

CHAPTER 11. VEGETABLE MARKETING EACs

This chapter describes two EACs, Cooperativa We Tukucán Ltda. and Cooperativa El Renacer del Cajón Ltda, dedicated to the production and marketing of vegetables for the fresh market.

11.1 The context

There are nearly 60 different species in the Chilean vegetable sector. In the 1997 Agricultural Census, about 45% of the farms in Chile declared they cultivated one or more vegetable crops, covering 9% of the total cultivated area (excluding pastures and forest plantations). Over the past decade, the annual area under vegetable crops has fluctuated up and down between 105,000 ha and 115,000 ha per year.

The main vegetable crops by area are tomato (15% of the area), fresh corn (11%), onion (5%), lettuce (5%), and green peas (4%). Beet, an important crop in one of my case studies, represents only 1% of the vegetable crops' area.

Two-thirds of the vegetable growing area is concentrated in the more temperate and irrigated areas of Regions V and VI, as well as in the Metropolitan Region (the central part of the country around the major population center of Santiago) with its well developed network of roads and small and medium sized towns.

Region V, where the El Renacer del Cajón cooperative is located, supports 13% of the area under vegetables. Its greatest advantage lies in its high yields and, in particular, its climate which allows it to produce an early crop of many of the fall and winter vegetables (*primores*). This comparative advantage has been enhanced by the massive introduction of greenhouses (about 1,200 ha) for early vegetable production. Much of the acreage under greenhouses belongs to medium and large commercial farmers.

Region IX in the south of the country, where the We Tukucán cooperative operates, is not known as a vegetable producing area. However, for decades there has been a vegetable production subsector around the regional capital city of Temuco, with an area that fluctuates around 4% of the national total. At least half of the area under vegetables in Region IX comprises small gardens kept by the many Mapuche⁵⁸ households, most of whose production does not reach the market.

Vegetable production in Chile is largely dominated by small farmers. The average area under vegetables per farm is less than one hectare. Average areas per farm per crop do not exceed 1.5 ha per farm, even for the most important vegetable crops. This is true for my case study crops and regions: tomatoes in Region V (1.2 ha per farm), and lettuce and beet in Region IX (around one-tenth of a hectare per farm).

The city of Santiago is easily the biggest market for fresh vegetables in Chile. The main retail outlets, accounting for over 85% of total sales, are the *Ferias Libres* ('free fairs'), comprising hundreds of small traders with pickup trucks who move around different neighborhoods daily. These mobile shopkeepers buy most of their produce at Santiago's three wholesale markets, although some of them also travel to nearby farms to buy directly from the producers. Many of the farmers in the central provinces transport their produce to these wholesale markets, but there is also a large group of wholesale middlemen. Some farmers have 'commission agreements' with traders, whereby they send their produce to the wholesale market to be sold for either a fixed fee per unit or for a pre-established share of the final price.

In this very competitive and open market, the key variables determining the success or failure of a

⁵⁸ The main native people in Chile.

vegetable farmer are location, yields, production costs and quality. However, transaction costs are also important, especially if a farmer intends to reach the wholesale market directly, without going through a middleman. Prices can fluctuate by as much as 10 to 20% in a day; access to timely information about daily supply and prices and the capacity to enforce agreements with wholesale buyers and traders can make the difference between success or failure. Small farmers in particular, must weigh up the costs of leaving the farm to take their crop to the wholesale market and directly supervise its sale, versus selling on the farm or relying on a trader.

11.2 The case studies

11.2.1 Cooperativa El Renacer del Cajón Ltda.

This cooperative was established in 1991. It is located in Region V, in the municipality of Quillota in the central part of the country. It started with 10 members, five of whom are relatives (three brothers, one sister and one cousin), all young, and all close friends who together have been active in different community activities and organizations for a long time. One more member joined in 1998. Of the 11 formal members, six are active (three brothers, one cousin and two non-relatives). The brothers and sister make up the core group of the cooperative; she is a young, intelligent, hard driven and hard working woman who is the undisputed leader and President of the cooperative. The father of the core group was one of the more important local leaders in the agrarian reform of the 1960s and 70s, and remains a leading community activist (*"but he has an awful business sense and always has had bad results.. we did not allow him to become a member of the Coop because he would have wanted to lead, and we would have gone under for sure"*).

They started working together in the late 1980s as a politically-motivated youth group linked to the Catholic Church. As a way of expressing their opposition to the military dictatorship, they started forming pre-cooperative organizations for Region V's Regional Federation of Cooperatives. Their first economic project was honey production, funded by a Dutch NGO through the Regional Federation of Cooperatives. However, it failed when they could not control a new disease that had a major impact on Chile's honey industry.

Nevertheless, part of the group remained highly motivated and decided to try their luck with a crop they were more familiar with. Although none of them had produced greenhouse tomatoes before, there were large commercial farmers in the area who had established greenhouses. *"We would look at those greenhouses and spend our time asking ourselves 'How can we do the same?' ... we learned that they had computerized irrigation systems, and to us that seemed incredible... we later learned that the irrigation timer only costs \$ 200 and we laughed ... we were the first small farmers to set up greenhouses with automatic drip irrigation."*

Six of the members put up their homes as collateral for an INDAP loan, as well as their personal savings, to set up the first 15 greenhouses (around 3,000 m²). This was the final outcome of their participation in GARIM, a special program launched jointly by INDAP and SENCE (the National Labor Training and Employment Service) which provided training, technical assistance and start up capital to young rural people willing to launch a career as self-employed entrepreneurs.

Their failed honey project taught them the importance of technical knowledge; they immediately hired one of the top regional advisors on tomato production. *"He was extremely expensive, but we worked with him for two years and we learned a lot... we then had two other very good advisors, also expensive, but they really knew what they were talking about and we learned... the first advisor saved us so much money and he made us bring down the initial greenhouses because he said that they were trash; he would not let us go on until we got it right... this is why many of other groups failed, because they started doing things wrong."*

Their current advisor is a specialist on management and marketing: *"we are now good producers, but we still have a long way to go in learning how to manage our business and how to penetrate new markets."*

Initially they worked on the project collectively, with little division of labor. However, they rapidly learned that they needed to specialize, so one of the women (the current president) took over the finances and administration (she had worked as a commercial assistant in a medical laboratory firm), one of the brothers became the trader, and the rest remained in charge of production.

At the beginning, none of the members owned any land, so the tomato production project was started on one hectare rented from other farmers (not relatives, since they did not want to mix family and business matters). One of the members then obtained another hectare of land from her father, took out a loan and put up her own greenhouses. Finally, another member inherited about half a hectare, and installed his own greenhouses there. Thus, at the time of my field work, the cooperative had three family-based production units, each run privately by the direct owners.

Through the cooperative they collectively buy their agricultural inputs and supplies, negotiate their loans with INDAP, sell their produce, contract their agricultural advisors, and produce the seedlings in order to manage the production schedule throughout the year and to ensure uniform varieties and quality. In 1994 they bought a truck to improve their marketing options, and in 1996 they took out a loan that allowed them to more than double the number of greenhouses.

They pride themselves on their ability to change varieties very rapidly as consumer preferences change *"most other farmers, even the big ones, don't change until they lose money one year... we don't want to lose money so we change ahead of time."*

They have also installed a fax machine so as to keep in touch daily with prices and market conditions: *"good information is essential, otherwise you harvest and take the truck to the market only to find that it is full of tomatoes..."*

Three of the brothers and the sister, together with their father, have also launched a separate EAC based on about 10 ha of avocados, all using drip irrigation.

Thanks to their early emphasis on doing things right during production, and to their willingness to invest in hiring the best advice possible, the group's yields are extremely high (around 135 ton/ha), almost twice the national average. The very best commercial producers in Region V manage to get 140 ton/ha, so this cooperative is among the top producers in the country. *"We aim for top yields with the best quality, because we know that's where the profits are"*.

The quality of their production is so high and their prices so competitive, that they easily sell all the tomatoes and other vegetables they can produce⁵⁹. This has allowed them to expand the area of greenhouses to a total of almost one hectare in less than three years.

The group faced a serious crisis between 1997 and 1999. A very severe drought and lower than normal winter temperatures affected yields and quality severely, and lowered prices. *"We faced this crisis head on, by investing heavily in wells and to improve our irrigation systems... we put all the money we had, and we also took out a loan to recapitalize the cooperative."*

A couple of years ago the group became interested in moving towards organic production, after one member went to Germany and saw that organic tomatoes in supermarkets were more expensive than conventional ones. The cooperative has an agreement with the national Agricultural Research Institute (INIA) to acquire integrated pest management (IPM) and drip irrigation technology through a local demonstration plot installed in one of the cooperative member's fields.

Most small vegetable farmers in the area sell their produce on the farm to middlemen, but the cooperative has acquired its own truck and a permanent post at the Valparaíso wholesale market, where one of the members sells their produce. The cooperative also buys and sells other small farmers' produce.

The members readily acknowledge that they have had no impact whatsoever on the market price:

⁵⁹ According to the management and marketing advisor, the break-even point of the cooperative's tomato production is of around \$ 0.10/kg, while market prices normally are above \$ 0.42/kg.

"when we started, we thought that by being together we could negotiate better prices... this is an illusion." They explain that the only way to get better prices is by producing better quality. Being known as producers of top quality tomatoes is particularly important when the prices are low: *"when there are good prices, anyone can make it... but when there is a bad year, then it makes a big difference if the buyers know that your tomatoes are all well graded and packaged and so on."*

They also sell a small fraction of their produce to a supermarket in Valparaíso; they wish they could sell more through this outlet because prices are higher, but the problem is that the demand from one or two supermarkets is quite limited. To target a large number of supermarkets or whole supermarket chains, they would need much larger volumes, as well as packing and grading equipment and storage facilities.

They could expand the volume to the needed levels to justify a packing house and the use of their own label by letting other farmers join the cooperative, or through supply agreements with other farmers. However, they fear that if they go this route they would lose control over quality and would almost certainly need to abandon their idea to some day specialize as organic producers. *"Everybody will some day produce tomatoes under greenhouses, so this will become a crowded market... organic production offers a very concrete way to differentiate ourselves from the rest and continue obtaining prime prices."*

Hence, the cooperative needs to decide between two different development pathways. On the one hand, they could take the large-scale option and become an important supermarket supplier of tomatoes. Alternatively, they could target the niche market of organic tomatoes and aim for a higher priced differentiated product.

The group is keen on improving their business and management skills, and so they have joined with several other EACs from Region V to establish a *Centro de Gestión* (Management Center), an organization that can provide business, management, accounting and marketing advice to small farmers' organizations in the area.

The staff of the local INDAP office feel that this cooperative is by far the best among the seven local EACs. The local head of INDAP told me that *"they are very responsible... other groups are always trying to have everything financed by INDAP, while they tend to reinvest a major share of their profits and ask only for the smallest possible loans."* Most of the people I interviewed who are familiar with the Cooperative agree that this EAC could survive even without support from INDAP or other public agencies.

While the organization maintains legally-required formal structures, decision-making is based on group meetings and a clear assignment of tasks and responsibilities to individual members. The group meets as frequently as necessary: *"before we would have a formal meeting once a month... now, each of us has a concrete assignment, so we only meet when necessary... while we waste little time in useless meetings, it is also true that we share less information; for example, I am in charge of the administration, and I do not have any obligation to inform the others on a regular basis."*

This system of decision-making is based on very deep trust among the members, perhaps the strongest among all the EACs that I studied. Such deep trust is made possible by the close family and friendship ties, by their long experience of working together and by the fact that the group is closed and very homogeneous. Often, when one of the members needs to take out a loan but has no collateral, the rest will vouch for him or her. At times, when one member is facing difficulties in meeting the payments on his or her loans, the rest help until the situation is brought under control: *"we all know that none of us will ever let the rest down. Therefore, if today I help one of my colleagues, tomorrow I will also be able to receive the support of the rest."*

11.2.2 Cooperativa We Tukucan Ltda.

This Cooperative was established in 1994 by 28 small farmers, 75% of whom are Mapuche. About seven of the members are significantly larger than the rest, providing the bulk of the produce sold by the cooperative. The cooperative also buys from non-members to fill in specific demands that cannot

be covered by the members. Its members reside in several different small towns and villages around the city of Temuco, the capital of Region IX, in the south of Chile.

All of the members have been vegetable producers for a long time. Before the formation of the cooperative, these farmers used to compete with each other in Temuco's wholesale markets. None of the members produced enough to have their own permanent post at the wholesale market. *"None of us had a permanent post at the market, and the big traders always had the best location because they were there all the time."* Each was forced to rely on middlemen, or to undertake the cost of taking their produce to the market and staying there one or two days. *"We all used to have the same problems, and for years we tried to solve them fighting against each other, with the only result that the middlemen were the only winners... this was so absurd that we were brother against brother and friends against friends, and all of that to put more money in the pockets of the middlemen."*

The first meetings were promoted by a small group of the current members of the cooperative, without any external support or stimulus. The talks went on for almost six years, and they carried on inconclusively until INDAP's policies to support EACs began to show a clear way of putting their plans and ideas into practice. INDAP rapidly became a strong supporter of this EAC. A member of INDAP who is familiar with We Tukucan told me: *"This was an emblematic EAC in this region. They were involved in the types of crops we would like to see more in small-scale agriculture, were strongly organized, and moved aggressively to create new business opportunities. We gave them all the support we could."*

When the time came, of the 90 or so initial participants, only 28 finally joined the EAC. As one of the grassroots members explained, *"when it was time to stop talking and put up \$ 63 each, then most of them just never showed up again"*.

According to the board members, their initial expectations were to increase the volume they could sell together, and thus to be able to share the costs of the marketing process: *"we could not be good traders and good producers at the same time; if you are small, it is too expensive to spend all that time trying to sell your products, especially if you don't have a permanent post at the marketplace."*

From the end of 1994, the group began implementing a large number of projects: building their warehouse and packing facilities; setting up a refrigerated storage unit; buying three delivery trucks; installing sprinkler and drip irrigation systems on all members' farms; hiring their own General Manager, sales agent, accountants, and technical advisors; buying computers to improve the efficiency of their administration; and carrying out, as a member put it, *"an infinite number of training courses"* on production, management, quality control and marketing issues.

Each member runs his or her own farm as an independent production unit. The main products are lettuce, carrots, beet, leeks, and cabbage. The cooperative coordinates production schedules to avoid too much or too little production of any one crop at a given time. It does this by asking members what they intend to produce that season, and then negotiating production levels with each farmer. The cooperative also tries to standardize the varieties of each crop in order to be able to offer a larger volume of the same product, and to differentiate themselves from other sellers.

Each farmer is responsible for taking his or her produce to the cooperative's central warehouse. The amount of produce they should bring in each day is determined by the management, and communicated to each member using two-way radios (now being replaced by mobile phones). At the warehouse, the produce is graded, packaged, labeled, and delivered to the buyers. The members are paid 15 days later, at the produce's average price over the previous two weeks, minus the value of the produce returned unsold by the supermarkets. The cooperative charges a flat 25% fee on the price paid by its clients for its services (transport, grading, packing and marketing, plus the support services such as technical assistance, accounting and so on).

What the members like most about this arrangement is, as one put it, that *"as individuals we can now forget about the marketing side, since this is taken care of by the organization. We can concentrate on producing more, and each of us has at least doubled his production levels. Besides, our clients receive*

a better service, because we have staff that are dedicated full time to working with them. If one of us at one time has only a small amount of produce, it can be still taken to the market in Temuco instead of having to sell it on the farm."

The members have to sell all their harvest through the cooperative. If this rule is violated, the member will be fined " *an amount similar to the damage caused to the organization*". It is up to the technical advisors to determine the amount sold privately by the individual. The rule has been enforced in the past, and some of the members paid the fine, while others left the organization. The capacity to enforce this key rule was weakened when the cooperative started running into liquidity problems and was unable to buy all its members' harvest. Nowadays, *"there are some cases of members who routinely purchase their inputs through the cooperative on credit, get all the services, and then go off and sell on their own."* This example underlines the two-way relationship between rules and economic performance.

By 1998 over three-quarters of We Tukucan's sales were to three supermarket chains, of which one, Santa Isabel⁶⁰, generated 51% of the total sales that year. That same year, the income from sales at the wholesale market represented 23% of total sales. The gross value of these sales reached more than half a million dollars that year, and the organization was one of, if not the largest, regional suppliers of fresh vegetables. Anyone familiar with the We Tukucan Cooperative pointed to this EAC as one of the most impressive success stories, emphasizing that it was particularly notable for 27 small farmers to have achieved such results in only four years!

And yet, as one friend has put it, at the same time *"the volcano was getting hotter"*! In December 1998 the cooperative defaulted on its loan payments. This crisis was the result of two factors, the most important being that the cooperative had become top-heavy, and that its operational and non-operational expenses had grown to the point where they could not be covered by the EAC's revenue.

The second factor was that the cooperative could not adjust to the supermarket chains' payment methods. Not only did they pay 60 or 70 days after delivery, but they also returned any unsold produce to the cooperative⁶¹. The cooperative could not transfer this payment method to its members, as they would be likely to desert the EAC and continue marketing their vegetables on their own.

It was only a matter of time before this two-pronged attack on the cooperative's finances would reach a point of no return. A key point is that the cooperative members did not know what was coming until the problem had become a crisis.

The organization reached this point through a process of successive investments justified more by the results of past experiences than by a clear and cold-headed analysis of the merits of the new projects. In 1994 and before, the group had impressed INDAP as it showed a capacity to organize a relatively large number of small farmers with very little or no external support. The group had a strong leadership, a clear diagnosis of their marketing constraints, and a well defined vision of how they could overcome them. INDAP provided the initial grants and loans, and the results were clearly positive, one could even say almost spectacular. The EAC expanded rapidly, supported by larger loans and more grants. INDAP was happy because it could use this EAC as a public showcase of its policies and their effects. The farmers were not only producing and selling more, but were also proud of their new status as one of the best EACs in the region. The results of previous investments were considered sufficient proof that this EAC could make it, and the analysis of future prospects as well as their monitoring practices, became more and more relaxed⁶². INDAP seemed to restrict its monitoring to the physical outputs of the projects: a larger warehouse, irrigation systems installed on members' farms, more trucks, more production, and so on. As far as INDAP was concerned, the members seemed

⁶⁰ A subsidiary of Royal Ahold of Netherlands, the largest food retailer in the world.

⁶¹ About 20% to 30% of the produce 'bought' by the supermarket is returned unsold to the farmers, who not only lose the income but must also incur the costs of disposing of it.

⁶² Weak monitoring practices were shown by the Cooperative Board and members, and also by INDAP. After the crisis, an analysis conducted by INDAP showed that the Cooperative had been showing a negative net revenue for at least two years, and yet INDAP continued to lend it money during that period, unaware of its poor financial position.

happy, no one was complaining, and that was that.

Little or no attention was given to the economic and financial results of these investments, much less to the sustainability of the whole process. *"We never had a method for monitoring this process, we were following the wrong indicators, we did not ask the correct questions, and we were far too short-sighted,"* says an INDAP member, adding that *"in my opinion, the same happened at the cooperative."* Another external advisor familiar with the process, puts it bluntly: *"there were two blind persons [INDAP and the cooperative] driving a very fast car."*

Those who asked questions about the wisdom of this accelerated growth were viewed suspiciously as 'technocrats' who did not trust the capacity of small farmers. One INDAP employee told me: *"they were gold nuggets that we wanted to support, and our analysis became more and more emotional; a closer look would have told us to slow down and to restrain at least the more recent loans and investments until they consolidated their previous gains."*

The almost continuous flow of fresh cash supplied by INDAP through new grants and loans financed the growing deficit. Between 1996 and 1998, INDAP loaned the cooperative \$235,000, an amount equivalent to more than two-thirds of annual sales, to which one should add \$84,000 in different subsidies in 1998 alone.

Paradoxically, the cooperative's cash flow problem was aggravated as a direct consequence of its success in penetrating the supermarket chains. To the members and to INDAP this penetration was clear proof of the EAC's great success; no-one seemed to pay attention to the fact that these outlets pay their suppliers only after 60 days or more. Eventually, the deficit became so large that not even the largesse of INDAP could sustain it, and the bubble burst.

The Board knew about the problem immediately, but the leadership did not inform the rest of the members until four months later. However, the members soon knew something was wrong when the frequency of the payments for their produce began to extend rapidly from 15 to 60 days, and when the service fee was increased from 20% to 25%. Finally the Board could not hide the information any longer and the crisis exploded in the open.

After intense recrimination and debate, the members grew calmer when it became evident that although there were severe administrative deficiencies and mistakes, no-one had stolen one cent from the organization. The members then focused together on identifying the precise problems and diagnosing the causes. One member explained that at that point *"we realized that we had made numerous mistakes in the administration of our business... none of us really knew how to manage something like this, so we left it in the hands of the managers and we did not control them"*.

Afterwards, in a series of fully attended meetings, the members defined a course of action: they cut their staff by 40%; brought their administration costs under control by lowering the fixed salaries of the hired staff and establishing payments according to results; they fired the manager and hired a new one; took a number of steps to reduce the share of the produce that was left unsold; and made an extraordinary cash contribution to increase the working capital of the cooperative. The president of the board, the prime promoter of the formation and growth of the cooperative, also resigned his position to let a new leadership guide the restructuring process, but has remained an active member with a very supportive attitude towards the new board and management.

The new manager has taken a number of measures to put the administration in order, and launched a special campaign to market the production of new non-member farmers. Through this plan, the cooperative was able to double gross sales in less than one year by bringing in about 25 new non-member suppliers.

However, the cooperative has had to stop working with the supermarkets because it could not sustain the financial cost of being paid 60 or more days after delivery. This was especially problematic given the growing importance of non-member suppliers who would not work with the EAC under those conditions. Also, members acknowledge that they are delivering a lower share of their total harvest to the cooperative, and selling more on their own. This is because the cash flow constraints mean that the

EAC often lags behind in its payments; in fact, several of the members who left the organization did so because of this problem.

According to the members, the cooperative is now being managed more tightly; they are stricter about demanding high quality and timely products from the member and non-member suppliers alike; and they are also doing better in demanding payment for the credit given by the EAC to its members when they buy agricultural inputs through the organization.

However, when I asked several of the members if they now had better and more frequent information about the organization's performance, they acknowledged they did not. While they say that it is true they should be more involved in monitoring the day to day operations of the cooperative, they still rely on a small core group of leaders because they prefer to spend their time working on their farms rather than attending meetings.

Things began to brighten a bit when the cooperative signed a contract with a British firm to export beet to the United Kingdom. After an initial test with one container, the cooperative was asked to ship six more, and there were good prospects for continuing this business in future years.

All of these measures have resulted in a substantial improvement in the EAC's operational results. After a negative net revenue of about \$80,000 in 1998, the losses in 1999 were 10 times lower. However, the debt (principal plus interest) has grown to such a magnitude that it is virtually impossible for the EAC to ever pay it back. The future of the organization depends on INDAP's decision to condone a very large part of the debt.

One of the cooperative members told me that *"during this time we often talked about throwing in the towel, handing in our assets to INDAP and forgetting about the whole thing. What kept us going was the knowledge that if we don't correct this problem, we will end up back where we started, at the hands of the middlemen. We know that there is no chance of making it as small vegetable producers if we go it alone."* Of course, this argument is particularly valid for the majority of the EAC's members, who are very small farmers. The larger farmers are also tied to the EAC because they put up their own private assets as collateral for some of the INDAP loans. Finally, a very powerful argument that underlies the whole process was made explicit during a meeting I held with nine members: *"we know that if worse comes to worse, INDAP will not foreclose on us."* In the end, only seven of the members left the organization as a result of the crisis.

11.3 Performance and impacts of vegetable marketing EACs

I now turn to describing and explaining the economic and financial performance of these two EACs, as well as their impacts on members' household and farm income.

11.3.1 Economic and financial performance of the vegetable marketing EACs

The available information shows that Cooperativa El Renacer del Cajón has achieved reasonably good economic and financial results, while We Tukucan is basically bankrupt (Table 11.1).

El Renacer del Cajón has managed to obtain substantial profits (37%) on its total revenue. This is mainly because of its low administration and marketing costs, as well as being able to keep its financial costs very low by financing members' expansion and its own assets primarily through the reinvestment of profits. However, the ratio between total assets and liabilities is close to becoming dangerous, although 85% of the liabilities are long term and thus the cooperative should be able to meet its financial commitments as long as it continues to sustain its high profits. Only 6% of the cooperative's total revenue comes from government grants, and this is used to pay part of the technical and management advisors' costs.

We Tukucan, on the other hand, had important losses because its operational expenses were significantly higher than its revenue, even after receiving a substantial amount of money from government grants. Its liabilities are significantly larger than its assets, and given the annual losses it is impossible to expect that the cooperative will be able to pay its debts. More important, the cooperative

has lost all of its operational capital, and thus will face severe difficulties in buying produce from its members or other farmers unless they agree to be paid many days after delivery. Since We Tukucan has defaulted on its loan repayments, legally all of its debts have become due and are now short term liabilities. Clearly this aggravates the EAC's financial position. Unless INDAP agrees to cancel a substantial share of the debt, We Tukucan will not be able to survive.

Table 11.1 Economic and financial performance of two vegetable marketing EACs

Item	El Renacer del Cajón 1998	We Tukucan 1998
Total revenue (\$)	79,701	535,669
Total expenses (\$)	50,574	611,930
Net result (\$)	29,127	- 70,261
Total assets (\$)	57,720	207,899
Current assets (\$)	8,367	82,562
Non-current assets (\$)	49,352	125,337
Total liabilities (\$)	38,352	260,436
Current liabilities (\$)	9,225	260,436
Non-current liabilities (\$)	29,127	0
Net assets (\$)	19,368	- 52,537
Grants from government (\$)	4,919	83,891
Net result/total revenue	0.37	- 0.14
Total liabilities/total assets	0.67	1.25
Operational capital (current assets – current liabilities) (\$)	- 858	- 177,874
Liquidity (current assets/current liabilities)	0.91	0.32
Dependency (grants/total revenue)	0.06	0.16

11.3.2 Impact on members' farms and households

Household and farm income

As shown in Table 11.2, El Renacer del Cajón cooperative members have a significantly lower average net household income than their neighbors. The opposite is true for We Tukucan. I will explain these differences later on, but note that especially in the case of El Renacer del Cajón the comparison group comprises landowners, while members own very little or no land.

Non-agricultural household income is particularly high for El Renacer del Cajón members, as each family has at least one person who is employed off-farm. The members of El Renacer del Cajón agreed that their decision to reinvest a large share of their profits in the EAC was made possible by this non-farm income. Actually, several of this cooperative's members used to be employed in the nearby cities, before going back to being farmers as a result of their project. The interviews I held with

all the members of this organization confirm that most of them have seen their annual income grow as a result of EAC participation, even those who renounced permanent jobs in the services sector.

In the case of We Tukucan, the households clearly derive all their income from agriculture. While all informed observers agree that most of these small farmers were not poor at the time the cooperative was launched, the average annual income they have achieved is clearly impressive, in particular if one remembers that most of them are very small farmers belonging to the Mapuche people, who generally are amongst the poorest and more marginalized in Chile. All the members I interviewed were convinced that, despite the crisis, their income had increased substantially as a result of EAC participation.

Table 11.2 Income and income composition, El Renacer del Cajón and We Tukucan (\$, 1999-2000 agricultural season)

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
Net hh income	10,003	16,107	29,021	11,679
Earned net hh income	9,059	9,169	23,844	10,760
Unearned net hh income	945	6,937	5,177	919
Non agricultural net income	6,302	1,693	6,606	4,457
Farm net income	4,017	8,202	21,201	9,769
Gross income for vegetables / Gross farm income (%)	96	100	90	77

Table 11.3 allows us to explore any possible causal links between EAC participation and farm and household income. These two cooperatives illustrate two different strategies: one (We Tukucan) has strived to break into a new, dynamic and seemingly more profitable market, while the other has tried to become the best and most efficient participant in a traditional market.

Compared with non-members, members of El Renacer del Cajón earn a 10 times larger gross margin per hectare for their tomatoes. I confirmed this impressive result in the field. The difference in performance is due to three facts: (a) cooperative members grow all their tomatoes in greenhouses and hence their yields are four times larger than the average for open-field tomatoes; (b) greenhouses allow them to harvest earlier and attain better prices; and (c) since they are marketing almost all of their production directly, rather than depending on middlemen, they receive almost double the price compared with their control group. Ultimately, cooperative members get about the same total gross margins as non-members on an average of 1,800 m² of land per member. Non-members need 10 times more land to get the same result.

The story is different for We Tukucan. The cooperative's main impact has been to allow its members to increase their income from vegetables by expanding the area under those crops. In fact, on a per hectare basis non-members do better than members. While members' yields are significantly higher than non-members, they cannot capture the full effect of this advantage because they end up getting about the same net price for their products.

Why is this so? Remember that the members of We Tukucan are selling about three quarters of their produce to different supermarket chains, and that these outlets force them to 'buy back' unsold produce; usually around 20% to 30% of the produce sold. On top of that, the cooperative charges members a 25% fee for their services.⁶³ That is, the net price paid to the farmer per kilo delivered to the supermarket is around 50% lower than the gross price paid by the supermarket per kilo effectively

⁶³ The supermarket chains also discount other costs, or force their suppliers to absorb them directly, such as the cost of promotions, shelf space, staff salaries, and so on. In the case of We Tukucan, several of these costs are included in the 25% service fee charged by the EAC.

sold.

Table 11.3 Average economic results of vegetable production, El Renacer del Cajón and We Tukucan (1999-2000 agricultural season)

	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
Gross income (\$)	10,406	14,138	28,181	110,351
Direct expenses (\$)	2,544	6,802	8,230	1,783
Gross margin (\$)	7,862	7,336	19,951	9,252
Gross margin per hectare (\$/ha)	42,885	4,009	3,772	6,294
Price tomato (\$/kg)	0,42	0,22	n.a.	n.a.
Price beet (\$/kg)	n.a.	n.a.	0.13	0.10
Price lettuce (\$/kg)	n.a.	n.a.	0.17	0.17
Price carrot (\$/kg)	n.a.	n.a.	0.02	0.02
Yield tomato (ton/ha)	135	35	n.a.	n.a.
Yield beets (ton/ha)	n.a.	n.a.	71	12
Yield lettuce (ton/ha)	n.a.	n.a.	54	47
Yield carrot (ton/ha)	n.a.	n.a.	20	13
Crop area (ha)	0.18	1.83	5.29	1.47
Production sold (%)	100	100	77	72
Production sold on farm (%)	19	100	3	5

Experts interviewed agreed that farmers are usually paid around 30% to 50% higher prices per kilo effectively sold by the supermarket, than the wholesale market. If we assume that the 20% to 30% return rate of unsold produce is more or less standard for high quality fresh vegetables such as lettuce, leeks or cabbage, then the service fee charged by the cooperative to its members would have to be below 10% for there to be any net gain from selling to the supermarkets. Anything above that means that a farmer is probably better off selling in the old way.

And to this we should add the financial costs of the supermarkets' payments 60 or 70 days after delivery⁶⁴, which is an extremely long period if we consider that many of these vegetable crops have a 75 to 100 day cycle. Therefore, the supermarket's method of payment increases the required working capital of a farmer by two-thirds. We Tukucan absorbed this huge cost by paying its members after 15 days, even if the supermarket paid after 60 or 70. The alternative, transferring this cost to the members, was not an option as it would have meant that most, if not all, would have started selling their produce elsewhere. The EAC's attempt to absorb these costs was one of the main causes of its financial collapse, as it meant keeping a supply of working capital at least four times larger than if it paid its members once the supermarket had paid.

⁶⁴ At the time of writing this chapter, several major supermarket chains announced that they would extend this period to 150 days in case the government enacted a proposed law to make them pay Value Added Tax on time. That is, they would make the suppliers shoulder the cost of paying their taxes on time.

The lesson seems to be that small vegetable farmers should be extremely careful when trying to access the supermarket chains. Unless they have deep enough pockets to withstand the predatory payment methods of supermarkets, and unless their volumes are so high that they can keep the per unit costs of marketing and administration very low, then they are probably better off sticking to the wholesale markets. The ways in which supermarkets operate create very large barriers for small farmers, even if they are well organized as in the We Tukucan case.

Access to technical assistance and credit

Virtually all vegetable farmers, organized or not, have access to one or more forms of technical assistance. All EAC members have access to their own advisors hired with the aid of INDAP's grants (Table 11.4). Moreover, most of these farmers also receive support from private advisors usually employed by the commercial agricultural inputs and supply firms.

Table 11.4. Access to technical assistance services, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
	Yes %	Yes %	Yes %	Yes %
Tech. assistance from EAC	75	0	100	0
Tech. assistance from government	100	57	100	100
Tech. assistance from local gov't	0	0	100	100
Tech. assistance from university	0	0	0	0
Tech. assistance from NGO	0	0	0	0
Tech. assistance from private firm	0	0	0	0
Tech. assistance from other org.	0	0	0	0
Tech. assistance from private advisor	67	71	100	100

All these farmers also have access to loans from different sources. Notably, in the case of the EAC members, almost all the loans come from INDAP, whilst non-members work with INDAP *and* other providers of financial services, such as the State Bank and private banks (Table 11.5). Non-members presumably use these other sources because the amounts they can get from INDAP are four to five times lower than the amounts lent to the EAC members.

An interesting finding is that the average debt of El Renacer del Cajón's members is three times smaller than We Tukucan members, despite the fact that greenhouse vegetable production is more capital intensive than traditional cropping systems. This may be because El Renacer del Cajón's policy of financing growth largely through the reinvestment of profits is also followed by individual members on their own farms; in turn, this practice is made possible by their significant access to non-farm income.

Table 11.5. Access to credit, El Renacer del Cajón and We Tukucan (\$, 1999-2000 agricultural season)

INDICATORS	EL RENACER DEL CAJÓN				WE TUKUCAN			
	Parts.		Non-parts.		Parts.		Non-parts.	
	Nº	\$	Nº	\$	Nº	\$	Nº	\$
Total loans	2	2,031	6	460	8	5,991	4	1,713
Short term loans	1	908	1	631	8	3,337	4	1,188
Long term loans	1	3,153	6	4,499	5	4,247	1	2,102
INDAP loans	2	2,031	6	450	5	6,139	4	1,713
State bank loans	0	0	0	0	2	3,153	0	0
Private banks loans	0	0	0	0	0	0	1	4,265
EAC loans	0	0	0	0	0	0	1	210
Commercial loans	0	0	1	631	0	0	0	0
Personal loans	0	0	0	0	0	0	1	4,205

Technology adoption

As in most of the other case studies, the members of these two EACs are more advanced than their non-organized neighbors in their adoption of certain production practices and technologies.

Table 11.6. Technological changes implemented in past five years, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
	Yes %	Yes %	Yes %	Yes %
Crop diversification	100	71	70	44
Contract agriculture	50	14	70	11
Marketing of inputs and products	50	29	80	33
Irrigation and drainage	100	86	90	56
Machinery and equipment	100	100	100	78
Buildings and infrastructure	75	71	60	33
Crop varieties and seed quality	75	86	100	100
Use of fertilizers	75	86	90	78
Weed control	75	71	100	89
Insect and disease control	75	86	80	89

In the case of El Renacer del Cajón, the differences are particularly striking for market-oriented technologies or practices, such as crop diversification (all the members had begun producing bell peppers, cucumbers and other vegetables, as opposed to the neighbors who only produce tomatoes),

experimenting with contract agriculture, and changing the marketing of products or inputs. Members told me they had hired an expert on farm management and marketing, as they felt this was where they needed to focus their energy, having solved all the main technical problems of production (Table 11.6).

The same is true of We Tukucan members, who have been quicker than their neighbors to adopt various farm improvements such as sprinkler and drip irrigation, machinery and equipment, and buildings and infrastructure (Table 11.6).

These differences between members and non-members also extend to farm management. We Tukucan members are clearly ahead of the non-members in having legally registered themselves as farmers, maintaining accounting systems and filing for Value Added Tax payments and credits, keeping farm costs and income records, or holding bank accounts (Table 11.7). The differences are less striking in the case of El Renacer del Cajón, because in the Quillota area farmers have worked in a more 'entrepreneurial environment' for many years (Table 11.7).

Table 11.7 Farm management practices, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
	Yes %	Yes %	Yes %	Yes %
Legally registered farmers for fiscal purposes	100	100	100	33
VAT accounting and filing	100	100	100	33
Costs and income records	100	43	70	22
Holds a bank account	20	0	30	0
Legalized land titles	100	100	44	57
Legalized water titles	100	100	13	0

11.4 Explaining the performance differences

In this section I explore the relationship between the performance of these two EACs and of the members versus the non-members, and the different characteristics of the individuals, households, and organizations.

11.4.1 Farmers' assets

Household characteristics

In both cases, EAC members are younger and better educated than non-members. In the case of El Renacer del Cajón, members' households are also significantly smaller than those of the non-members.

The better education levels among members are true for most categories; younger children and older persons, as well as males and females. The differences are very important; for example, members aged 31 to 45, the heads of households and their spouses, on average have twice or more years of education than non-members (Table 11.8).

Table 11.8 Household composition, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
Members of household	3	4.3	4.6	4.6
Female members	1.4	1.9	2.2	2.2
Male members	1.6	2.4	2.4	2.3
Members 0-12 yrs.	0.4	0.9	1.9	0.6
Members 13-18 yrs.	0	0.4	0.4	0.8
Members 19-30 yrs.	0.2	1.3	0.4	0.9
Members 31-45 yrs.	1.6	0.7	1.2	1.1
Members 46-65 yrs.	0.4	0.9	0.7	0.9
Members 66+ yrs.	0.4	0.1	0	0.3
Schooling members 7 yrs or +	9.1	6.8	8.6	7.8
Schooling members 15 yrs or +	9.1	6.8	11	8.1
Schooling members 19-30 yrs or +	1.4	5.5	2.6	7.1
Schooling members 31-45 yrs or +	10.2	3.6	9.3	5.7
Schooling members 46-65 yrs or +	2.8	2.1	4.9	2.8
Schooling members 66 yrs or +	0	0.9	0	1.3
Schooling of head of hh	8.8	4.4	10.4	5.2
Schooling of spouse	9.4	5	10.1	5
Schooling of sons/daughters	3	5.4	4.3	8.8
Schooling of other members hh	0.8	2.7	0.5	3.4
Schooling female members hh	8.6	6.5	8.6	6.8
Schooling male members hh	8.4	4.7	7.7	6.7
Age of head of hh	44.2	50.3	42.9	56.3
Age of spouse	37.4	41.4	36.7	43.1
Age of sons/daughters	9.6	11.4	9.2	23
Dependency ratio	0.3	0.3	0.9	0.4

Physical and financial assets

On average EAC members own less land than non-members. However, We Tukucan members addressed this situation by renting as much land as they own, so that they end up managing more land than non-members. Of great importance is the fact that We Tukucán members have a significantly larger area under irrigation compared to non-members; this is a great advantage in Region IX, where irrigation is not widespread. El Renacer del Cajón members also have access to additional land through different contractual arrangements, although they still end up with an average of less than two hectares of land per member, of which less than 50% is irrigated⁶⁵ (Table 11.9).

⁶⁵ Only irrigated land is suitable for vegetable production in Region V, but not in Region IX with its much higher rainfall and lower evapotranspiration levels.

Table 11.9 Land assets, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
Land owned by hh (ha)	0.38	2.22	5.34	6.68
Land taken by hh, shareholding (ha)	0	0	0.50	0.88
Land taken by hh, rental (ha)	0.03	0.78	5.25	1.33
Land taken by hh, other contracts	1.37	0	1	1.27
Land let by hh, shareholding (ha)	0	0	0.02	0.22
Land let by hh, rental (ha)	0	0	0	0
Land let by hh, other contracts (ha)	0	0	0	0.11
Land under management by hh (ha)	1.79	3	12.07	9.84
Irrigated land under mngt by hh (ha)	0.74	1.81	5.97	1.72
Irrigated land owned by hh (ha)	0.67	2.07	4	4.57

The total value of We Tukucan members' capital assets is twice as high as their control group. The members are wealthier in all the categories included in the survey: buildings and infrastructure, land, machinery and equipment and livestock. The interviews and workshops revealed that, with the exception of land, many of these assets were acquired as a direct result of the EAC's skill in capturing different grants, subsidies and loans for their members. In fact, several We Tukucan board members told me that one of their main roles was to make sure that their members could benefit from the many different programs made available by INDAP, CORFO, FOSIS and other public agencies (Table 11.10).

Table 11.10 Fixed and quasi-fixed assets, El Renacer del Cajón and We Tukucan (\$)

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
Value of buildings and infrastructure	13,866	21,763	14,733	11,249
Value of machinery and equipment	76,295	10,312	20,411	3,813
Value of land owned by hh	18,794	103,168	82,795	40,862
Value of livestock	3,771	910	2,649	1,568
Total value of physical assets	112,727	136,155	120,060	57,322

El Renacer del Cajón members are wealthier than non-members in machinery, equipment (mainly irrigation), and livestock, but lag behind in the value of land, buildings and infrastructure, as well as in the total value of all these different assets. Machinery and equipment make up two thirds of the total value of members' assets, and there is no doubt that their acquisition has been possible through the EAC's activities and projects (Table 11.10).

In short, these two EACs have been very effective in helping their members acquire significant amounts of capital, through their organized participation in different development projects and programs. Their perception by public agents as successful and dynamic EACs has given them privileged access to many different kinds of public support.

11.4.2 Social capital

As in the previous case studies, I will discuss the role of social capital in terms of participation in rural organizations, social norms that foster cooperation, systems of rules within the EACs, and the EACs' participation in wider networks.

Participation in community and economic organizations

These EAC members tend to participate more than non-members in other rural organizations. This is true for both economic and community organizations. Moreover, a significant proportion of the EAC members hold leadership positions in these rural organizations (Table 11.11).

Table 11.11 Participation in development projects and organizations, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN		WE TUKUCAN	
	Parts.	Non-parts.	Parts.	Non-parts.
	Yes %	Yes %	Yes %	Yes %
Organizations or projects with economic objectives				
Irrigation or drainage	100	29	100	44
Marketing of products or purchasing of inputs	60	14	90	22
Soil conservation and pasture improvement	0	0	0	11
Storage of products	20	0	60	11
Youth	0	0	0	0
Women	0	0	30	22
Trade Association	0	0	30	22
Cooperative	100	0	100	11
Held leadership position in any of the above	20	14	50	33
Organizations or projects with social development objectives				
Neighborhood committee	40	100	40	11
Sports, culture and recreation	40	29	40	22
Housing or local improvement	40	14	30	11

El Renacer del Cajón members are extremely positive about the costs and benefits of participating in EACs. Most, if not all, members agreed that participation had brought many specific benefits. Perceived economic benefits included improved household income, higher production, agricultural diversification, and improved marketing, whilst social benefits comprised better quality of life for the family as a whole and for women and youth in particular, better relations with their neighbors and with government agencies, etc. Few, if any, members cited reduced production costs as a benefit of membership. Nearly all agreed that the main costs were indebtedness, exposing their farms to greater risks, and having to pay membership fees (Table 11.12).

Table 11.12 Perception of costs and benefits of EAC participation, El Renacer del Cajón and We Tukucan

INDICATORS	EL RENACER DEL CAJÓN				WE TUKUCAN			
	Participants		Non-participants		Participants		Non-participants	
	Not True %	True	Not True %	True	Not True %	True	Not True %	True
Benefits								
Improved household income	0	100	20	80	10	70	0	50
Improved yield and production	0	100	20	80	20	80	0	50
New crops and livestock	0	100	20	80	20	70	50	50
Improved marketing of inputs and products	20	60	40	60	200	60	25	75
Improved prices of products	20	40	40	40	70.	0	25	50
Lowered production costs	80	20	50	25	30	40	50	25
Farm improvements	20	80	20	80	20	80	50	50
Improved quality of life for family	0	100	20	80	30	50	0	25
Improved quality of life for women	0	100	20	80	30	50	0	100
Improved quality of life for youth	0	80	20	80	25	62.5	0	100
Optimistic view of the future	0	100	20	80	10	80	25	75
Improved relations with government agencies	0	60	40	60	20	70	25	50
Improved relations with municipal government	40	40	40	60	40	40	0	75
Improved relations with neighbors	0	40	25	75	10	80	0	100
Doing better as small farmers	0	100	20	80	20	60	0	50
Costs								
Incurring debts	0	100	0	100	0	100	0	100
Membership fees	0	100	0	100	10	90	0	100
Greater risks in agriculture	40	60	40	20	20	70	0	100
Loss of time in meetings	40	40	60	20	20	80	25	50
Share of product prices taken by org.	100	0	66.7	33.3	0	100	25	50
Worsened relationships with neighbors	100	0	100	0	90	10	75	25
Some taking advantage of others	40	40	40	40	22.2	77.8	25	50
Less trust in the future	100	0	80	20	80	10	75	25

A very interesting finding is that the El Cajón control group has an equally positive view of membership benefits. Perhaps this is why many said they would like to become members of the cooperative, but accused the old members of being "selfish" by keeping membership closed.

We Tukucan members are also positive about the benefits of membership. Most agree that the economic benefits are higher incomes, improved yields and production, diversification into new crops,

improved marketing and farm improvements. Hardly anyone cited improved prices as a benefit of EAC participation, confirming the results given in the section above on household and farm impacts. In terms of the costs of participation, We Tukucan members cite costs familiar in all the other case studies: higher debts, higher risks and having to pay membership fees. However, they also include time lost to meetings, net prices being reduced because of the share taken by the EAC, and "*some members take advantage of the rest*" (Table 11.12).

The We Tukucan control group identified fewer benefits of participation, and discarded most of the economic benefits apart from improved marketing. The benefits they recognize are social: better quality of life for women and the youth and better relations with their neighbors and with the municipal government. On the side of the costs, they agree with members about debts, risks and membership fees, but do not realize (as the members do) that EAC participation can lead to the organization taking a share of the product prices, losing time in meetings or to some members taking advantage of others. In short, they appear to be less aware of certain benefits but also of some of the costs identified by the members (Table 11.12).

Norms that foster cooperation

Compared with non-members, El Renacer del Cajón members are more trusting of other people. Nearly all non-members interviewed felt that you cannot trust most people, that most individuals only care about themselves, and that given the opportunity, most people would take advantage of others. EAC members disagree with this view, tending to think that you can trust most people and that organizations benefit the majority of their members. Cooperative members also think that rural organizations are always or almost always beneficial, that participating in these organizations has been good for them and their families, that they are doing better as small farmers than 10 years ago, and that 10 years from now they will be doing even better (Table 11.13).

In the case of We Tukucan, the control group was also more negative when it comes to trusting others: they think that you cannot trust most people, that individuals only care about themselves, and that rural organizations only benefit a few of the members. The members are split almost 50/50 on these questions, with about half answering along the same lines as the non-members. This split is probably the result of We Tukucan's ongoing crisis. I perceived during meetings with members that there were clearly two groups: (a) those who were active in the EAC until the crisis were still optimistic and committed to finding a solution, while (b) those who were less active before were more negative about the events leading to the crisis, blaming the leadership and the other members, and thinking that things were unlikely to change (Table 11.13).

Networks

The El Renacer del Cajón cooperative is clearly embedded in one rural community. The parents of the current members lived through the agrarian reform together, fought against the *latifundistas*, and together suffered repression and persecution during the military regime. They all belong to the same community organizations. Before forming their cooperative, the members had obtained much experience of collective action together, having carried out many common economic, social, cultural and political activities and projects. The cooperative is one more step in a longer social process at the local level.

Table 11.13 Trust, cooperation, reciprocity and view of the future, El Renacer del Cajón and We Tukucan

QUESTION	EL RENACER DEL CAJÓN				WE TUKUCAN			
	Participants		Non-participants		Participants		Non-participants	
Ease of organizing with neighbors, compared to 10 years ago	More difficult %	Easier %	More difficult %	Easier %	More difficult %	Easier %	More difficult %	Easier %
	0	100	57.1	28.6	0	80	33.3	66.7
Household's degree of participation in org. compared to neighbors	Less %	More %	Less %	More %	Less %	More %	Less %	More %
	20	60	28.6	14.3	20	50	44.4	22.2
Community and farmers' organizations are useful	Never or almost never %	Always or almost always %	Never or almost never %	Always or almost always %	Never or almost never %	Always or almost always %	Never or almost never %	Always or almost always %
	0	100	0	100	10	80	22.2	55.6
For you and your family, participation in org. is...	Waste of time %	Beneficial %	Waste of time %	Beneficial %	Waste of time %	Beneficial %	Waste of time %	Beneficial %
	0	100	0	71.4	0	80	0	66.7
Farmers' and community organizations benefit...	Only a few or none %	The majority %	Only a few or none %	The majority %	Only a few or none %	The majority %	Only a few or none %	The majority %
	40	60	42.9	42.9	50	50	55.6	33.3
Can you trust most people?	No %	Yes %	No %	Yes %	No %	Yes %	No %	Yes %
	40	60	71.4	28.6	50	50	66.7	22.2
Most people...	Only care for themselves %	Try to help others %	Only care for themselves %	Try to help others %	Only care for themselves %	Try to help others %	Only care for themselves %	Try to help others %
	60	40	85.7	14.3	50	50	77.8	22.2
Most people...	Take advantage of the rest %	Try to be fair %	Take advantage of the rest %	Try to be fair %	Take advantage of the rest %	Try to be fair %	Take advantage of the rest %	Try to be fair %
	40	20	57.1	28.6	40	40	33.3	44.4
Has your situation as small farmers compared to 10 years ago...	Worsened %	Improved %	Worsened %	Improved %	Worsened %	Improved %	Worsened %	Improved %
	0	100	42.9	57.1	20	70	22.2	33.3
In the next 10 years, will your situation as small farmers...	Worsen %	Improve %	Worsen %	Improve %	Worsen %	Improve %	Worsen %	Improve %
	20	80	14.3	57.1	0	70	0	88.9

In the case of We Tukucan, the members belong to a number of different communities dispersed over a relatively large area around the city of Temuco; their social interaction is largely limited to this EAC. Because of this, cooperative members had no prior experience whatsoever of working together, either for economic or non-economic objectives. The cooperative is the result, not of a previous history of

collective action, but of the inspirational leadership of a few individuals. This origin is reflected in the cooperative's management style whereby a small number of founder members took charge with little active participation by the majority.

We Tukucan decided to make supermarkets their main market. This relationship gives little bargaining power to members; the EAC can basically 'take it or leave it' when it comes to the supermarkets' imposed demands and requirements. As the supermarkets themselves are engaged in fierce competition with each other, their rules and conditions are extremely difficult for small farmers to meet, and leave the EAC very little room for maneuver. While perhaps five or six of the members of We Tukucan could have survived under these conditions, most of the rest, being very small farmers, could not; thus, heterogeneity of the EAC introduced further degrees of rigidity into their decision-making process. What is perhaps more important is that the EAC engaged in this difficult and demanding relationship without sufficient preparation.

In contrast, El Renacer del Cajón has remained in the much more flexible and impersonal traditional fresh vegetable market. They can shift clients at will and from one day to the next, based on results of previous engagements or on the conditions offered by the many potential buyers. While they often think about accessing the supermarkets, they have always felt that before they get there they have to be on much more solid economic, financial and technological ground. They do not want just to sell tomatoes to the supermarkets; they want to enter that market when they can offer organic tomatoes, when they have control over the necessary volume of produce with uniform quality, and when they have accumulated enough working capital to be able to survive the supermarkets' financial conditions.

When I asked the members of El Renacer del Cajón to explain why they are so cautious, their answer surprised me: *"because of the honey bees!"*. They explained how they had tried to rapidly increase the number of hives, and that when faced with the first serious threat (a new disease), they just did not have enough knowledge and experience to know how to react (*"we were completely dependent on others, and it turned out they did not know either what has happening"*), nor the financial strength to sustain the losses. The project collapsed overnight. As the woman who heads this EAC told me, *"we produce tomatoes, but always keep thinking about the bees when sometimes we feel the urge to move ahead more rapidly... if we want to be pequeños empresarios [small business entrepreneurs], we have to think long term, and this means to be willing to sacrifice short term benefits in order to make sure that you are building on very firm foundations."*

Both organizations base their relationship with INDAP and other public agencies on the fact that they are widely seen as successful EACs (until 1998 in the case of We Tukucan). As such, they had greater leverage than most economic organizations to extract greater benefits from the many public programs designed for small-scale agricultural development and the promotion of EACs. We Tukucan played this card to the full, launching on a very rapid expansion process fuelled by public funds, and paying very little attention to the need to consolidate previous gains before moving ahead again. El Renacer del Cajón was much more careful; although they clearly had the option to take out more and larger loans (for example, to buy and sell produce from other farmers), they have based their expansion largely on the reinvestment of their own profits.

System of rules

Table 11.14 (adapted from Ostrom, 1990 - see Chapter 2, Section 2.5) summarizes the system of rules governing these EACs. These EACs have two completely different systems of rules.

El Renacer del Cajón relies on a system based on:

- the very active and detailed involvement of all members in all important decisions affecting the EAC, so that all rules have a very high degree of consensus and legitimacy;
- every member having almost daily access to extremely detailed information concerning not only the activities of the EAC itself, but also of each member, with the result that there are few if any opportunities for anyone to free ride or take advantage of the rest;

- the very close relationship of trust, friendship and reciprocity among all the members, imposing great peer pressure on each person to conform to the agreements and commitments.

The result of such legitimate rules, close monitoring, and strong norms fostering cooperation, is that this organization is run on the basis of what Ostrom (1999), following Levi (1988), calls "*quasi voluntary compliance*"; while the members could in theory cheat and free ride, they do not because they would certainly be caught almost immediately, and the cost of such action could be extremely high both in economic, social and personal terms. From the point of view of its internal institutional performance, this cooperative is by far the most robust of all those I studied.

We Tukucan is a different story. It is run by a very small group of members and hired managers, while most members remain passive. This system worked well while things were going smoothly; the leadership enjoyed the legitimacy afforded by good results and concrete and frequent achievements that clearly benefited most members. However, it also meant that the EAC was completely unable to monitor and learn about those results that were not immediately obvious, and to take corrective action in time. The consequence was a crisis threatening the organization's survival. The EAC lacked what could be called 'institutional know-how', i.e., a set of internalized or embedded organizational practices, traditions, rules and norms to guide decision-making when the going got rough. Consequently, the organization has been incapable of taking full control of its problems, and has been forced to rely on short term decisions imposed by external agents. It does not have the institutional strength to devise and put into action any sort of long term plan to correct its fundamental problems.

Table 11.14 El Renacer del Cajón and We Tukucan's rules (based on Ostrom, 1990)

RULES	El Renacer del Cajón	We Tukucan
Clearly defined boundaries	Membership is clearly defined. The EAC deals with non-member small farmers from whom it buys produce, strictly on a client basis. All benefits are completely restricted to the members.	Membership is clearly defined. However, with the financial crisis the EAC has been forced to blur its boundaries by offering non-member suppliers a number of benefits which are identical to those received by the members.
Low cost systems for monitoring compliance	Given the very close contact between all the members, they are almost fully aware on a daily basis of what is happening in the production and marketing side. All the members are informed in detail of all the organization's debts and other commitments, as well as of each individual member. Given this intimate knowledge of what is happening in all the relevant areas, it is highly unlikely that any one member could free ride. All the members comply with the rules required to achieve the EAC's main objectives (e.g., assuring uniform quality and a well thought-out production schedule)	Before and after the crisis, most members had little or no information about the EAC's performance or future plans. They trusted that the board members knew what they were doing and would inform them if necessary. In turn, most of the board members lacked the technical know-how to effectively monitor the performance of their EAC on the basis of the information that should be made available by management. Although the EAC has written bylaws that define a number of benefits and obligations, after the financial crisis the EAC has less power to enforce many of the most important ones, such as the obligation to sell produce through the EAC. This has resulted in many of the farmers selling a larger share of their harvest on their own.
Congruence between appropriation and provision rules, and market conditions	The relationship between provision and appropriation is regulated by a careful separation of activities and responsibilities between the individuals and the EAC itself. Each individual is	Given the heterogeneity in size, production capacity and socioeconomic status among the members, the smaller and poorer members end up making a relatively larger effort to meet certain

RULES	El Renacer del Cajón	We Tukucan
	responsible for his or her own production units and must meet the quality standards agreed upon by all. Each individual has well defined responsibilities in the EAC (marketing, administration, production technologies, relations with clients, and so on).	expenses of the EAC. Also, the system of payment used by the EAC (average net price received in a 15-day period, after discounting the cost of unsold produce) punishes those who can deliver higher quality produce. The appropriation rules followed by the EAC until the crisis (paying the members after 15 days), was not congruent with the conditions of their major client (supermarkets who pay after 60 or more days), and the EAC lacked the resources to fill in the gap on a sustainable basis.
Graduated sanctions for non-compliance with rules	Given the extremely detailed information available to all members about the different aspects of the EAC, the members can usually react almost immediately to any sign of non-compliance. Until now peer pressure has been sufficient to force members to correct their behavior when they have not complied with their obligations or commitments.	While the members are fully aware of who is or is not complying with some of the most important rules, the EAC does not impose sanctions until the infractions are very serious. In those cases, some members have preferred to leave the EAC. The weakened financial position of the EAC has affected its capacity to enforce sanctions as it cannot afford more members leaving the organization.
Participation of members in defining and changing rules	All the members are intimately involved in all significant decisions. Rules are changed routinely to meet changing conditions.	A small group of members shoulders most of the work involved in running the EAC. The majority of members are very passive in the decision-making process. The members formally approved the EAC's bylaws, but the <i>de facto</i> rules are decided by management or by those few members who are most involved in management.
Low cost mechanisms for solving conflicts	Given the detailed information that all members have concerning all aspects of the EAC and of each of the members' work, this organization is characterized by what Ostrom (1999) following Levi (1988) calls " <i>quasi-voluntary compliance</i> ".	The 1998 crisis shows that this EAC lacked low cost mechanisms for solving conflicts, since nothing was done until the problem exploded with all the consequences that have been described above.
External authorities respect the right of the members to establish their own rules	The members take a very strong position of not allowing INDAP or any other authority to become involved in their decision-making. On many occasions they have rejected offers of external support when they feel they could undermine their independence.	Before the financial crisis of 1998, INDAP usually respected the right of the EAC to run its own affairs. After the crisis, INDAP has taken a much more active role in many of the fundamental decisions of the organization.