

LEARNING TO BEAT COCHRANE'S TREADMILL

Public policy, markets and social learning in Chile's small scale agriculture

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ABSTRACT

An analysis of the small farming development strategy followed in Chile since the early 1990's, shows that in the context of increasingly liberalized economies open to international competition, the success and sustainability of local development initiatives depends on the interaction between market characteristics and signals, reformist public policies, and the approaches used to facilitate social learning and adaptive management. Market-oriented collective action by small farmers has a role to play only when it is directed at overcoming high transaction costs which impose insurmountable constraints to individual farmers acting alone, but fails –regardless of the quality of the facilitation approaches- due to pervasive free riding when small farmers are simply attempting to improve their position in the marketing of undifferentiated commodities in the spot and wholesale markets. On the other hand, even when market conditions are favorable to collective action, social learning and adaptive management are essential to build specific social assets that are required to achieve economic efficiency and competitiveness. Such social assets include multi-stakeholder networks across the public-private divide, embeddedness of market-oriented farmers' organizations in rural communities, and effective systems of rules that structure decision-making within farmers' organizations. The bottom line is that in the context of increasingly liberalized economies open to international competition, a more systematic and substantial dialogue is needed to close the communication gap between those who espouse social learning and adaptive management perspectives, and those who follow market and business approaches.

INTRODUCTION

In his book *Regenerating Agriculture. Policies and practices for sustainability and self-reliance*, J. N. Pretty explains that “most successes are still only small scale... only a few thousand communities throughout the world have benefited” from initiatives aimed at achieving a more sustainable agriculture (1995, p. 239). It is true – as Pretty (1998) argues elsewhere – that mainstream policies that do not reflect the long term social and economic costs of resource use, act as powerful disincentives to change towards more sustainable forms of rural activities. However, I would like to argue that the ‘upscaling problem’ is also often due to the lack of linkage between markets and rural development initiatives. To put it bluntly, in the prevailing institutional environment that characterizes most developing countries, market competitiveness has become a prime determinant of the sustainability of farm-based livelihood strategies (Berdegue and Escobar, 1997).

It is also true that uncertainty, unpredictability and complexity are inherent characteristics of that same institutional context. The notions of ‘social learning’ and ‘adaptive management’ gain their significance because “it is impossible to control all the feedback loops. The environment is inherently unknowable and continuously changing” (Röling and Jiggins, 1998, p. 289). Effective action in complex environments requires the capacity to control, adapt, learn, innovate and reflexively manage cognitive systems (Röling, 2000). Probing and monitoring; communication, negotiation and concerted action involving numerous stakeholders; flexibility and opportunity of response... these are new attributes of any development initiative that aspires to have meaningful and lasting effects.

A point which is often missed is that the need for *both* attributes of farm-based development initiatives (competitiveness and adaptive management), is largely determined by the *same* set of processes and institutional changes – increasingly global in reach. And yet, in the theoretical debate and the practical work of development agencies, the proponents of market and business approaches, and those who adhere to a social learning

and adaptive management perspective, are like two ships passing in the night¹: each considers the other to be operating in a separate domain, even irrelevant or politically incorrect.

The result is lack of dialogue between these two perspectives, that in turn leads to a less rich perception and interpretation of the issues at hand (i.e., how can small farmers succeed in the post-liberalization rural economy?), that in turn impedes a shared formulation of goals and means, that in turn results in lack of concerted action, when not conflict, between those who adhere to each of these perspectives.

From the point of view of the small farmer, the consequences are significant, for this cycle creates or deepens a divide between economic and agricultural public policy-makers, business managers along the value chains that for good or for bad are of strategic importance to small farmers in the new rural economy, civil society organizations engaged in the promotion of rural development and poverty reduction, and the rural communities and the farmers themselves. I don't think it is necessary to have to demonstrate that dialogue and concerted action between these four large groups of stakeholders, is a critically important prerequisite for the development of small scale farming in the post-liberalization rural economy.

In this article I will discuss the opportunities for sustainable and more inclusive development that can be created by a greater degree of dialogue between both these views. I will use the case of Chile in the 1990s to illustrate how social learning and adaptive management in small-scale farming development initiatives can be stimulated by market-oriented policies, and how social learning and adaptive management are indispensable for such market-oriented policies to bear fruit. The Chilean case will further illustrate how the lack of correspondence between both conditions, generally leads to the failure of the specific development initiatives affected by such dissonance.

¹ I am in debt to Prof. T. Reardon, Michigan State University, for this metaphor.

POLICY CONTEXT

Since the mid-70's Chilean agriculture underwent a process of rapid and significant change, hand in hand with the liberalization of the economy and the privatization or outright disbanding of most agricultural support and protection policies and programs. The shock policies implemented by the military dictatorship predated the Structural Adjustment Programs that ten years later would be imposed on all Latin American countries after the terminal crisis of the import substitution economic model that had been followed for the past four decades. Under these policies, the value of non-traditional agricultural exports (mainly off-season temperate fresh fruits, forest products, wine, and processed horticultural products) grew by between 300% and 600% since the mid-80's, while the acreage of traditional food staples destined for the domestic market declined by one-third in the same period, in response to a drop in real prices of between 28% and 50%, depending on the product.

At the same time, the repression by the military of all forms of political and social dissent, assured the silence of the small and medium farmers who suffered the costs of these transformations. It has been estimated that more than half of the small farmers who had benefited under the Agrarian Reform (1964-1973) lost their land (Echenique and Rolando, 1991).

When democratic rule was reestablished in 1990, a strong debate began to take place within the new administration, regarding the strategic direction of public policies in support of small scale farming. The key question was how public policy could more effectively support small scale farming within the context of a liberalized economy open to international competition. Should these policies follow a more conventional orientation and emphasize the role of peasant farming systems in the traditional agrarian systems producing commodities destined for the domestic market? Or should these policies promote the 'reconversion' of peasant agriculture away from traditional commodities and into new value-adding chains structured around non-traditional products, destined for the international markets?

If the former route was chosen, the instruments of public policy would be well known: the strength and viability of small farmers within agrarian systems producing undifferentiated commodities, in the context of a liberalized economy open to international competition, would depend on them being world leaders in the unending process of productivity-enhancing technological innovation. This option implied that peasant farmers could jump onto the agricultural treadmill described by W. Cochrane (1958), and beat the system.

Cochrane's theory proposes that when a very large number of farmers all produce the same undifferentiated commodity, all of them operate as price takers. The going price is defined by the law of supply and demand, and supply in turn is a function of the average productivity of all farmers engaged in that market. Only those few farmers who are early adopters of productivity-enhancing technologies, can make a windfall profit against the going price, which still responds to the old technologies prevailing in most farms. Eventually, most farmers (or those responsible for the bulk of production) will adopt the new technologies, and the prices will fall given the higher average productivity. The cycle starts again and again as new technologies reach the market. Those farmers who lag behind in the continuous adoption of new technologies are unable to compete and are eventually forced out of the market, while resources are concentrated in the hands of the few who consistently lead the race.

Proponents of the alternative of 'reconverting' small scale farming argued that Chilean peasants could not be expected to emerge as winners in this agricultural treadmill, since they held no comparative advantages whatsoever in the production of basic commodities (wheat, sugarbeets, oil crops, grain legumes, milk, and meat). Liberalization, urbanization, growing exposure to mass media, and the improvement in rural roads had removed most *de jure* or *de facto* protective barriers, so that small farmers were increasingly part of a global market. An "escape forward" option was offered by non-traditional, high-value crops and animal products, that were characterized by being labor- and supervision-intensive, where product differentiation through value-adding - in particular if linked to

local or regional rural identities – was a viable marketing strategy in which farmers could retain a greater control and a larger share of the final price.

At least two factors favored this reconversion strategy:

- (a) The previous growth of the for-export sector had led to the development of the necessary “hard” and “soft” infrastructure and had produced or captured for the country as a whole much of the necessary technological and business know how and expertise. More importantly perhaps, it had exposed thousands of small farmers to the new crops and animal products, which they were eager to adopt as soon as they had the necessary supports to do so.
- (b) Conversely, the declining profitability of traditional commodities had led to a widespread frustration among peasant producers, who in growing numbers failed to see any future for them, their farms and their children, if they remained tied to this sinking ship.

In other words, the willingness of small farmers to engage in significant innovation processes was the direct result of the new incentives put in place by the prevailing macroeconomic policies and the accompanying new institutions. The challenge then was to design a set of public policies that would aim directly at creating the capacities needed by small farmers to respond to these incentives.

By 1992-93, the Agricultural Development Institute (INDAP, an agency of the Ministry of Agriculture charged with supporting small scale farming) and several other public agencies were set on the design and implementation of the new strategy. The key definitions underlining the new strategy were as follows:

- (a) It was explicitly recognized that the productive orientation of peasant agriculture was market-driven, and that the role of government was to create effective opportunities for small farmers to participate successfully in dynamic markets.
- (b) The traditional agricultural support services would need to undergo an in-depth overhaul. The conventional linear research-extension-production arrangement of the Transfer of Technology school, were judged to be totally ineffective in dealing with the

new challenges. Instead, it would be necessary to build more complex and diverse public-private networks and alliances, organized within well defined rural regions, and geared towards giving peasant farmers access to clearly identified market opportunities.

- (c) At the local level, this meant that new facilitation approaches would need to be developed and put in place. Extensionists and advisors were no longer expected to deliver ready-made solutions to their ‘beneficiaries,’ but were to act as facilitators of processes whereby local groups of farmers could identify market opportunities, design medium-term projects to access such markets, build the necessary alliances with a diverse set of private and public agents, develop and strengthen producer’ organizations to engage in collective action, and implement the necessary ‘hard’ and ‘soft’ changes at the farm and off-farm levels.
- (d) Finally, Associative Peasant Business Firms (EACs, or *Empresas Asociativas Campesinas*²) were recognized as the primary social agents of the new development strategy, meaning that market-oriented collective action, and not only individual primary production in the family farm, was understood to be the key arena of peasant agriculture.

THE RESPONSE OF SMALL FARMERS

During the 1990’s the Government of Chile, through INDAP alone, invested about \$ 1.5 billion in support of this new strategy for the development of small scale agriculture. Over 30 specific programs and support services were designed to finance farm and off-farm investments through loans and subsidies; to provide technical assistance and advisory services delivered by private commercial and non-for-profit agencies; to support training of farmers, farmers’ leaders and technical staff; to improve the natural resource base of small scale farming (e.g., through micro-irrigation schemes), and; to promote the formation and strengthening of EACs.

² I define an EAC as a legally constituted organization whose members or owners are exclusively or mainly small farmers and peasants who control the organization’s decision-making process. Such organizations carry out marketing or value-adding activities directly linked (upstream or downstream) to their members’ primary production. Their main purpose is to improve the performance of their members’ farms as economic units engaged in market transactions.

Within one year of the launching by INDAP of the new strategy, a review of the work of 1,109 small farmers' local groups (with about 40,000 members) showed that 42% of them were engaged in the introduction of non-traditional crops and animal products; that 47% were engaged in marketing activities; and that 11% had already set up the necessary facilities to process and add value to primary products before marketing (Berdegúe and Marchant, 2002). An impact study conducted in 1997-98 showed that 48% of the approximately 100,000 small farmers working with INDAP had partially diversified their farming systems away from traditional commodities (Ministerio de Agricultura and Ministerio de Economía, 1998).

In response to the strong policy signals and the direct incentives offered not only by INDAP but also by other agencies of the Chilean government, about 778 EACs had been formed by the end of 1999, with approximately 58,000 members (Berdegúe, 2001). The average gross annual sales of these EACs in 1998 was of about \$ 135,000, although half of them had sales of less than \$ 35,000 per year. On average, each EAC had about four paid employees, but close to half of them did not have any hired staff and relied on the voluntary work of the members. Most of the EACs in 1998 were working in a combination of different markets (local, regional, national), and slightly more than one tenth of them were already exporting their products to other countries. Close to 90% of the EACs were involved in non-traditional crop and animal products, and other activities such as agro-tourism which are also new in the Chilean countryside. Essentially all of these EACs were engaged in marketing and/or value-adding³ activities, which is a distinguishing feature of these organizations.

After being formed, EACs can search for and analyze new markets opportunities; establish contracts and agreements with potential buyers; identify the grades and standards that their products and production processes must meet to tap into the targeted market; negotiate grants and credits from public and, less often, private sources, to finance farm and off-farm investments and working capital; build, maintain and manage the necessary off-farm

³ The term 'value-adding' is used here in the broad sense of the business strategy and management literature, to include actions along the chain from farm production through distribution, processing and marketing, with the goal of differentiating products for specific market segments.

infrastructure (warehouses, cooling tanks, cold storage units, processing lines, etc.); hire managers, accountants and technical staff; provide technical assistance to the member farmers to adjust their production to the new market demands; bulk, store, grade, process, package, label, and control the quality of the product supplied by the members and other farmers; transport, negotiate and sell the product; collect payment, and, finally; distribute the net income among the members according to sets of rules established before hand. EACs often also engage in social or community development activities. And, of course, to do all of this they must establish rules; negotiate agreements and resolve conflicts between the members; monitor and enforce compliance with the rules and commitments, imposing sanctions when necessary; communicate and organize concerted action with private and public agents; defend their autonomy from outsiders; and engage with other EACs to promote their own views and interests in the public arena.⁴

Despite the fact that the policy frameworks and the specific programs did not discriminate in favor or against any specific type of farming system, the degree of farmer participation in these EACs had very large variations across different types of farms as characterized by their main products and markets. As a national aggregate average, about one fifth of all Chilean small farmers had joined an EAC by 1997-98, but the rate of participation was much higher in those small farms engaged in milk production (55%), than in those working mainly with potatoes (24%), beans (20%) or wheat (15%).

Elsewhere I have shown that the degree of participation is related to the significance of the market-specific transaction costs that small farmers have to face, with the result that participation in economic organizations is lower in those farms which deal with undifferentiated commodities that are sold in the spot and wholesale markets (lower transaction costs). In those cases, collective action cannot improve on the results that a farmer can expect to obtain if he or she sells his or her products (or buys his or her inputs and farm services) individually, while at the same time it is very likely to lead to higher risks and costs (Berdegú, 2001).

⁴ This is of course an idealized or 'composite' description of what EACs do. For a description and analysis of a number of EACs, see Berdegú (2001).

An econometric analysis of cost and income data for 300 small farms, using Heckman's Two-Stage procedure (Heckman, 1979), showed that participation in EACs contributes to the farm's net margin only for farms whose main products are sold in markets with high transactions costs, but failed to have any significant impact in the case of farms producing undifferentiated commodities such as potatoes or wheat that are sold in the spot or wholesale markets (Berdegúe, 2001).

In addition to the impacts at the farm level, the specific economic context faced by these EACs had a strong effect on their own performance as business-oriented organizations. Less than 6% of those EACs engaged in the marketing of undifferentiated commodities destined for the spot markets, had "good" to "excellent" indicators of economic and financial performance in 1999, while those that were dealing with markets with higher transaction costs were about three times as likely to achieve this kind of positive results.

Only under certain market conditions does it make sense for small farmers to engage in economic collective action, which always carries significant costs and risks, but only occasionally holds the potential of delivering added benefits; vegetable or milk farmers participate more in EACs not because they are less 'individualistic' or 'egotistical' than wheat or bean producers, but because it makes economic sense to do so. Seen from a national perspective, disposition to engage in collective action depends not only on the quality of the facilitation approaches used by technical agents at the field level, but by the system of incentives as perceived by farmers, i.e., by 'the positive and negative changes in outcomes that individuals perceive as likely to result from particular actions taken within a set of rules in a particular physical and social context' (Ostrom et al., 1993, p.8).

What we observe then is that the potential for upscaling economic collective action initiatives involving small farmers in Chile in the 1990's, was determined by the interaction between the incentives derived from specific market characteristics, the 'political opportunities' (Fox, 1996) opened by reformist public policies, and the capacities created at the field level through the action of governmental and non-governmental

programs and agents. Support programs that do not consider the major influence of market conditions and characteristics are: (a) likely to face lower degrees of farmer involvement and commitment, (b) will have a significantly lower impact, and (c) will be much more dependent for their survival on the direct incentives that are made available through government and NGO funds.

SOCIAL LEARNING AND ADAPTIVE MANAGEMENT AS SOURCES OF ECONOMIC EFFICIENCY AND COMPETITIVENESS

However, once collective action is initiated in response to a system of policy and market incentives, it is the quality of the social learning and adaptive management processes at the level of their EAC and their immediate context that largely determines the fate of the concerted action⁵.

The data from Chile shows that only about one-fifth of all EACs had an economic performance that put them on a sustainable path of development, while the rest either failed completely (30%), or continued to be largely dependent on external financial support to stay alive (Berdegué, 2001).

The primary source of failure for organizations focusing on marketing of undifferentiated commodities, was pervasive ‘free riding’ that came about as the members found out that collective action could not deliver any additional benefits, while simultaneously implying important additional costs and risks, as compared to individual participation in the spot or wholesale market. This sort of organizations rapidly degenerate and become rent-seeking structures tapping into the many subsidies available from governmental and non-

⁵ Social learning in the domain of the EACs can be defined following Röling (2002), as an iterative process of sense-making, in which the members gradually develop and refine a shared perception and interpretation of the context in which they act collectively, as well as a shared design for the future that includes a common perspective of their means and goals. Adaptive management in this context is a process of decision-making, nurtured by the permanent evaluation of conducts, results, and expectations, leading to action in the systems of rules, in the networks in which they participate, and in the design and implementation of their business plans. Adaptive management informs and is informed by social learning.

governmental programs; these EACs stay alive for as long as small farmers can obtain these benefits, and collapse as soon as these external supports cease to exist.

Yet, about half of those EACs which were participating in markets where collective action did make economic sense from the point of view of the members, also failed. In this case, it was the quality of the social learning and adaptive management processes that made the difference between success or failure.

From case studies of 16 EACs in Chile I can hypothesize that three specific ‘products’ of social learning and adaptive management appear to be of special importance for the consolidation of these organizations (Berdegúe, 2001): (a) embeddedness of the organizations within rural communities; (b) effective systems of rules within the organizations, and; (c) effective networks across the public-private divide.

Economic organizations and rural communities

In almost all the cases studied, EAC members participate more in other rural organizations than non-members, and tend to hold leadership positions in these organizations. EACs thus bring together many farmers who are part of "*el activo social*", or the socially-active members of local communities. These individuals are positive about the potential costs and benefits of collective action, making them more likely to join an EAC, and with less hesitation, than others.

Such experience of collective action among rural communities leads to the formation of *catalytic community groups*. These are groups comprising more or less the same individuals within a community, which persist over time and ‘switch on’ or become active when a new collective initiative is needed. When one examines the history of collective action in a community, the same group of people, more or less, pops up time and again. These groups catalyze and organize other community members to participate in new collective efforts.

Such groups give the emerging EACs a broader knowledge base. This includes norms, attitudes, beliefs, information about the likely behavior of the other participants, organizational principles such as leadership roles, initial sets of rules, and experience in dealing with external agents. Rural communities, through the individuals who make them up and through these catalytic community groups, can accumulate and store such organizational knowledge, drawing on it years later as necessary.

The existence of these catalytic community groups greatly enhances the emerging EAC's chances of succeeding. Without them, initial leadership is likely to be taken over either by a strong individual or by external agents. These people tend to have a disproportionate influence in an EAC's important formative period when rules are established, roles defined, technologies chosen, staff hired, negotiations occur and agreements are reached with clients, suppliers, and external agencies, and so on.

The case studies illustrate other ways in which an EAC can benefit from being embedded in its rural community:

- (a) A reduction in the costs of monitoring whether members fulfill their organizational obligations. Social and geographic proximity provide valuable information at low cost to the EAC.
- (b) A reduction in the material heterogeneity of its members, at least according to certain characteristics associated to location. Greater homogeneity in terms of different variables associated to location makes it easier to design and enforce rules about the benefits members receive and the costs for which they are liable.
- (c) Social costs which deter members from behaving opportunistically. Relationships between members outside the EAC can be important in deterring people from breaking rules and failing to meet obligations.
- (d) Community knowledge can ensure that fines or sanctions are appropriate and fair. Knowledge of the community helps an EAC to distinguish, for example, unintentional mistakes, behavior resulting from major problems or emergencies within a household, or serious, intentional violations.

- (e) Better member participation in EAC discussions and decision-making processes. When the members are all neighbors, it is easier for them to meet as often as necessary. Discussion and dialogue can take place not only in the formal EAC instances designed for such purpose, but also informally in other social settings.

For all the case study EACs which were not embedded in a rural community, there were no formal mechanisms which effectively replaced the social exchanges listed above. In these cases there was a very clear communication gap that impeded interaction between the EAC and its members. The members participated less, they were definitely less informed about what was going on in their EAC, there was more room for undetected opportunistic behavior, and it was clearly more difficult to impose sanctions when necessary. This suggests that formal management or organizational procedures and mechanisms (board meetings, hired managers, accounting systems, etc.) can never fully replace the quality of interactions based on social and geographic proximity.

On the other hand, the case studies also yielded some examples of how embeddedness in a rural community can undermine the EACs' operational rules. For example, the social and economic power of a few individuals within the community led them to dominate an EAC's decision-making process. Also, I often observed how close social relations prevented the EAC from enforcing its rules of sanctions, because of fear of affecting good relations between friends, neighbors or members of the same families. In at least one of the case studies, this sort of 'perverse social capital' largely explains the failure of the EAC.

Systems of rules

In the context of rural economic organizations operating in a liberalized market environment open to international competition, effective internal systems of rules need to address the allocation of costs and benefits between the individual members, and, *simultaneously*, the allocation of contributions and appropriations between the members as individual independent farmers, and the EAC as a business-oriented organization. The balance between the EAC's economic and financial performance and sustainability on the

one hand, and the impacts of the collective effort on individual farms and households, on the other, depends on how this dual allocation problem is solved.

EACs involved in markets characterized by high transaction costs can address this problem of dual allocation of costs and benefits through systems of rules which:

- (a) Transmit undistorted market signals directly to each member. This means that the costs and benefits to each member are directly related to his or her farming performance and to market conditions. Thus rules must prevent costs or benefits being spread among EAC members. In terms of Ostrom's (1990) design principles, the key is to ensure congruence between rules defining benefits and costs to members with those relating to market conditions. If this does not occur, then the EAC shoulders the difference between the farmer's performance and market conditions, and/or the rest of the members carry the costs.
- (b) Reduce the transaction costs of negotiating, monitoring, and enforcing agreements between the EAC and its members. If these costs are high, then the EAC and its members will have to choose between affecting the organization's income or reducing members' profits.

Five of the 16 EACs included in my study achieved this tricky balance because of their:

- (a) Previous history of significant collective action involving many of the members. The formation of these EACs was just another step along a longer road of concerted action. These groups had the advantage of a significant stock of organizational expertise. They had learned to work together. They had rules, norms, tested leaders, and knowledge about how others were likely to behave in collective activities. Through past experiences they had often already weeded out those individuals who were not group players.
- (b) Similar farming capacities among members. If members do not have more or less equal production potential it is extremely difficult for them to negotiate provision and appropriation rules that can be met by all. Of course, in the successful EACs there were differences among the members, but these were less significant than in other cases. It

was thus easier for them to reach agreements acceptable to all, and to fulfill their obligations once they had done so.

- (c) Clear links to the local rural community. As discussed before, the geographic and social proximity of members helped their dealings within the organization, and were vitally important for reducing the cost of obtaining information, negotiating agreements through frequent and frank dialogue, monitoring compliance with the rules, enforcing graduated and fair sanctions, solving conflicts, and adjusting the rules and agreements as circumstances changed.
- (d) Lack of exit options. To put it bluntly, in all the EACs who solved the problem of dual allocation of costs and benefits, the members had no affordable options other than EAC membership. They *had* to sustain their organization, any alternative approaches were unacceptable. Losing the EAC would mean either being left out of the market, or at least having to cut back significantly on their scale of production. This position forced members to accept lower benefits, or even accommodate some losses when the market was unfavorable or when the EAC made a bad business decision.
- (e) Capacity to learn and adapt. A striking feature of the successful EACs was their detailed knowledge about their position vis-à-vis market conditions and trends and especially their capacity to turn that information into clear plans for future action. Put simply, they knew where they were, where they wanted to go to remain competitive, and what they needed to do to get there, both at the level of the EAC and of the individual farms. This information and knowledge was used to refine and update their rules, their priorities and their investment plans whenever necessary. With the support of their advisors, successful EACs had developed a remarkable capacity to use their knowledge to inform action.

Networks across the private-public divide

Effective EACs are embedded in effective multi-agent networks that bridge the private-public divide. This is because linkages to a broader set of actors than those found within rural communities provide vital support for EACs operating in new, more dynamic and competitive markets. I have already discussed above the role and importance of rural

communities in the functioning of EACs, and I turn now to the other necessary participants in these networks: markets, government agencies and programs, and intermediate support organizations.

Markets

An EAC which lacks effective links to specific markets will either collapse from lack of purpose, or will become something other than an EAC, such as a channel for government or intermediate agency funds, taking advantage of the greater political leverage enjoyed by almost any organized group of farmers. An EAC's meaning and purpose is defined by the conditions of a specific market. This shapes members' expectations about EAC membership. Where EACs focus on marketing undifferentiated commodities in the spot markets, members' expectations and objectives cannot be fulfilled. They will rapidly conclude that they will not get the benefits they originally expected. The lack of correspondence between market conditions and the domain of action of the EAC becomes a disincentive, and the members default on their commitments.

When, on the contrary, there is congruence between the EAC's domain of action and market conditions (as when the organization helps its members access a new market from which they were previously barred), then market signals are an incentive for continued collective action. In a successful EAC, the members will continuously try to improve the congruence between their practice and market conditions. To do so, they adjust and refine their systems of rules.

Government agencies

All of the case studies clearly illustrate the key role of government agencies. The 'political opportunity' provided by government through its public policy signals is a prime incentive for EAC formation. The case studies demonstrate three levels of government involvement in EAC formation:

- (a) At one end of the spectrum, a few EACs are basically creatures of government intervention. There is no history of collective action among the individuals involved. The whole process is put in motion only after government agents (or intermediate agencies) make a deliberate effort to set up an EAC. Clearly such an origin leads to quite an artificial organization, largely dependent on the continuous flow of government funds or NGO grants for its survival.
- (b) Some of the EACs emerged out of pre-existing local groups or organizations, with a previous history of working within government programs, notably INDAP's extension services. In these cases, the government program transformed the existing group into an EAC. However, in several cases, whilst the EAC ended up being ineffective, the original groups (lost or weakened in the process) had managed quite well before their government-induced transformation.
- (c) Finally, there are some cases where pre-existing local groups or organizations took the initiative to set up an EAC. Some of them had some contact with government programs in the past, but some had not. In most of these cases, the pre-existing groups had been trying for years to form some sort of formal organization to engage in marketing or value-adding activities. In all cases, the farmers did not know exactly what type of organization they needed, or how to form it, but they did have a more or less well identified problem, and they certainly knew what they wanted to achieve. Eventually, one way or another they managed to 'connect' with sympathetic government officials, usually through an intermediate agent (such as an NGO, an extension agent, a parish priest, or a regional federation of cooperatives), and the EAC was formalized with the support of both government and intermediate agencies.

It is unlikely to be coincidence that the latter EACs were most successful in extracting precisely what they wanted from public programs, or in defining with greater autonomy how they would run their organizations. This does not mean that all have been successful, for some run into great difficulties precisely because their notorious 'drive', fuelled by their own accomplishments, encouraged an unsustainable rate of growth. Neither does it mean that the second type of EAC cannot manage to become rather successful business-oriented organizations.

After the organization forms, its relationship with government agencies is conditioned by how successful the EAC *appears* to be. Those EACs which did not quickly show clear signs of success, soon fell into the ‘protective embrace’ of the government agency and lost much of their autonomy. The reason is clear: once a government agency and its officials have invested in an EAC, they will do almost anything to prevent it from going under, for they are not willing to pay the political cost of failure. This occurs even when the EAC’s failure cannot reasonably be attributed to a mistake or omission by the government agency.

This is a major problem for two important reasons:

- (a) At the first visible sign of trouble government agencies will react by, in effect, externalizing at least some of the costs out of the EAC. They do so by providing implicit or explicit subsidies, either to the EAC itself or to the members at the farm level, or to both. Inevitably, this decouples the EAC from its market context, and eventually distorts incentives and rules and disguises market signals. This sort of ‘salvage’ operation leads to a vicious cycle: the externalization of costs and risk decouples the EAC from market signals and trends, incentives and rules are altered accordingly, the negative results are enhanced, more subsidies are poured into the EAC, its disconnection from market realities increases, and so on. The dozens of EACs facing financial crises in the past two years were the ultimate outcome of this distortion in the nature of the relationship between these organizations and government programs.
- (b) The government’s response to EACs in trouble means that it is impossible to bring problems out into the open for analysis and discussion. Such analysis would help negotiate more lasting solutions than simply pumping millions into keeping them alive, and would also allow people to learn from the mistakes that may have been made.

This ‘reflex reaction’ by government agencies is a very serious stumbling block for processes of social learning and the adaptive management of these kinds of soft systems.

Intermediate agencies

Intermediate agencies (NGOs, extension firms, etc.) play a decisive role in building linkages between the actors who form part of the EACs' networks. These agencies provide organizational models and expertise that give shape and content to emerging EACs. These roles reduce the actual and perceived costs and risks to farmers when starting up an EAC, and increase their chances of success.

In all the case studies, intermediate agencies were important facilitators of EAC formation. This is true even of those pre-existing local groups or organizations who took the initiative to set up an EAC. While these proactive local groups had developed their own notion of why they wanted to change the *status quo*, and despite having some idea of the type of activities in which they would like to engage and their objectives, it was not until they linked to an intermediate agency that they were able to get going. This was because of the models, expertise and contacts provided by the external facilitators.

While being good catalysts of EAC formation, many of these intermediate agencies are often less capable of supporting the actual implementation and consolidation of the organizations and their business-oriented project. Why is this? The existing intermediate agencies and facilitators are basically the same ones that had been accustomed to working within the linear transfer of technology paradigm. In many cases, their outlook was one of delivering ready-made options and solutions to well defined problems and constraints, mainly in the domain of production technology. But the courses of action for the new EACs can no longer be defined in terms of standardized pathways towards pre-conceived 'optimum' outcomes. The new strategy requires a new set of skills, information and knowledge to facilitate communication between different stakeholders operating from different perspectives, and to negotiate agreements for concerted action, almost always within very dynamic and uncertain contexts. Only some of the intermediate agencies managed to make the necessary changes in attitudes, concepts, strategies, methods and skills, to transit from the old "transfer of technology" mode to a new one centered on the facilitation of learning and on adaptive management. Insufficient public support to this

transition created severe constraints to the implementation of the new development strategy.

In addition, the technical problems which need to be solved are also fundamentally different from the old focus on raising traditional commodity crop yields. Many intermediate agents and advisors simply lack sufficient expertise and experience in producing high-value products, marketing, management and processing for value-adding.

These problems were sometimes compounded by some EACs insisting on taking over the delivery of technical assistance, thereby displacing the intermediate agencies. Sometimes this resulted in more pertinent and more focused support and advice, and in better coordination between support to the production, marketing and value-adding parts of the process. But very often it weakened the technical quality of the support services, in particular when some EACs diverted part of the funds available for technical support to help cover their other costs and investments.

CONCLUSIONS

The case of Chile in the 1990's illustrates that in the context of liberalized economies open to international competition, development strategies for small farmers must internalize market trends and signals, as an essential prerequisite for their sustainability and potential for upscaling. Under those conditions, failure to link development strategies to dynamic markets results in lower degrees of farmer involvement and commitment, lower impact, and high dependency on public subsidies and foreign donors.

At the same time, the quality of social learning and adaptive management at the level of the specific development initiatives, has a major influence on the possibilities of success of such market-oriented strategies. Small farmers' development processes can gain in economic efficiency and competitiveness when they include effective multi-stakeholder networks across the private-public divide, strong links and interactions between market-oriented organizations and rural communities, and good systems of rules for governing

economically-motivated collective action. These social assets cannot be built by means of formal business management techniques, and can only be the product of social learning and adaptive management approaches.

The bottom line is that in the context of post-liberalization rural economies, a more systematic and substantial dialogue is needed to close the gap between those who espouse a social learning and adaptive management perspective, and those who follow market and business approaches. Both views are indispensable to deal with the complex systems of incentives and capacities that determine the fate of collective action by small farmers in liberalized economies open to international competition. To bridge the current divide, much theoretical work and critical reflection on practical experiences are still needed... as well as huge doses of good will.

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