000). Among the factors involved in the development of this insect are direct winds, sunshine, rain and hail; As well as temperature, being one of the most important factors on the establishment, survival, growth, development and reproduction of the cochineal (Herrera 1983, Aquino 1992, cited in Tovar, 2000). Likewise, you must take care of predatory insects and pests.

7.1 Production system

There are two basic systems of production: the standing plant (open sky and tapexco) and the cut-off plant (micro tunnel and commercial greenhouse). The size of the holding determines the production system to be used. The use of each one depends to a great extent on the environmental conditions of the place where the productive unit is intended to be established.

Tapexco is more efficient in protected sites, such as glens, hillsides, micro-basins, etc., where air currents, storms and gorges are not very strong. The micro tunnel is recommended for the cut-off system and in desert and semi-desert climates, in valleys and plains where winds, storms and tolvaneras, as well as solar radiation are very strong. The greenhouse is recommended in the same regions as the micro tunnel, but for commercial producers (Aquino, s.f.).

In Peru and Bolivia, for example, the production is carried out by standing plant because of the environmental conditions characteristic of the place (Llanderal and Campos, 2001; Aldama, Llanderal, Soto, and Castillo, 2005). In Mexico it is produced through the two systems (Aquino, s.f.). However, here the production of cochineal is difficult due to the existence of wild cochineal species, natural enemies, extreme temperatures, off-season rains, high luminosity and strong winds (Llanderal and Campos, 2001; Aldama, Llanderal, Soto, & Castillo, 2005).

For the cultivation of the cochineal, when it is with cut leaves, it is taken to a protected place to carry out its infestation of grana and later to hang itself to complete the cycle of approximately 90 to 120 days and to become adult. It is recommended to fast kill the cochineal to accelerate the drying and thus avoid loss in weight and carmine. Some methods are: immersion in freshly boiled water, application of water vapor, by freezing, spray with 100% pure hexane and by asphyxiation (Tovar, 2000).

Subsequently, the drying of the cochineal is carried out using solar dryers, stoves with spotlights, direct sun or dry to the shade, taking care that the place where it is done is completely dry (Tovar, 2000). Subsequently the classification, cleaning and packaging of the product is carried out. The most commonly used method is sieving. Once dry, clean,

classified is stored in polypropylene bags, the amount per bag of 50 kg. 70 kg. (Qunitanilla 1999, cited in Tovar, 2000).

7.2 Cochineal breeding

There are two ways to start cochineal breeding. The first is to place the nests containing the breeding foot and leaving them oviposit until the breeding females die. The second case refers to filling nests with enough cochineal, to infest the plagues and to rotate it at least 6 pence per nest. In this case, they are changed to new plots every third or fourth day depending on the proper infestation of the cladode, which can be when it is seen at least 100 insects in a 10 x 10 cm box. (Aquino, s.f.).

7.3 Production process (Muñoz, 2011)

- 1) Planting of the nopal with appropriate care, fumigation, irrigation and constant revision.
- 2) Cut the third branch of the nopal, since it has the most nutrients and take it to the greenhouse.
- 3) Put beds of pencas and place the cochineal to be installed in them
- 4) Once the cochineal has defined its penca, to hang the pencas with hooks inside the greenhouse so that the cochinilla grain feeds, to grow and to reproduce, the life time of the females is of 3 months, whereas the males only live 60 days.
- 5) A new bed of pencas is installed so that when they are reproduced, the small nymphs fall into them, they settle and start the process again.
- 6) When the nymphs' 3 months of life pass, they are collected by penca; they are cleaned and packaged for sale.

8 Analysis of results

8.1 History of the "Chiquihuitecas"

The cooperative "Las Chiquihuitecas" is a cooperative registered under the regime of a limited liability company. The partners are only obliged to pay the contribution certificates they have subscribed (Article 14, LGSC, page 3, DOF, 1994) of variable capital located in the town of Casa de Piedra belonging to the Municipality of Autlán de Navarro,

Jalisco. Its objective is the production of cochineal. It is a cooperative of an ordinary character, according to Articles 30 and 31 of the LGSC (DOF, 1994), since for its operation only its legal constitution was necessary.

8.2 Formation of the group

It started operations in 2011 with a group of women (10) with the aim of generating self-employment and fostering local economic development. The concern is born of a person outside the locality that motivates and encourages them to participate in the National Support Fund for Solidarity Enterprises (FONAES). Due to problems of mistrust and non-fulfillment of some issues, once the group starts activities, it begins to disintegrate, leaving 6 people currently.

The structure they have is established by the General Law of Cooperative Societies, a legal representative, a secretary and treasurer, a member of the supervisory board and three members. As a result of the reconfiguration of the group, they are currently in the process of withdrawing the initial charter and registering existing members who actually carry out the activities. And they have two people outside the group, who are of plant that help them in the activities for the operation of the greenhouse, carrying brambles, cleaning the cactus, hooking the pencas, toilet, among others.

The type of production they handle is by greenhouse, which has an area of 2500 square meters. The amount produced varies depending on the space used, but is between 5 kg., and 150 kg., approximately every 3 months. The marketing of the product from the beginning an engineer bought directly the production and he was in charge of the sale of the product. Currently, the cooperative is looking for its customers to directly sell them production.

8.3 Way of production

- 1) The nopal planting is in a field near the greenhouse, it must be kept clean and free of pest.
- 2) From this plant, the best nopal beds are selected for the cochineal infestation. They are cut and cleaned of thorns and washed so that they do not have wild cochineal and between contaminated to the greenhouse and propagate this one and make that the production of fine cochineal is lost.

- 3) Once clean the penca is introduced into the greenhouse, is hooked and is expected to be infestation and therefore the fine cochineal culture.
- 4) The care that must have in the greenhouse is to have it behind closed doors so that spores of wild cochineal do not enter and contaminate the production. Do not enter with black clothes because it alters the males or with perfume on the skin.
- 5) When the collection time arrives, the cochineal is cleaned and sifted. Subsequently, it is allowed to dry to be packaged. He mentioned the leader who is kept in black bags so he does not lose his color.

The sale price is consulted on the internet to see how it is being traded in the market; it ranges from \$ 30 to \$ 35 per kilo, usually. But in periods of winter it reaches up to 80 dollars a kilo.

The interview was made to Mrs. Irma Dolores Mondragón Sandoval, leader of the group, although currently does not act as legal representative. Regarding the decisions, she mentions that the decisions are taken together and by voting choose the course of action to follow. When questioned about the group's interaction with others inside and outside the community, with similar objectives, it was mentioned Campo Carmín, S.P.R., of R.L., a company also dedicated to the production of cochineal greenhouse in Morelos, who have been the most important source of advice to get the project going. She also mentioned other groups with different objectives, but they have been very supportive of them, such as the Ayunquila River Intermunicipal Board (JIRA), the University Center of the South Coast (CUCSUR), the Ayuntamiento Autlan de Navarro, Jalisco; and the National Commission of Protected Natural Areas (CONANP).

All of this is supported by Art. 60 of the LGSC, which states that the Cooperative societies may receive donations, subsidies, inheritances and legacies from natural and public persons, public or private, national or international, to increase their heritage" (DOF 1994 , Page 16).

In terms of financing, its main source is the contribution of the partners, the initial project that financed them, the sale of the product and participation in government projects. However, it is one of its main problems these days.

8.4 Networks

Social networking is, therefore, a necessary condition for reciprocity and trust (Ruben and Heras, 2012). Networks support reciprocity through the repetition of reliable actions and the exchange of information between individuals. They can be structured vertically or horizontally, based on peer-to-peer or hierarchical connections (Gittell and Vidal 1998). In Mexico, LGSC in its article 74 promotes the formation of networks among the cooperatives for their benefit, stating that cooperative societies of production and consumption can be grouped freely in Federations, unions or any other associative figure with legal recognition (DOF, 1994, p.19).

The leader of the group was questioned about the number of friends or close relatives who worked in the group, to which she replied that they are all friends, the legal representative is a friend and acquaintance, two of the members are children, sister, another friend and a servant. They are the ones who are currently committed to the project. Regarding the participation in networks of other cooperatives, they are not yet integrated into any.

8.5 Trust, solidarity and reciprocity in the group

Paldam and Svendsen (2000) argue that high trust and reciprocity are vital to controlling freedom of movement. Better organized and more integrated agricultural cooperatives are also more reliable vis-à-vis financial market agencies and therefore have easier access to finance (Portes and Sensenbrenner, 1993). Ms. Irma mentions that trust is the key element that has made the group prosper, as well as commitment and mutual help among them. When agreements are made, they are verbal and fulfilled in their totality, if one cannot carry them out, it warns in time not to affect the group and agrees to substitute another member in the future when any of the others cannot support.

In addition, considering what the LGSC establishes (Article 64, 1994), that in producer cooperatives, the personal work of the partners may be physical, intellectual or both, organized in such a way that, if at some point someone cannot support physical work for time or health, take turns or replace the activities with another member of the group or

external salaried personnel (according to Art. 65, LGSC, DOF, 1994). On the other hand, since even the cooperative does not have a fixed production and therefore a fixed income, she mentions that if any of the members has a greater economic incentive outside the cooperative, the most obvious thing is that it tends to leave the group.

8.6 Collective action and cooperation

They were asked if they had been involved in any activity benefiting the locality in the last 12 months, but the response was positive in reforestation and garbage collection activities. The leader of the group mentions that not all people in the community get involved with the total disposition and tend to be criticized by the same people of the community that if they participate.

8.7 Information and communication

The three most important sources of information that are used to make decisions in the group are through meetings and external counseling. JIRA is the external organization that supports them by providing them with information on financing projects in which they can participate and supports them by advising them on the procedures.

8.8 Social cohesion and inclusion

Heterogeneity can become an important impediment to cooperation (Putnam 2000), since the possibility of connecting with external networks reduces the probability of interaction between members within the cooperative itself. The feeling of union or closeness of the group with its community is very strong, as well as between them, where the relationships go beyond the labor. Regarding the existence of differences between the members of the group and the community, they are minimal and do not cause problems.

As for the frequency of group meetings, they only meet each other to make important decisions; otherwise the leader decides and informs what has been done.

8.9 Empowerment and political action

The leader is very happy and therefore considers having total control over her decisions and changing the course of her life. Therefore, she considers having a great impact in improving her locality and the group as such. In the last 12 months she has met more than 5 times together with local people to talk to the government and make requests for the benefit of the community. Most of the petitions have been successful.

8.10 Current issues

- 1) The main problem that they have at present is the lack of labor for the cut of pencas. This causes that since their inception to date they have not been able to use the greenhouse at its maximum capacity because there are no people who want to work cutting cactus beds because of the difficult of the activity they end up being chased away from the whole body.
- 2) The second problem is the lack of financing for the operation and maintenance of the project.
- 3) Lack of training of current members in administration and marketing, so that they are self-sufficient and seek their market, rather than having intermediaries who take most of their profits.

9 Conclusions

Firstly, with regard to the product, it can be concluded that the production of cochineal is a business opportunity because: it is a non-perishable product (dry cochineal) that can be stored until the volumes are adequate for sale and more profitable. It is easy to store and in times of shortages such as the winter months can be sold at a price considerably higher than the average annual price.

It is a self-employment alternative, because if it is selected a good breeding system combined with family labor, materials and instruments in the region, and participate in government support, income would be considerable, reducing investment and production costs, as well as taking advantage of the arid and semi-arid zones of the country for the benefit of the inhabitants of those zones. Likewise, being a natural product, non-toxic and totally

organic, it is an excellent alternative to replace artificial colors, and here is the business.

However, within the disadvantages of the production of this article, is that because it is relatively new there is much ignorance about its cultivation and management, as well as its market and sale. In addition, the cutting activity is complicated and not everyone knows and wants to carry out, because of the consequences of completing everything. And it must be produced in large volumes to make the whole productive system and investment profitable.

Regarding social capital, with the interview it was possible to verify the importance of social capital in the formation of any group, and in this case of the cooperative. The networks and relationships that have unconsciously formed with CUCSUR, with JIRA and H. Ayuntamiento, etc., these have been very important factors in this company's continued existence, for the various supports they have received and continue to receive, such as training and counseling for participation in economic projects that regulate the situation in times of crisis and little production. As mentioned by Perlbach et al. (S.f.) that social capital is not formed by a single individual but by sociability and interaction with others and networks of relationships appear as keys between individuals and groups.

Trust, solidarity, reciprocity, collective action and cooperation among members are other important elements in the development and operation of the cooperative. The way it is taken turns, shifts and organize work, schedules, mutual trust of knowing that they have the person to get the job, support, familiarity and friendship strengthen the bonds and bonds within the group for better functioning and cohesion between them. Perlbach et al. (S.f.) establish that reciprocity is strong when members of a group care about the interests of all. And this element manifests itself not with the immediate application of the legal contract that united them, but the short and medium term altruism and the personal benefit as a result of the above.

Another important factor is the leadership that Mrs. Irma leads in the direction of this group, because despite not being the legal representative for the moment, all members are subordinated to her in an environment of trust and commitment to move forward the draft. In addition, all share a same vision of support to the community and participate in

activities that benefit all. In this part proactivity is manifested, an active and committed involvement with the group and the community. Social capital is formed by active, creative, moved people and not as passive recipients of products, services or rights.

10 General recommendations

As alternative solutions to their training problem, it is suggested that taking advantage of the excellent relationship that has with the authorities of the University Center of the South Coast (CUCSUR) is requested the establishment of an agreement of professional practices with the degrees of Engineer in Agronomy and Engineer in Natural Resources so that the young people support them in natural pest care advice, as well as how to efficiently produce cochineal without contaminating the processes.

Likewise, an agreement of professional practices with the careers of Administration, accounting and computer science to support the people of the group with training courses in administrative, accounting and computer management and internet searches, so that they are self-sufficient and empower themselves with the important business they undertake.

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