

Distr.  
RESTRICTED

LC/R.1660  
29 July 1996

ENGLISH  
ORIGINAL: SPANISH

---

E C L A C

Economic Commission for Latin America and the Caribbean

**AGROINDUSTRY AND SMALL-SCALE AGRICULTURE:  
Conceptual guidelines for a policy to encourage  
linkage between them**

This document was prepared by Alexander Schejtman, agricultural economist at the Regional Office for Latin America and the Caribbean (FAO), within the framework of the project entitled "Promotion of the economic and social integration of small and medium scale farmers into agroindustry", in accordance with the cooperation agreement signed between ECLAC, the Food and Agriculture Organization of the United Nations (FAO) and the German Agency for Technical Cooperation (GTZ), representing the Government of the Federal Republic of Germany. The opinions expressed in this document, that has not undergone formal editing but has been checked for correct terminology and references, are those of the author and do not necessarily reflect the views of the Organization.

96-8-747



## CONTENTS

	<u>Page</u>
ABSTRACT . . . . .	v
 I. CONTEXT AS A CONDITIONING FACTOR . . . . .	 1
1. The macroeconomic context . . . . .	1
2. The situation of the sector: the implications of heterogeneity . . . .	2
 II. BASES FOR LINKAGE BETWEEN AGROINDUSTRY AND FAMILY FARMING	 7
1. Family farmers as suppliers of inputs . . . . .	7
2. Agroindustry as customer . . . . .	8
3. Contract agriculture and the motivations of those involved . . . . .	9
 III. TYPES OF PRODUCTS AND CHAINS FOR WHICH LINKAGE IS SUITABLE	 13
1. Types of products . . . . .	13
2. Types of agroindustrial chains . . . . .	13
 IV. FORMS OF LINKAGE, MARKET FAILINGS AND TRANSACTION COSTS .	 19
1. Forms of linkage and the factors that determine them . . . . .	19
2. Production costs and transaction costs . . . . .	24
3. Market failings . . . . .	27
 V. POLICY OUTLINES . . . . .	 31
1. Agreement on objectives, disagreement over strategies . . . . .	31
2. Advantages and risks for those involved . . . . .	34
3. Sequence of actions for building up and developing a relationship	36
4. Main conclusions . . . . .	39
 REFERENCES . . . . .	 41



## ABSTRACT

The purpose of this document is to provide a framework for analysing forms of linkage between agroindustry and small-scale farming. To this end, section I sets out by giving a brief description of the macroeconomic background in terms of the implications that the changes which have occurred over recent decades hold for the prospects of developing these links. This is followed by an outline of the effects of adjustment processes on the dynamics of the agricultural sector, dwelling in particular on the implications of heterogeneity – a characteristic of this sector – in terms of the need to have policies tailored to different types of producer in order to bring about the dissemination of technology which is a necessary precondition for greater competitiveness.

The aim of section II is to establish conceptual bases to serve as a foundation for the improvements in competitiveness which can be achieved if agroindustry is encouraged to become an agent for change and modernization in small-scale agriculture. To do so, the section begins by describing the motivations of family farmers as suppliers of inputs, contrasting their "management logic" with that found in the commercial farming sector in terms of what motivates decisions as to what, why, how and how much to produce. Agroindustry is examined in its capacity as a customer for inputs, and the section concludes with a look at contract farming, identifying the alternatives facing agroindustrialists and small farmers as regards, respectively, their sources of supply and the use to which they put their resources.

Section III attempts to ascertain what types of products are suitable for linkage with agroindustry, i.e. for which products small-scale agriculture can be assumed to be competitive under certain conditions, given its structural characteristics. The conclusion is that these will generally be products which are highly labour-intensive per hectare, have a high unitary value, are perishable and do not offer significant economies of scale in agricultural production. With this established, agroindustrial chains are then categorized by type on the basis of the kinds of input they use, their dynamism, and thence the influence they can exercise on family farming, to arrive at a hierarchy which starts out with non-traditional agricultural export products (or their equivalents for the domestic market), followed by modern staples (in particular poultry and pig fattening), traditional export products and traditional staples (wheat, kidney beans, rice, etc.), and ends with differentiated or branded goods in which the importance of the agricultural input is marginal.

Section IV is an attempt to come to an understanding of the factors determining the widely varying forms of linkage which actually exist so as to examine their underlying causes, in particular failings in markets for land, credit, information, access to technology, etc., and includes an analysis of the characteristics of transaction costs. Its conclusion is that, even when prices and production costs work in favour of small producers, transaction costs tend to marginalize them as potential suppliers to agroindustry, which suggests that action needs to be taken to reduce these costs.

Section V does no more than outline some policy suggestions, starting out by presenting, in a very tentative and schematic way, the limitations of two strategic options at either end of the spectrum, the "neo-liberal" and the "neo-populist" options, which have formed part of the recent debate on the role of the state, to ascertain how much of

each should be preserved in a strategy for modernizing small-scale agriculture. Next follows a list of the advantages and risks for agroindustrialists and small farmers when they opt for some form of contract farming, with a discussion of the difficulties involved in formulating "perfect contracts" to ensure that the expectations with which the parties enter into the arrangement are realized in practice. Finally, a policy outline is formulated, starting out from the need to follow a particular sequence of actions in order to ensure that initiatives intended to link together agroindustry and small producers do not end in failure or frustration. It is suggested that this sequence of actions involves: ensuring that there is a profitable market, providing technical assistance and training, securing financing, encouraging producers to organize among themselves, introducing mechanisms to moderate the risks that the initiative involves for the small farmer and ensuring that the information required for agreements to be transparent is available.

It must be pointed out at this juncture that the scope of this document is limited to the link between the agricultural processing industry and family farmers, which is only one of the forms that linkage in the sector needs to take if this type of producer is to benefit from modernization. Other complementary forms of linkage include developing employment options in non-agricultural rural industries, based on the dissemination of flexible specialization technologies; organizing units to produce local infrastructure; and reorienting links with companies providing inputs and production equipment, etc. The first two are of primary importance for those living in the countryside who have no land or very little, the last for small and medium-sized units with well-developed commercial links.

## 1. CONTEXT AS A CONDITIONING FACTOR

At this point in time, it is a commonplace to remark that the economies of the region are going through a period in which the operating conditions that characterized them from the period following the second world war until the so-called "crisis of the eighties" are experiencing profound changes; it may be said that what we are witnessing is a process in which one particular set of rules governing the distribution and reassignment of society's output is giving way to another one, whose outlines are only just emerging and whose institutions are undergoing a slow process of gestation and preparation.

### 1. The macroeconomic context

Among the phenomena from the outside world that will have a direct impact on the economies and agriculture of the region in the short, medium and long term should be mentioned, among others: the absorption and dissemination of the "new pattern of technology" in a number of countries (computing, biotechnology and new materials), which will reduce the comparative advantages derived from the possession of natural resources and cheap labour; the agreements reached in the Uruguay Round of GATT; the profound changes being experienced in the countries of Central and Eastern Europe, the transformations in the Chinese economy, etc. In a very significant way, these phenomena are redefining the external factors that influence the workings of economies and agriculture in the countries of the region.

Internally, structural adjustment policies, applied with more or less rigour in all of these countries, are redefining the ground rules to which those operating in their economies had become accustomed. This is a result, among other measures, of the abandonment of protective practices and increasing openness to foreign trade; the relative shrinking of the public sector and privatization of firms belonging to the state; the subordination of sectoral policies to macroeconomic balances; the tilt towards production of exportable goods, etc.; these are processes whose effects on economic growth, equitable distribution of wealth and long-term sustainability are still impossible to predict.

These changes in the international environment and in the ground rules governing the economies of the region have meant that a sustained increase in **competitiveness** has become a necessary precondition for growth and for the very viability of productive units, and that widespread dissemination of **technical progress** has, in its turn, become a necessary precondition for increased competitiveness.

In the agricultural sector, generally speaking, those who have mainly profited from these new conditions have been companies whose land has the greatest potential for producing export crops, and which are able to gain access to credit, technology and information about conditions in domestic and foreign markets. This has led to a significant increase in exports, especially of non-traditional products. Although the positive features of this development should not be denied, it does carry the potential risk, unless measures are taken to avoid this, of accentuating the exclusive and polarizing character which has been a feature of agricultural modernization in the region over recent decades, as it is concentrated in particular products, certain regions, and medium-sized and large producers.

## 2. The situation of the sector: the implications of heterogeneity

One of the characteristics common to the great majority of these countries, arising out of the period of transition from the plantation to the capitalist agricultural firm, is the existence of two-tier structures in farming; that is, the fact that commercially managed and smallholder agriculture exist alongside one another. This structure means that complex problems have to be overcome if technical progress is to be widely disseminated, this in turn being a necessary condition for equity <sup>1</sup> since, whereas in homogeneous structures a technological option which is valid (i.e. consistent with the resources the economy has at its disposal) will be so for the great majority of productive units, in two-tier structures an option which is valid for a large modern agricultural firm is unlikely to be so for the family farming sector faced with the same relative price scenario.

On the basis of empirical evidence, with some degree of theoretical support, it may be stated that marked differences exist in what has come to be called the "internal management logic" or the criteria applied by one and the other type of agriculture to decisions on how, why, what and how much to produce, such differences being of great importance when strategies or policies intended to influence the behaviour and development of the sector are being designed.

The contrasting behaviour of the two different types of organization is illustrated schematically in table 1,<sup>2</sup> and although this is not the place to examine every one of these differences, it is worth stressing the contrasts in the way the labour force is made up and the way risk is absorbed, because of the importance of these matters for policymaking.

The fact that there is a non-transferrable labour force margin in family farming suggests that this margin (namely, the unpaid work of the wife and children or other family members, the "free" time of whoever is running the farm) is able to create value only within this structure, i.e. there is no other area in which this available working time can be harnessed whereas, by contrast, an agricultural firm depends on salaried labour which it contracts in the market.

Considerations of risk are also incorporated differently in management criteria since, whereas it is reasonable for a businessman to opt for a higher risk alternative if it is compensated by higher returns, the small producer would have to avoid the higher risk option, however great the income expected from a positive outcome, if the unfavourable result would threaten his viability.

---

<sup>1</sup> The empirical foundations of the links between technological dissemination, competitiveness and growth with equity are set out in CEPAL (1990) and Fajnzylber (1989).

<sup>2</sup> For an explanation of the theoretical basis underlying what is stated here, see Schejtman (1980) and Figueroa (1981).



Table 1

**DIFFERENT CHARACTERISTICS OF PEASANT AND COMMERCIAL AGRICULTURE**

	<b>Peasant agriculture</b>	<b>Commercial agriculture</b>
Purpose of production	Reproduction of the producers and the production unit	Maximization of the rate of profit and capital accumulation
Origin of the labour force	Basically the family and, on occasion, reciprocated loans from other units; exceptionally, marginal quantities of wage labour	Wage labour
Commitment of the head to the labour force	Absolute	Non-existent, apart from legal requirements
Technology	Very labour-intensive; low intensity of 'capital' and of purchased inputs	Greater capital intensity per labour unit and higher proportion of purchased inputs in the value of the final product
Destination of the product and origin of inputs	The market, in part	The market
Criterion for intensification of labour	Maximum total product, even at the cost of a fall in the average product. Limit: nil marginal product	Marginal productivity $\geq$ wage
Risk and uncertainty	Assessment not based on probabilities; 'survival algorithm'	Internalization based on probabilities, in the search for rates of profit proportional to risk
Nature of the labour force	Makes use of non-transferable or marginal labour	Uses only transferable labour on the basis of skills
Components of net income or product	Indivisible family product or income, realized partially in kind	Wage, rent and profit, exclusively in the form of money

Source: A. Schejtman (1980).

From the considerations set out above there arise two types of challenges calling for strategies and policies which are different for each of the two types of agriculture. The first of these challenges is faced by modern corporate agriculture, which risks seeing the foundations of its competitiveness eroded if it is unable to incorporate technical progress into the most critical links in its production chains, since the advantages conferred by the cost of labour and an ample supply of natural resources are ceasing to be the source of competitiveness. The second challenge is faced by small farmers (family, cooperative or traditional units) who run the risk of being forced out of production and increasing rural and urban poverty unless they can be linked in by specifically tailored policies to processes which raise their productivity and realize their competitive potential. It is the purpose of this document to set out the main lines of such policies.

The need for different policies or programmes for different types of producer is valid not only for smallholders as opposed to the corporate agriculture sector, but within the smallholder sector itself, as processes of differentiation have meant that this sector fits into the economy in many different ways, ranging from situations where what is being sold is mainly or exclusively labour to scenarios where the sale of produce is the only source of income and where a cumulative excess is being or, given the potential resources, could be generated. (See table 2.)

**Table 2**

**MEXICO: TYPES OF FAMILY UNIT**

Category	Definition criteria	Classification variable	Number (in thousand)
Smallholders	Basically family labour force. Wage relationships, where they exist, are relatively unimportant	Days work contracted for wages $\leq$ 25	2,212
Below subsistence	The productive potential of the unit is insufficient to feed the family	Arable area $\leq$ 4.0 ha of NSE*	1,422
Subsistence	Productive potential is in excess of what is required for food, but insufficient to generate a replenishment fund	Arable area $>$ 4.0 ha but $\leq$ 8.0 ha	414
Stable	The unit is able to generate an excess over and above consumption needs and equivalent to the replenishment fund and some contingency reserves	Arable area $>$ 8 ha but $\leq$ 12.0 ha	166
Surplus	The unit has the potential to generate an excess over and above its reproductive needs alone.	Arable area $>$ 12.0 ha	210

Source: ECLAC, *Economía campesina y agricultura empresarial (tipología de productores del agro mexicano)*, Siglo Veintiuno publishing, fourth edition, 1989.

\*/ NSE: national seasonal equivalent (corresponds to the average maize yield from unirrigated or seasonal land).

The situation illustrated in table 2 is not unknown in the great majority of the countries in the region. Consequently, there is a need to design strategies which, setting out from an accurate diagnosis of the degree of differentiation existing in the family farming sector and depending on the managerial abilities of the public authorities, are sufficiently tailored to the circumstances to break down barriers and build on the potential of the different types of producers found in the smallholder sector, as illustrated in box 1.

Box 1						
RURAL DEVELOPMENT PROGRAMME FOR THE ECUADORIAN SIERRA						
	Size of landholding (hectares)					
	Without land	0.1 to 1	1 to 2	2 to 5	5 to 20	More than 20
		<b>1</b>				
Families (%)	14.6	28.1	14.7	16.9	15.9	9.8
<b>Production earnings</b>	0	28.4	49.8	66.7	76.9	74.6
agricultural	n.d.	19	43.7	<b>2</b> 62	70.8	<b>3</b> 70.4
craft	0	9.4	6.1	4.7	6.1	4.2
<b>Sale of labour</b>	85.9	53.8	45.1	26.6	6.1	4.2
agricultural	32.6	20.2		22.9	<b>4</b> 5.2	1.3
non-agricultural	53.3	33.6	22.2	12.1	<b>5</b> 6.2	3.3
others	14.1	17.8	5.1	6.7	11.7	20.8
<p>Source: De Janvry A., Glikman, P. (1991).</p> <p><b>1</b> Land reform and settlement.</p> <p><b>2</b> Rural development with emphasis on the family unit.</p> <p><b>3</b> Rural development with emphasis on production.</p> <p><b>4</b> Generation of employment and rationalization of the labour market.</p> <p><b>5</b> Rural-urban linkages.</p>						



## II. BASES FOR LINKAGE BETWEEN AGROINDUSTRY AND FAMILY FARMING

The various studies carried out in the framework of this project were undertaken with the aim of formulating, in the current circumstances, the outline of a policy to encourage agroindustry to become an agent of productive change for small-scale agriculture, based on the idea that certain attributes characteristic of family farming and of certain agroindustries make it reasonable to suppose that a system of linkage between agroindustry and small-scale agriculture would be in a position to compete with other forms of organization such as vertical integration or direct purchasing from large producers, under particular circumstances and for a particular type of products. (See box 2.)

### Box 2

#### CUATRO PINOS: THE CHOICE FOR SMALL PRODUCERS

In the middle of the 1970s the transnational company Hannover Brands Inc. bought Alimentos Congelados, S.A., which had been founded five years previously, and began to produce vegetables for the United States market. In the first stage, ALCO S.A. carried out its own primary production on purchased and rented land; cost considerations persuaded it to abandon this practice in favour of contractual arrangements with medium-sized agricultural operators (holdings of 20 to 40 hectares). This arrangement in turn was abandoned and the firm linked up with smallholders organized into the Cuatro Pinos Cooperative, which had been founded in 1979 and was to benefit from a programme of training in vegetable growing provided by a Swiss NGO which, as well as providing food aid, literacy courses and assistance in reconstruction work following the earthquake which had devastated the country, had begun to implement agricultural development programmes, including programmes for vegetable growing. The Cuatro Pinos Cooperative extended its activities to six Indian communities and became one of the main suppliers for ALCO S.A., enjoying accelerated growth. By the second half of the 1980s it had around 1,200 members, and had significantly increased the land area given over to vegetables for export. In recent years (Carletto *et al.*) falling productivity in its main product (snowpea) has led it to diversify into other vegetables, while those members with the least resources have left the Cooperative and gradually begun to return to their traditional crops.

#### 1. Family farmers as suppliers of inputs

Among the reasons underlying the necessity and viability of promoting linkage between family farming and agroindustry <sup>3</sup> it may be mentioned:

- i) That there is a segment of small producers which has resources, land and labour of a quality and/or quantity such that access to existing and known technology, credit, markets and other complementary resources would allow them to achieve

---

<sup>3</sup> For the sake of simplicity the term agroindustry will be used to cover all operators with which the small producer is linked as a supplier of inputs: supermarkets, exporters, resellers, etc.

significant increases in output and productivity levels, on top of what is required for them simply to sustain their current living and working conditions.

- ii) That unless a policy designed to create the right conditions is put in place the segment of producers mentioned will tend to lose its self-sufficiency in production due to the new rules governing the workings of economies, growing competition and the lessened ability or willingness of governments to implement compensatory policies.
- iii) That technical progress needs to be introduced to the small producer sector as a necessary precondition for it to become more competitive and avoid decline.
- iv) That under certain conditions, which will have to be explored, linkage between small-scale farming and agroindustry and/or modern agribusiness provides a mechanism for disseminating technical progress to the former.
- v) That the link which joins small farmers to buyers of their output and suppliers of their inputs is one of the areas where market failings are very often to be found.
- vi) That the competitive potential of family farming lies in the fact that, due to the reasons set out earlier in schematic form <sup>4</sup> (see once again table 1), the price necessary to induce family units to grow a particular product is lower than the price required for a unit of the corporate type to do so; the difference would be roughly equivalent to the difference between the profit which a businessman would expect if he were to undertake a particular activity and the requirements of the family unit, on top of what is necessary for the family and the unit of production to be sustained. The use of internal labour and other resources which cannot be turned to profit anywhere other than inside the family unit explains this situation to some extent.

## 2. Agroindustry as customer

Expectations of the potential role that agroindustry can play as an agent of change, in its capacity as a customer for agricultural inputs, are based on a number of special attributes which this industry possesses.

Among the known attributes are its ability to: reduce product perishability and post-harvest losses; make supply less seasonal; raise the value added to the primary product; accommodate urban patterns of demand; enrich the nutritional value and change the properties of taste and smell of agricultural inputs, etc. To these attributes can be added others which are particularly important for the way they boost its role in rural development, among them:

- i) greater flexibility than other branches of industry in terms of efficient scales of production;

---

<sup>4</sup> In particular the fact that family labour is not transferrable and the implications this has for crops which are highly labour-intensive.

- ii) the ability to achieve integration of highly capital-intensive processes with labour-intensive ones, both in agroindustrial activity as such and in the interaction of this industry with farming activity; and
- iii) the ability to become an integrating and ordering factor in the primary activity by transferring to it features of industrial organization, insofar as the agroindustrial centre tends to introduce its sources of supply to particular working disciplines, production volumes, quality levels and degrees of standardization.

### 3. Contract farming and the motivations of those involved

By the term contract farming will be understood an arrangement established between one or more agricultural producers and an agroindustrial or agribusiness firm whereby the latter comes to exercise a given degree of control over the production of the former. The term contract covers both formal written agreements and informal or consuetudinary ones.

An agroindustry may be induced to enter into agreements with small producers in a specific area without public incentives or external compulsion if:

- i) there is a shortage of suitable land to buy or rent in an area where smallholdings predominate and which is particularly suited to the production of the agricultural input required (see box 3);

#### **Box 3**

##### **COMMUNAL LAND AS AN AREA OF EXPANSION FOR AGROINDUSTRY**

In the Amealco valley (Mexico), where agricultural and climactic conditions are suitable for vegetable production, a substantial part of the land has long been held jointly by members of the Otomí people who, on irrigated land, carried out maize cultivation. EXPOHORT, a company specializing in agroindustrial vegetable processing and exporting, was expanding strongly, and its growth was limited chiefly by access to land suitable for these crops. Some of the communal lands in Amealco (Mexquititlan and Chiteje) were virgin in terms of vegetable growing and were served by underused wells with high-quality water. These circumstances and the fact that labour was available created the right conditions for the company in question and these landholders, with the support of a public body, to enter into partnership.

- ii) if there is a permanent or seasonal shortage of labour in the area or it is very expensive, either because of such scarcity or as a result of wage and social security legislation;
- iii) if the small producers of the area have acquired know-how or experience in the crop or similar crops and it would be very costly to have to train third parties (see box 4);

**Box 4**

**RURAL DAIRIES IN ECUADOR**

At the end of the 1970s a smallholders' cooperative in the village of Salinas in the Province of Bolívar, consisting of eighty families carrying out production of fresh cheese among other activities, received assistance from Swiss Technical Cooperation (COTESU) which, starting out from the knowledge the small producers already possessed, developed a training programme to teach techniques for producing a variety of fine cheeses, demand for which had been on the increase. This cooperative has gone on to train and advise another fifteen cooperatives, made up of between 20 and 30 families, which now also carry out this type of production, and their products are sold in their own shops in Quito, Guayaquil and Guaranda, as well as in supermarket chains.

- iv) if the crop requires intensive care and using contract labour for this would involve very high supervision costs (see box 5);

**Box 5**

**ORGANIC PRODUCERS OF DEL CABO**

Del Cabo is a cooperative of around 150 communal landholders in Baja California Sur involving farmers from five communal holdings, and it produces organic vegetables and herbs for export; it is associated with an organic produce farm in California, whose members provide a substantial part of the inputs purchased and some advance payment for cultivation work, as well as training and technical assistance; the American farmers also put in a significant number of days working on the land with the landholders. The technology and care involved require very high labour intensity, with transplanting of one or more furrows at intervals over the months. The produce is sent by plane to the United States and is marketed by Jacob's Farm, the cooperative to which the North American partners belong.

- v) if development loans are available for small producers and are oriented towards crops of interest to the firm, which consequently does not have to commit resources of its own or go into debt to finance production (see box 6);



**Box 6**

**LOANS TO ENCOURAGE ASSOCIATION**

One of the functions of the Fideicomisos Instituidos en Relación con la Agricultura [Trust funds for agricultural purposes] (FIRA) of the Bank of Mexico is to promote partnership between agroindustrialists or businesses in general and small producers with low incomes. With this in view, once the participants have been identified and analyses carried out on the viability of the project, FIRA acts through the various funds to rediscount up to 90% of the loans offered by commercial banks and guarantees up to 80% of the agricultural loans made by the banks for operations approved by FIRA to implement the approved project, once its economic and financial viability has been evaluated and its credit package assessed to ensure that the different components (current and investment loans) are suited to the objectives of the project. The Instituto de Desarrollo Agropecuario de Chile (INDAP) has recently launched a contract farming programme, for which it mobilizes professionals such as "contract farming promoters". More than 2,200 hectares have been included in the programme through agreements between the Institute, the Federación de Agricultores y Procesadores de Alimentos and the Industria Azucarera Nacional (IANSA).

- vi) if the producers are part of an organization which acts as an intermediary with the firm (see box 7);

**Box 7**

**PRODUCER ORGANIZATIONS AS INTERMEDIARIES WITH AGROINDUSTRY**

Agroindustry is often faced with the dilemma of whether to encourage producers to organize to reduce the costs of dealing with each one individually or whether to discourage them in order to prevent them gaining greater bargaining power. The experience of ASAGRO in the Santa valley in Peru illustrates this dilemma clearly. The first administration opposed the formation of the Producers' Association which arose as a result of disagreements over prices and over the interest rates charged by the former; however, the administration which took over from it not only accepted the Association as a negotiating partner but regarded it as an instrument for improving producer coordination and discipline and ensuring that production techniques were applied correctly and product quality raised, this being compensated by better prices and better credit terms.

- vii) if adopting this practice, even if it brings no direct advantages, facilitates other dealings with the authorities.

A small producer will be willing to enter into an agreement with agroindustry if the activity proposed combines some of the following characteristics (see box 8):

- i) a secure market with pre-established prices and volumes seems, along with financing, to be the most important of the reasons inducing small producers to venture into areas different from their traditional ones;

- ii) better use of family labour than other alternatives available; for this reason preference is given to products which require more of this resource and make more productive use of it;
- iii) access to finance on better terms than are available from other sources, if there are any;
- iv) access to supplies, know-how and technologies which would be otherwise unobtainable;
- v) an increase in the yield value of their scarcest resource: land.

**Box 8**

**COMPONENTS OF A COMPREHENSIVE AGREEMENT**

In 1981 an agreement was entered into between Industria Azucarera de Chile (IANSa) and the Instituto de Desarrollo Agropecuario, involving more than 1,000 small producers of sugar beet with an average land area of less than a hectare. The contracts, which are individual ones, set out the purchase price and the criteria and procedures for evaluating the quality of the produce, stipulate the latest sowing date and the way in which the seed supplied and recommended by INDAP should be used – and likewise fertilizers, pesticides and herbicides – and lay down detailed instructions for cultivation operations and when they should be carried out. In return the farmers, in addition to supplies, are granted credit by INDAP and receive technical assistance from a team made up of an agricultural scientist and three agriculturists who, few as they are, manage to carry out the programme by virtue of the fact that the farmers are organized into "sugar beet committees"; the agriculturists plan out seed use and harvesting with these committees, and technical assistance and training are also provided through them. Furthermore, the contracts are signed at their meetings and payments are made there. Credit recovery is 100%.

### **III. TYPES OF PRODUCTS AND CHAINS FOR WHICH LINKAGE IS SUITABLE**

#### **1. Types of products**

Not all agricultural inputs used by agroindustry are suitable for contracts or agreements with family farmers. The greatest potential is found in products which have some of the following attributes:

- i) they do not offer significant economies of scale in primary production, so that small units can be as efficient as large ones, or more so;
- ii) they are labour-intensive, so that full advantage can be taken of a family workforce, including labour which is not transferrable or which has no opportunity cost in the labour market;
- iii) they have a high value per unit of weight and per hectare, as this reduces the disadvantages of remoteness and dispersion by reducing weight relative to transport costs;
- iv) they are perishable, given that they are not suitable for storage and stockpiling like grains and tubers, which can easily be bought on the market;
- v) significant value can be added to them in the post-harvest stages, so that they are attractive to agroindustry;
- vi) as far as possible, they have a short cycle or generate some income in the short term, as loans required in the stages preceding full production can accumulate and put the sustainability of the unit at risk;
- vii) as far as possible, they are linked to chains with dynamic demand, so that there is scope for increasing the supply.

#### **2. Types of agroindustrial chains**

If the general attributes of products for which linkage with agroindustry appears to be most viable are as suggested, the next step is to try to make a preliminary approach to a general categorization, judging each category by its greater or lesser degree of effectiveness in incorporating small agricultural producers in an advantageous manner.

Among the factors to be considered if this search is to produce results are: i) whether or not economies of scale exist in the agricultural base providing inputs; ii) the dynamism of domestic and international demand for the products of the agroindustry concerned; iii) the importance of the agricultural input in the value of the final product and iv) the flexibility of the agroindustry in terms of scale and locality.

For the agroindustry to be able to bring about technical progress in its agricultural hinterland, particular combinations of the factors described must be present.

As a first step towards establishing a general categorization, following the guidelines mentioned and using as our central criterion the ability of agroindustry to bring about technical progress in its source of agricultural supply, we can distinguish five types of agroindustries (see table 3).

Table 3

**TYPES OF AGROINDUSTRIES**

Type of agro-industry	Dynamism	Scale in agricultural base	Importance of input in final value	Potential dissemination capability
A. Traditional staples	-- ↓	+ + ↑	+ +	--
B. Modern staples	+ + + ↑	+ ?	+ +	+ +
C. Differentiated	+ + +	+ +	---	--
D. Traditional agricultural export	-- ↓	+ +	+	?
E. Modern agricultural export	+ + + ↑	--	+ +	+ + +

--- nil  
-- very low  
- low

+ + + decisive  
+ + very high  
+ high

↑ increasing  
↓ decreasing

? depends on the case

a) The traditional staples, which correspond to chains centred around staple grains or tubers for human consumption, are characterised by low elasticity of demand; high heterogeneity in the industrial stage; increasing economies of scale in primary production; and international trade dominated by a small number of large transnationals, with little transparency in their operations. With the exception of a few parts of the chain dominated by concentrated agroindustries (namely special types of bread wheat for producing doughs) their ability to bring about technical progress in family farming is very low, although this does not mean that forms of linkage which improve smallholder incomes do not exist (see box 9).

Box 9

**PARTNERSHIP BETWEEN COMMERCIAL FARMERS AND SMALLHOLDERS TO OVERCOME PROBLEMS OF SCALE AND MARKETING IN RICE PROCESSING**

Smallholders of the Antofagasta district in the city of Santa Cruz, Bolivia, who have traditionally grown rice, used to depend for their marketing on resellers (lorry drivers, grocers or employees of a particular silo, depot or processing plant), to whom rice was sold without any prior processing: the weight, degree of humidity and quality were assessed by the resellers, to whom the smallholder generally owed money. Here, with the encouragement of the Centro de Investigación y Promoción del Campesinado (CIPCA), the "La Campana" company was set up, one of the participants being a commercial farmer whose rice yields were among the best in the area. With the volumes achieved by combining his output with that of the farmers in the district, it became viable to set up a mill, two drying plants and a storehouse designed under the supervision of the commercial farmer. As a result, not only could pounded rice be sold, but the farmers could adjust sales in the light of price changes, without being forced to sell the harvest.

b) The modern staples are characterised by highly dynamic demand; by a relatively high degree of concentration in the main nucleus of the chain; by the existence of economies of scale in some of the agricultural inputs (grains for animal feed and oleaginous grains) and the relative lack of such economies in others (poultry fattening, sugar beet, milk production, seeds). Their ability to bring about technical progress is relatively high, especially in those cases where there are no significant economies of scale in the primary base. (See box 10.)

Box 10

**THE CASE OF POULTRY PRODUCTION IN BRAZIL**

The Public Relations Executive of the Sadia Avícola company commented in an interview that, for small producers to be selected for integration in the chain on a contractual basis, they had to be smallholders, and the work had to be done by family members, because "Sadia does not work with absentee landlords...it is the family that works day in day out...because Sadia does not want farmhands or agricultural labourers, as they have no interest in production." A second requirement is that they should have some area, however small, given over to maize production, and that the producer should have a "tradition" in agricultural work and a monetary reserve for his own investments. If these requirements are met, the firm designs and follows through the project to its conclusion, provides banking surety, supplies inputs and undertakes to buy the farmer's output.

This type of arrangement was extended to 4,000 integrated producers and, according to research by Cebrae/Ceag-SC, freezing plants that integrated vertically proved less competitive than those that opted to incorporate small producers.

c) Differentiated or branded products are particularly notable for the decisive role that advertising plays in creating dynamic demand; agricultural inputs are generally speaking a very small component of the final product (snacks, cereals derivatives, fizzy drinks, etc.); the agroindustrial nucleus generally evinces high levels of concentration and

its ability to bring about technical progress in the agricultural base is very low, given how unimportant the agricultural input is in terms of the final value of the product.

d) Traditional exports; when these agribusinesses deal primarily with staple grains (wheat, flour, rice, maize, kidney beans), despite the fact that they have similar attributes to those whose business is in traditional staples as far as their ability to bring about technical progress is concerned, their quality and punctuality requirements may nonetheless make them more effective in this respect than those supplying the domestic market. (See box 11).

**Box 11**

**KIDNEY BEAN PRODUCTION IN CHILE**

When a study was carried out in Chile on the characteristics of small-scale agriculture, and the differences in yields between this type of farming and medium-sized and large-scale agriculture were examined, it was found that whilst the yields of kidney beans for internal consumption achieved by the former were some 32% lower than those achieved by the others, this difference dropped to 11% in the case of beans for export, owing to the specifications laid down by the export companies.

e) New or modern agroindustrial export companies or their equivalents for the domestic market, including fruit and vegetable products, flowers, essences, herbs, etc. and, generally speaking, products with high value added per unit of weight, which are characterised: by highly dynamic international demand; by a lack of significant economies of scale in primary production, which means that small units can achieve high profitability; and by a high degree of concentration, with some exceptions, in the agribusiness or agroindustrial nucleus. They have great potential to bring about technical progress in areas of small-scale production. (See box 12).

**Box 12**

**INDUSTRIAL TOMATO PRODUCTION IN CHILE**

The tomato concentrate industry in Chile sends a large part of its output to foreign markets, and for this reason the quality of the raw material used is a central concern of the sector, since it determines the quality of the final product to a great degree. Given that the crop concerned needs a great deal of care, is labour-intensive and does not offer economies of scale (in fact one should speak rather of diseconomies of scale in this case), companies obtain their supplies through contracts with small producers, whose great advantage is that they have abundant family labour to carry out harvesting. These producers receive technical assistance and training from the processing company as special varieties, which change constantly, are used for this crop, and these require great care.

From the above categorization, which we must repeat is of a purely exploratory nature, can be produced the following ranking arranged in decreasing order of ability to bring about technical progress in family farming:

- i) modern agricultural export categories (or their equivalents for the domestic market);
- ii) the modern staples categories (see box 13);
- iii) the traditional agricultural export categories;
- iv) the traditional staples categories;
- v) differentiated or branded products.

**Box 13**

**FIRA: RELATIVE IMPORTANCE OF THE DIFFERENT TYPES OF PARTNERSHIP**

The experience gained by FIRA over more than 10 years of promoting partnership between businesses and small landholders to some extent confirms this ranking of agroindustries in terms of effectiveness in achieving these purposes since, of those that lasted, some 39% were involved in poultry and egg production; some 26% in vegetable growing; some 6% in fishing and around 3% each in beekeeping, fruit-growing and forestry activities.

Without prejudice to this ranking, considerations of food security may suggest that it would be desirable to combine new agricultural export categories with traditional staples; this is in fact a common practice among small producers when a new crop is introduced. Again, there is some empirical evidence to suggest that efforts to bring about technical progress in the former can translate, by force of example, into technological improvements in staple consumption categories. (See box 14).

**Box 14**

**TECHNICAL PROGRESS APPLIED TO STAPLE CROPS**

Cases where technical progress has been applied to staple consumption crops by virtue of skills learnt through cultivating agricultural export products with high unitary value can be found in the experience of Chile and Guatemala. In the case of Chile, the average yields obtained by industrial tomato producers in their staple crops are greater than those obtained elsewhere in the same area, partly because certain practices have been adopted, partly through the necessity for crop rotation.

In the case of Guatemala, the small producers of the Cuatro Pinos Cooperative who applied themselves successfully to exporting vegetable products also succeeded in obtaining maize and kidney bean yields 30% or so higher than those obtained by similar producers who were not involved in production for export.





#### **IV. FORMS OF LINKAGE, MARKET FAILINGS AND TRANSACTION COSTS**

##### **1. Forms of linkage and the factors that determine them**

So far we have confined ourselves to examining the basis of the potential inherent in the linkage between agribusiness and small farmers; in what follows, we shall explore the factors influencing the decision by the parties involved as to whether or not to establish such links.

An agroindustrial firm may opt for various ways (which do not have to be mutually exclusive) of obtaining supplies of its agricultural input; buying on the open market; establishing contracts with independent producers, which may be large, medium-sized or small (vertical coordination); carrying out production itself on its own or rented lands (vertical integration) or a combination of these options, depending on which strategy is best suited to its objectives, unless impediments of some kind rule out one or another of these alternatives.<sup>5</sup> (See figure 1).

##### **a) Determining factors**

The decision by an agroindustry as to how many agricultural supply activities – of those that can be established separately – are to be integrated and how many are to be devolved to third parties will depend on the question of which alternative, in particular circumstances, will ensure a quality, quantity, punctuality and flexibility (in changing category) in the flow of inputs which is consistent with its installed capacity and with the level, make-up and dynamics of the demand for its product, and the alternative chosen will be the one which enables these conditions to be fulfilled at the lowest cost.

For the small farm producer, again, the decision as to where his resources of land and labour should be directed will be determined primarily by the levels of income he expects and the magnitude of the risks involved in the various alternatives within reach, consideration of which, as will be shown later, involves features peculiar to family farming.

Among the factors determining the form of organization chosen, according to Williamson (1979), are:

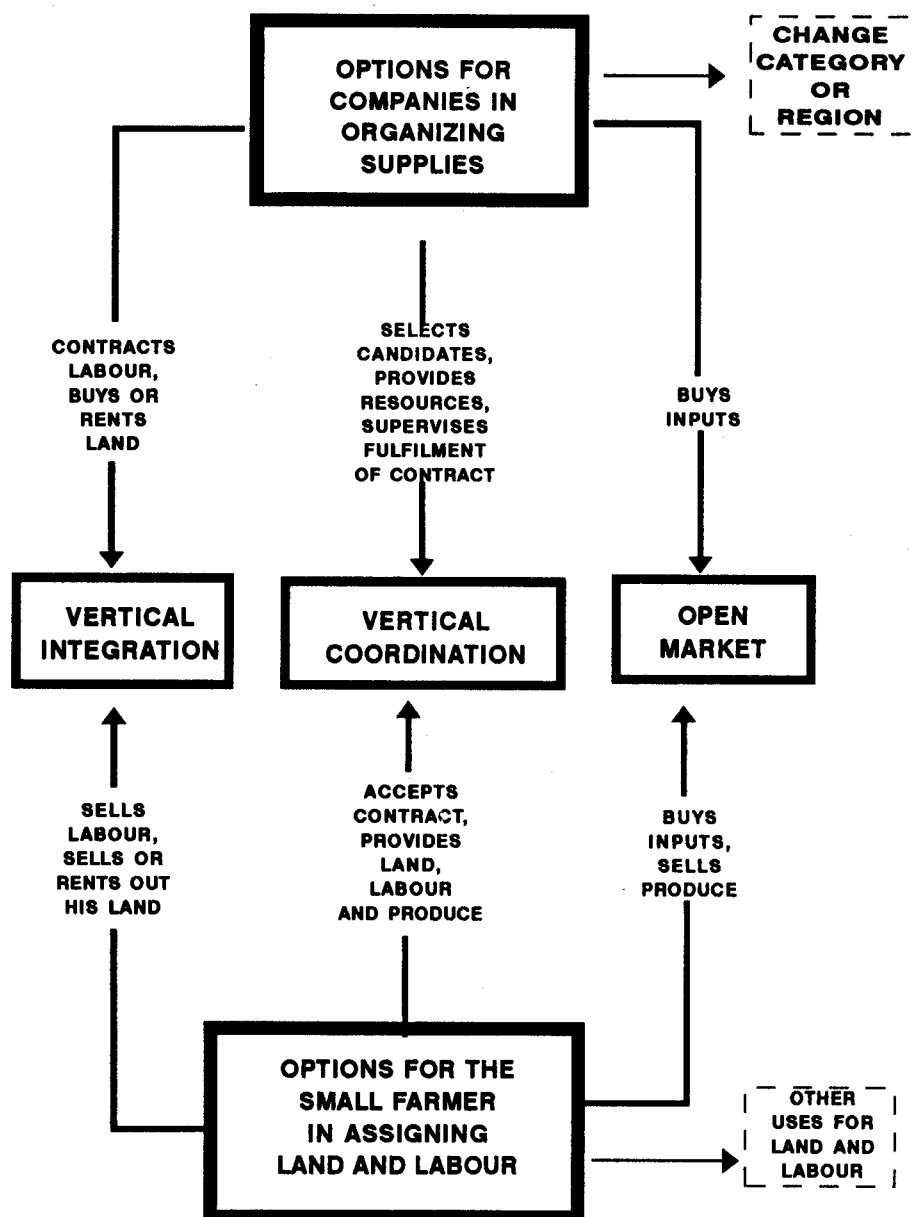
- i) recurrence, which enables a distinction to be drawn between occasional or frequent transactions;
- ii) uncertainty, which is related to the gap between the expectations held by the parties when entering into the transaction and the result that emerges from the transaction;

---

<sup>5</sup> Such as lack of available land, legal impediments, the absence of any but small landowners, etc.

Figure 1

OPTIONS FOR LINKAGE BETWEEN AGROINDUSTRY AND SMALL FARMERS



Source: Based on D. Runsten and N. Key (1995).

- iii) the degree of specificity of the investment or resource involved in the transaction generating what the author defines as "idiosyncratic transactions". This specificity may relate to the degree of labour force training or specialization required, the suitability of a particular location, the specialized (and non-transferrable) character of an investment, etc.

(buying or selling goods or services) ... "which are not specialized is less hazardous as buyers can easily find alternative sources and sellers can sell their output to other customers" ... but if, because of its specificity, "the value of the product in alternative uses is much less than for the purpose for which it was produced, the supplier is effectively 'tied' to the transaction for which it was produced." (English original) (Williamson, 1979).

The way in which recurrence, uncertainty and specificity are combined, and the relative weight of each of these characteristics, will have an impact on the levels of risk faced by the participants, the type of mechanism that the agribusiness will turn to in order to obtain supplies and the use that the small producer will decide to make of his land and labour.

In very schematic terms, and in general, transactions involving generic goods, whether frequent or occasional, will be carried out through the open market; occasional and specific transactions will require some form of contract or agreement, with access to arbitration if the parties should disagree over the results (gap between prior expectations and actual results) and frequent and specific, or idiosyncratic ones will tend towards either vertical coordination or vertical integration, depending on the production and transaction costs involved, which will be discussed further on. (See table 4.)

**Table 4**

**FACTORS INFLUENCING THE TYPE OF COORDINATION CHOSEN**

FREQUENCY OF THE TRANSACTION	DEGREE OF SPECIFICITY OF THE PRODUCT OR INVESTMENT		
	None	Medium	High
Occasional	Purchase of standar equipment	Purchase of equipment to order	Construction of a plant
Recurrent	Standard inputs	Specific inputs with alternative uses	Specific inputs with no alternative use
MECHANISM	Market	Vertical coordination	Vertical integration

b) Forms of linkage <sup>6</sup>

In principle, transactions in an agricultural product will be carried out through the open market when many "anonymous" buyers and sellers are active and when the way in which the product needs to be adapted is mainly autonomous, in other words when the buyer can adapt the input to his needs without the seller adapting his or vice-versa.

In general, what have been called "vertical coordination" mechanisms will be used for frequent transactions, just-in-time delivery or transactions where cooperative adaptation is the rule since, when buyers ask suppliers to make specialized long-term investments in order for their requirements to be met, conditions of dependence are created on both sides, suppliers being unable to reorient their assets without losing productive value and buyers being unable to obtain supplies easily if the contract is broken.

Finally, vertical integration will tend to be the norm in cases where the product is highly specific, there are economies of scale or economies achievable by locating the place of production close to the place of processing, and in-house production and supervision costs are lower than those which would be incurred if production were carried out by third parties. (See box 15.)

**Box 15**

**TOMATO PASTE IN PERU**

In a study dealing with the links between small-scale agriculture and agroindustry in the Ica valley, it was found that an initial attempt had been made to produce tomato paste using supplies provided in part on the basis of contracts with small producers, but that the difficulties and costs involved in the supervision required for farmers to adjust to the technical instructions of the firm led it to abandon this practice, and it decided instead to rent land and control and oversee production directly.

Where there is a lack of confidence in the institutions that support vertical coordination mechanisms (the quality of contractual laws and the efforts made to apply them, including arbitration facilities), or doubts as to whether reliable contractual partners can be found, it happens that what could have been a contractual arrangement moves towards the extremes, i.e. towards market-based transactions (with product specificity being sacrificed, and productive value therefore lost) or towards vertical integration (with an increase in investment and in administration costs, and problems of rigidity in terms of size and location –except in the case of rented land– with the company taking on all of the risk).

The price paid for a product also has an influence on vertical coordination relationships. Thus, when prices do not vary much with quality or homogeneity, there is

---

<sup>6</sup> This section was prepared by Martine Dirven of the Agricultural Development Unit of ECLAC.

less reason to enter into a vertical coordination relationship rather than buying in the market. (See box 16.)

**Box 16**

**CONTRASTING FORMS OF COORDINATION FOR A SIMILAR PRODUCT**

The differences in the supply mechanisms used by the tomato paste industries in Ecuador and Chile reveal a great deal about the effects that quality and homogeneity requirements have on such mechanisms. In case of the first the paste is intended for the domestic market, either as a final product or as an input for other food processing industries, and a large part of the supplies used by this industry are purchased, for price reasons, on the open market during periods of over-production, or consist of leftover produce not sold on the fresh food market. In the case of Chile, the demands of the foreign market, where most of the product is sold, have brought into existence some highly elaborate forms of vertical coordination.

Again, the method of supply chosen by an agroindustry can change from vertical integration or coordination to buying on the open market in cases where the product ceases to be a "new" or recently introduced one and becomes a mass-market item, and if the technology specific to the introduction stage becomes standard.

With the aim of producing a graphic synthesis of the above, figure 2 has been divided horizontally into three areas: in the first (I) are specified the characteristics which, in ideal circumstances, lead to a certain type of interaction between the parties involved; in the second (II) the consequences of this interaction are described; and the third (III) shows the factors that cause the "ideal" type of interaction to give way to another type of interaction.

The variety of possible forms of coordination is extraordinarily large. Nonetheless, it is possible to classify the different types on the basis of what could be called "degrees of intensity", depending on how many of the following components are or are not included: i) buying and selling contract with quantity, quality, method of payment, price calculation methods and delivery deadlines being specified to a greater or lesser degree; ii) in addition to the foregoing, the provision of all or some agricultural inputs; iii) the provision of credit to finance all or part of the operation; iv) the provision of technical assistance; v) "managerial" involvement to lay down how and when each production stage is to be carried out.

In the different forms of coordination, the degree of intensity can range from a simple verbal buying and selling agreement specifying nothing but volume, as tends to be the case for example in certain industries producing juices and dehydrated products, to agreements covering all of the components mentioned as happens, for example, in the above-mentioned cases of tomato paste and sugar beet in Chile.

In addition to the agribusiness and the farm producer, other participants in the process can be: a governmental development body, the bank, an NGO, a private technical assistance firm, etc. (Again, see box 16.)

## 2. Production costs and transaction costs

Earlier on, reference was made to the types of food production chains in which linkage between agroindustry and small farmers could be expected to have competitive potential, it being pointed out that under certain circumstances small producers can compete on price with medium-sized and large ones. There is a need, then, to examine the factors which, given this potential, prevent contract agriculture with small producers from arising spontaneously as often as would be expected. A large part of the explanation is to be sought in the nature and magnitude of the **transaction costs** incurred by the participants, on top of production or purchasing costs as such.

In simple terms, and for the purposes of this presentation, we can consider as transaction costs those costs necessarily incurred by an operator – on top of the costs of producing or purchasing the goods or services required – to ensure that his acquisition matches up as far as possible to his needs or expectations. So, for example, the costs of obtaining credit for a farmer go beyond the interest rate charged, and include his time, travel, the implications of delay in receiving it, etc.;<sup>7</sup> for an agroindustrialist, labour costs include not only salaries but supervision as well, if the vertical integration route is chosen. (See box 17.)

### **Box 17**

#### **TRANSACTION COSTS AS THE REASON FOR SWITCHING FROM SMALL PRODUCERS TO LARGE ONES**

Marsh and Runsten (1994) cite the case of an agroindustrialist who opted to replace a certain number of smallholders with a smaller number of large producers because: the former required more field visits for technical assistance; problems that arose could not be resolved by telephone; specialized machinery had to be lent or leased to them; they needed cash advances, a use of resources which held opportunity costs; they broke some of the regulations governing pesticide use, something which also affected their own output; they sent small production volumes, which meant longer unloading and weighing times; and the greater number of transactions meant that greater administration and accounting costs were incurred. The sum of these costs undoubtedly meant that the lower price charged by these small producers was insufficient to justify maintaining links with them.

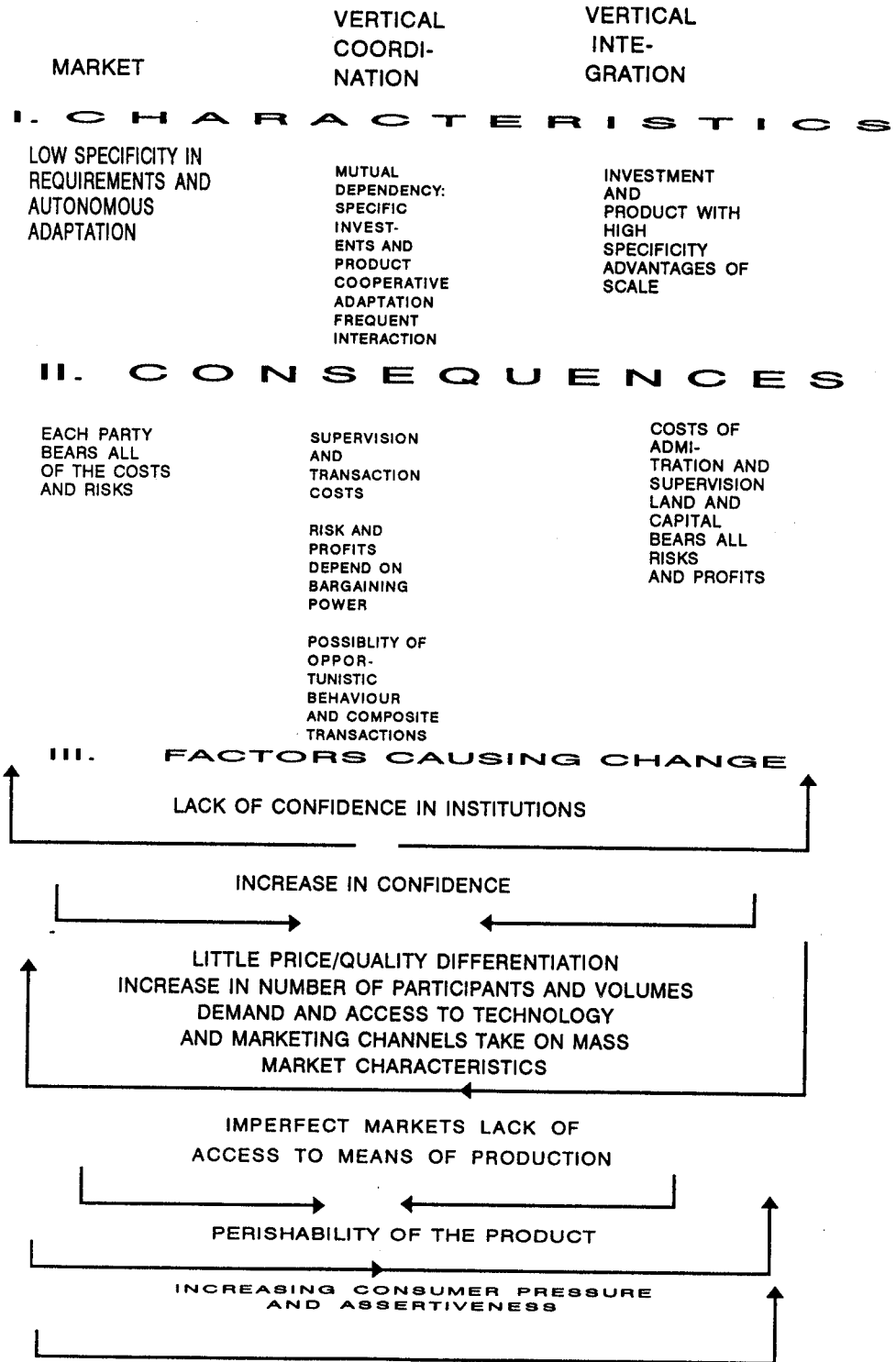
If an agroindustry is free to choose between the different forms of organization, the choice will depend on considerations of cost and profitability: it will opt for small producers if these costs, which include the price to be paid for the produce plus costs necessarily incurred to ensure that quantity, quality and timeliness are as required, are lower than if it decided to buy it in from other businesses, taking account of the administration and supervision costs which these two alternatives involve.

---

<sup>7</sup> See box 19 below.

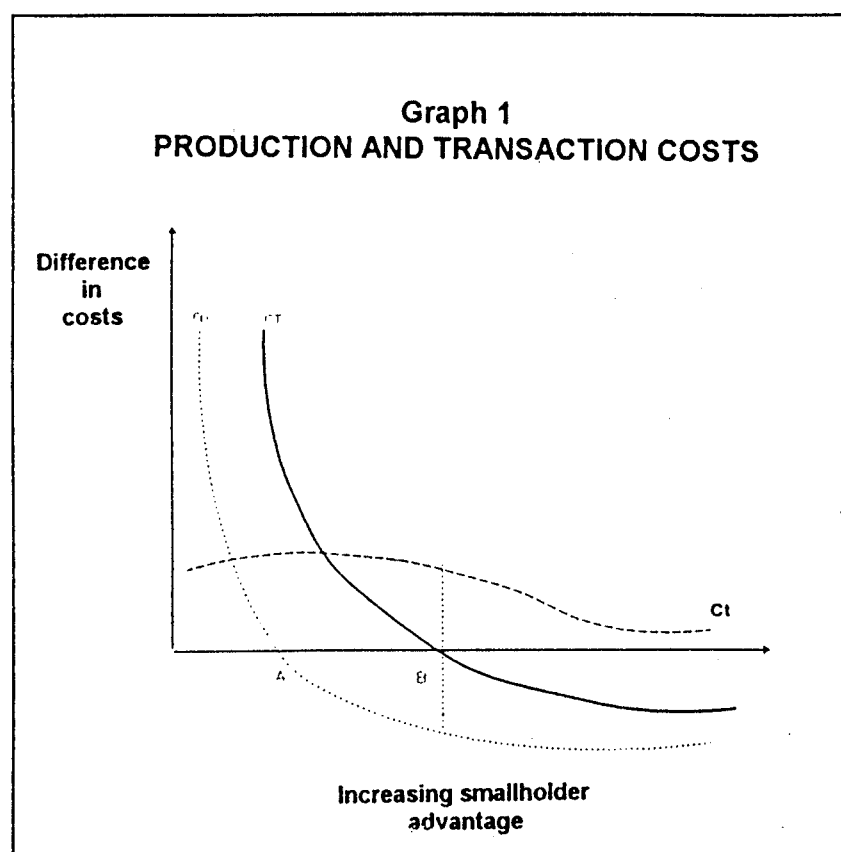
Figure 2

# FACTORS CAUSING FORMS OF COORDINATION TO CHANGE



In simplified form (see graph 1), it may be assumed: a) that the difference between the cost of producing within the company relative to that of buying in the market decreases as the product in question becomes more specific, as the economies of scale that exist when there is a massive supply on the market become less, and b) that the internal costs of organization, administration and others (transaction costs) are greater than those incurred in the market in the case of a generic product, but the difference falls to the degree that the input becomes more specific, until the point where the costs of obtaining the specific product required on the market are sufficiently high to induce the business either to enter into contracts in which the product required is specified, or to produce it internally.

In graph 1, the horizontal axis represents products for which small-scale production holds growing advantages, in other words it goes from non-perishable products with economies of scale which are not labour-intensive (for example grains) to highly labour-intensive products which are not characterized by economies of scale and which require a high level of supervision to ensure quality, etc. (for example vegetables, spices).





The vertical axis corresponds to the differences in costs. The curve  $C_p = C_{pc} - C_{pe}$ , where  $C_{pc}$  corresponds to the price payable to the small producer and  $C_{pe}$  to the cost to the agroindustry of carrying out production itself or purchasing the product from a commercial producer;  $C_t = C_{tc} - C_{te}$  corresponds to the differences in transaction costs between buying under contract from small producers or integrating vertically or contracting with commercial producers.

$C_t$  will tend to fall if we assume that the transaction costs of contracting with small producers are constant and that, as is to be expected, supervision and other costs which the agroindustry will have to incur if it chooses to carry out production itself tend to increase as the amount of care required by the input increases or the advantages of scale diminish.  $CT = C_t - C_p$  is the total cost curve. From point A onwards smallholders produce at a lower price than the agribusiness or a large agricultural firm. However, given transaction costs, it is only from point B onwards that contracting with small producers begins to be the most suitable form of coordination.

If the curve  $C_t$  moves downwards, this corresponds to a fall in transaction costs resulting, for example, from better organization of small producers, and implies that the total cost curve CT moves backwards, widening the range of crops suitable for a contract arrangement.

If it is admitted that, other things being equal, the price necessary to induce a family unit to produce a labour-intensive crop —under conditions of compensated risk—<sup>8</sup> is lower than what would be demanded by an agricultural firm or than the production costs that would be incurred by the agroindustry itself, it can be deduced that transaction costs are what determine whether one option or another is chosen, and these costs will undoubtedly be higher if the agroindustry has to supply itself from a large number of small producers than they will be in the other cases.

If transaction costs are not compensated by lower acquisition costs, as often happens, and if we wish to foster a productive transformation in small-scale farming by means of linkage with agroindustry, the conclusion must be that promotional policies should set out to compensate or reduce transaction costs, concentrating on the factors that generate them.

### 3. Market failings

Several of the features of the above list suggest that the spontaneous emergence of contract agriculture can be explained, in many cases, by failings in the market, such as shortages of land and labour in the case of companies and of technology and information in the case of small producers, or by savings in the transaction costs which would have to be incurred if the market or vertical integration alternatives were opted for.

---

<sup>8</sup> Given the decisive role played by risk in the production decisions of small farmers, unless there are conditions that restrain it expectations of greater earnings may be insufficient to induce them to enter into an activity which jeopardizes the viability of the family.

Analysis of a large number of concrete experiences reveals the enormous variety to be found in the forms of linkage joining agroindustry and small farmers, when these do not pass through the open market. In a number of cases it can be seen that a particular form is adopted because a market does not exist or is defective, this inadequacy being "resolved" through the forms of association chosen. (See box 18).

**Box 18**

**MARKET FAILINGS AND LINKED MARKETS**

The forms which linkage has taken in the Ica valley in respect of tomato paste production reveal a great deal about the type of mechanism that arises when markets depart from the "Walrasian ideal", as in this case the agroindustry has opted to rent land from small producers with holdings of less than four hectares, who are then contracted to work on their own land to produce tomatoes for the agroindustry. By renting their land, the small producers can obtain the resources they need to cover both their production requirements in the part of their land not used for tomatoes and other needs, and at the same time be assured of work. The situation described can be regarded as one in which the lack of any market for land purchases or for loans to small producers, and the paucity of the market for labour and/or systems for transferring technology to small producers, are "resolved" by one-off institutional structures.

In general, markets that tend to be deficient, fragmented or simply non-existent in rural areas are the markets for land, credit, products and inputs, information and technology.

In the case of the land market, one of the best illustrations is provided by what happens in areas which have been reformed or where holdings are small, when for legal or customary reasons the land in such areas does not come on the market. (Once again, see box 3.)

The restrictions generally encountered by small producers when they seek access to formal credit are due not only to lack of collateral and the amount of interest, but also include lack of transparency and handling costs (certificates, travel, delays, etc.). (See box 19.)

In the case of technology and of inputs, which are normally linked to this, very often the only way of obtaining access to both is by tying up with an agroindustry which, on occasions, may even have exclusive rights over particular patents.

Access to information in many cases involves costs that small producers cannot afford and, in others, requires contacts, knowledge and access to ever more sophisticated means of communication which are out of the reach of small producers.

**Box 19**

**COSTS OF FORMAL CREDIT TO SMALLHOLDERS**

Various estimates have shed some light on how much of the total cost of a loan is made up of transaction costs. Thus, estimates for Bolivia have indicated that even though interest rates for bank credit might be lower than those for informal loans, transaction costs were thirty times higher; a study in Colombia revealed that interest represented only 30% of the cost of formal credit; a similar study for Brazil estimated that interest represented between 29% and 76% of the cost depending on the size of the loan; and one for Mexico put transaction costs at an amount equivalent to half of the nominal rate of interest. In the case of the Dominican Republic, where the commercial bank is reluctant to give out loans to small producers, it is agroindustries that act as intermediaries between the Banco Agrícola and the producers, who anyway prefer this procedure to going to the Banco Agrícola itself, even when lines of credit are open for this type of producer.



## V. POLICY OUTLINES

### 1. Agreement on objectives, disagreement over strategies

The quest for growth with equity is found to be one of the stated objectives of economic policy, whatever the position of the regime proposing it; nonetheless, as a number of studies have shown, there is not a single country in the region where these objectives have been achieved simultaneously, in stark contrast with other recently industrialized countries.<sup>9</sup>

In the context of changes in the international economy, more or less profound adjustments in the economies of the region and great diversity in their productive structures, the task of achieving both these objectives at once represents an enormous challenge since, as will be shown, competitive structures need to be put in place, and this requires technical progress to be spread widely. In the agricultural sector, given how greatly agrarian structures differ from one another, technical progress can only be spread widely, as will be shown, if policies or programmes can be designed to suit each type of producer, promotion of linkage between modern agribusiness and small farmers being just one of several such programmes.

Before we begin to examine the implications of this inference for the matter in hand, we need to consider the strategic framework within which the objective of growth with equity fits.

Whilst there may be said to be broad agreement on the objective of achieving equitable and sustainable growth, this does not imply a consensus on the strategies for achieving it. Accordingly, we may contrast two approaches from either end of the spectrum, albeit in a very schematic and simplified way: the approach which derives from neo-liberal orthodoxy and what we may call, for want of another name, "neo-populism". (See figure 3). The first emphasizes the need to achieve macroeconomic balances in open economies and allow markets to operate freely and without government interference; the second stresses the need for active government intervention to redistribute income and rural property, strengthen the smallholder sector and regulate (and in some cases block) processes which have an unfavourable environmental impact.

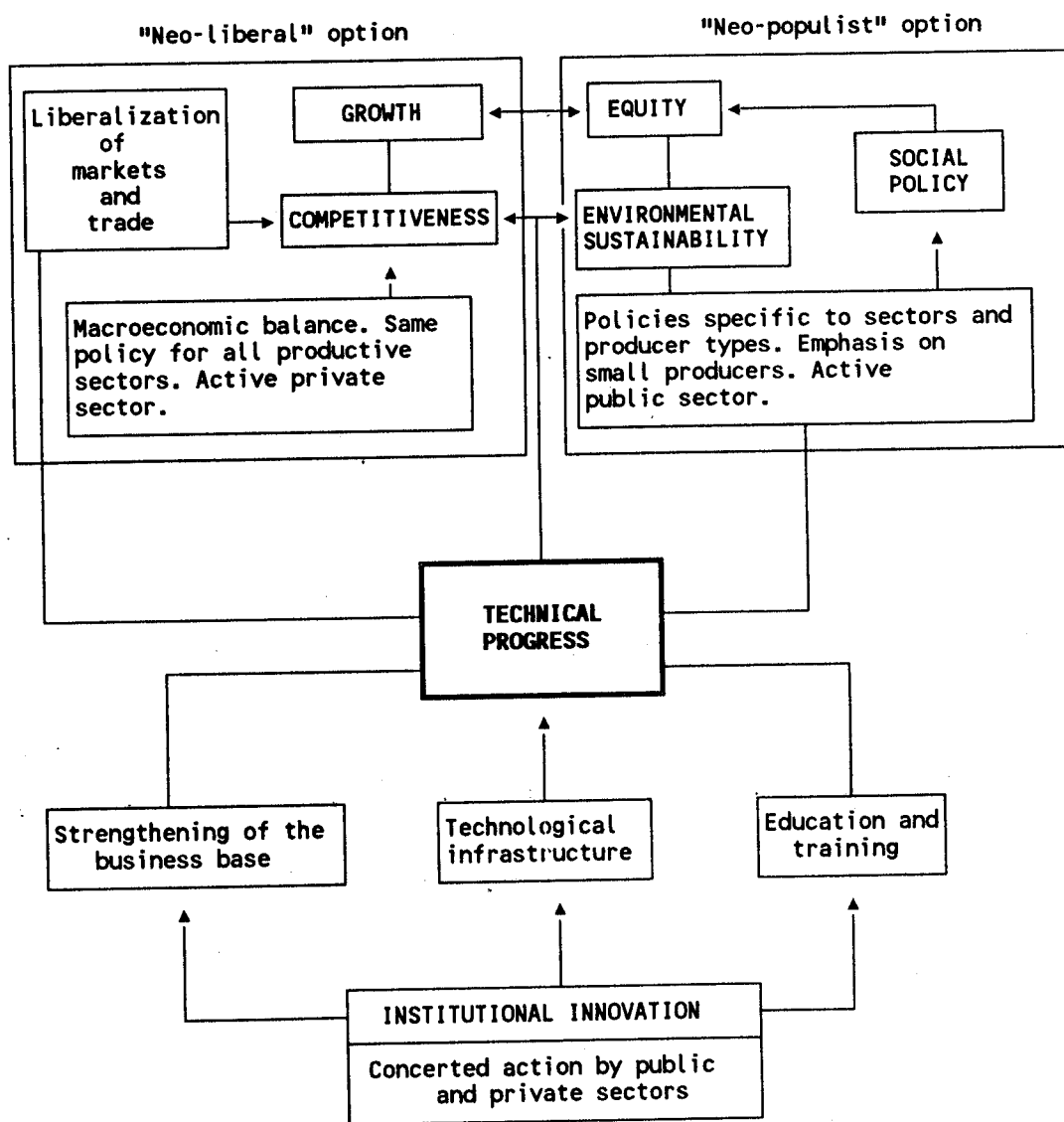
Market liberalization, as a universal formula, is called into question in rural areas where market failings are plain to see given that certain markets do not exist, are at an embryonic stage of development or are fragmented, or because a not inconsiderable proportion of the population does not have the purchasing power to express its need for products and inputs in the form of demand in the market. This does not of course mean that the enormous number of decisions taken by countless operators and coordinated in the market can be replaced by government agents of agencies, with the high costs in terms of efficiency this would involve; in particular, the temptation to disrupt the system of prices by administrative measures, however well intentioned, must be avoided. Strictly speaking, government intervention should consist in improving the efficiency with which transactions are carried out between the various parties involved, with the aim of ensuring that they reflect the costs and benefits to society as well as possible.

---

<sup>9</sup> F. Fajnzylber and A. Schejtman (1995); F. Fajnzylber (1989) and CEPAL (1990).

Figure 3

SCHEMATIC CONTRAST BETWEEN STRATEGIC OPTIONS AT EITHER END OF THE SPECTRUM



Source: Modified version of F. Fajnzylber, "International insertion and institutional innovation", CEPAL Review no. 44, Santiago de Chile, August 1991.

Again, although growth in itself does not guarantee equity, as is proven by the long period of economic growth unaccompanied by improvements in income distribution or reduction in poverty in several countries in the region, it is no less true that conditions of stagnation, recession or slow growth make it more difficult, if not impossible, to implement policies designed to ensure more equitable distribution of what society produces, a fact which throws into question the viability of the "populist" approach. (See box 20.)

#### **Box 20**

##### **MARKET-LED GROWTH NECESSARY BUT NOT SUFFICIENT**

Although growth with equity is possible, it is neither easy nor automatic. However great the consensus that exists on the importance of the market economy and a strong private sector in developing the economy – a consensus which ECLAC shares – it must be recognised that this is a necessary but not sufficient condition of growth, and less still of growth with equity. If it were, income per head in the region would not amount to a fifth or a tenth of the figure for developed countries, nor would 40% of its population live in poverty as is the case now, since for the first 120 at least of the 180 years during which the region has been independent (and for almost 450 of the 500 years which have passed since it was colonized) its economy has been organized around private property, the market system, and a small and passive state. This tells us that growth with equity requires not just a market economy, but also vigorous government action to take maximum advantage of all opportunities for taking supplementary action in pursuit of both objectives. (J. Ramos)

Albeit that both strategic approaches contain elements worth preserving, such as the links between openness, competitiveness and growth in the "neo-liberal" approach and the need for sectoral policies and programmes tailored to different types of producers in the "neo-populist" one, their main weakness lies, in the first place, in the failure to incorporate the need for dissemination of technical progress and, in the second place, in the anti- and pro-state ideological bias which characterizes one and the other respectively, since these prevent them from grasping the institutional innovations that can give rise to synergistic forms of public-private collaboration in a renewed institutional framework, in accordance with the dynamics of the internal and external changes now being experienced.

From what has been said so far certain inferences follow, and these should be stated before we begin to consider the possible advantages and risks involved in the various forms of agriculture based on contracts with small producers:

In general, most of the experiments analyzed were initiated by an agroindustry, by an international cooperation agency or by an NGO, without the involvement of any public promotional or regulatory policy. In cases where there was such involvement the initiatives concerned, with a few exceptions, predated the structural adjustment process or were put in place by government agencies which existed beforehand but whose activities had been reduced in scope.

The spontaneous emergence of forms of linkage appears, as suggested, to be due to market failings or to fragmented or simply non-existent markets, a situation typical of

rural life in the region. The links which arise to fill their place come to incorporate small producers when, for various reasons, there is no other alternative or when the transaction costs of other alternatives are excessively high, so that leaving this choice entirely up to the "free enterprise" of the company would constitute an abandonment of one of the possible routes towards modernizing a more or less significant proportion of the small farming sector.

It is indispensable for institutions to be renewed in a such a way that creative forms of collaboration between the public and private sectors can emerge and thus, in the specific area we are dealing with, agroindustry can be induced to act as an agent for channelling technology towards small farmers, not only because the functions which were carried out by the public sector in the past have been abandoned or seriously curtailed, but also because, regardless of the good intentions of those in charge of the process, many of the forms of technology transfer practised in the past did not produce the results hoped for.

In so far as the opportunities and restrictions faced by any partnership between business and small farmers will manifest themselves in specific ways at the local level, ways that cannot be perceived in the centres, it is vital: i) for the decision-making powers of public bodies to be decentralized and delegated to local agencies; ii) for human and material resources to be decentralized accordingly; iii) for the complementary functions of various government agencies to be integrated at a local level; iv) for private operators to be organized and v) for areas of collaboration to be created locally for concrete initiatives, albeit in the framework of national policies or programmes. It must be borne in mind that for operators to build on the advantages they possess and moderate the risks confronting them, as described below, what is needed are "small areas of territory and institutional partners very close at hand" (Borja, 1987).

## 2. Advantages and risks for those involved

A "perfect contract" is one in which the incentives governing the behaviour of the different parties involved lead them to "act and share information in such a way as to maximize the results of the association, with the assurance that their earnings will not be affected adversely by the (opportunistic) actions of any one of them" (King, 1992, p. 1220). Undoubtedly, this situation is rarely achievable if we consider the **asymmetries** between the parties in terms of information and power, the **uncertainty** characteristic of this type of activity and the **clash of interests** that frequently arises, which mean that the explicit expectations, intentions and behaviour with which those entering into the agreement start out do not correspond to the behaviour and results which subsequently emerge.

### a) Advantages for the agroindustry

- i) Delegation of the risks inherent in agricultural production to third parties;
- ii) avoidance of problems deriving from the employee relationship;



- iii) avoidance of the risk of giving grounds for expropriation under Land Reform legislation;
- iv) avoidance of the need to tie up capital in land;
- v) access to land suitable for cultivating the inputs it requires in areas to which access is unobtainable other than by agreement with producers in general or small producers, if this is how land is held in these areas;
- vi) costs reductions when it would be more expensive to carry out production itself, small producers being opted for when agricultural firms demand higher prices, even taking into account the extra transaction costs incurred when procuring supplies from such producers;
- vii) government incentives or legislation, respectively encouraging or requiring it to purchase from small producers.

b) Risks to the agroindustry

- i) Increasing transaction costs as the number of suppliers mounts (transportation, technical assistance, quality control, administration, etc.);
- ii) the complexity of contracts which, to ensure efficiency, include many variables (quality, delivery times, price) that are difficult to control and give rise to continual disputes;
- iii) sale to third parties when the price agreed is lower than the market price at the time of delivery;
- iv) diversion of supplies delivered by the agroindustry to uses other than those agreed on.

c) Advantages for the small producer

- i) A guaranteed market and, if the contract so stipulates, a price set in advance;
- ii) technical assistance enabling productivity per hectare to be increased;
- iii) introduction of higher value products;
- iv) better use of family labour since the products involved are generally more labour-intensive per hectare;
- v) the opportunity to extend the new knowledge gained to traditional products or other ones not included in the agreement;

- vi) in some cases, access to production equipment or machinery belonging to the agroindustry.

d) Risks to the producer

- i) Manipulation of quality standards to regulate prices and deliveries;
- ii) late acceptance to reduce prices;
- iii) linking of the contract to another one which is less advantageous to the producer, when the firm buys more than one product;
- iv) tendency to monoculture, with the dependency and vulnerability that stem from this;
- v) deficiencies in technical assistance, the effects of which become the responsibility of the producer and not the company providing it;
- vi) late payment or lack of clarity in settlements;
- vii) favouritism in allotting the most favourable planting dates.

3. Sequence of actions for building up and developing a relationship

Once an initiative has been launched to link small producers with an agroindustry, the subsequent gestation and development of this relationship will involve overcoming problems relating to the market, financing, technology, information and security, to avoid the risk of the initiative ending in failure, as has happened on innumerable occasions. The various experiences examined both in this study and in others dealing with the same subject suggest that a particular sequence of actions needs to be followed when tackling the problems mentioned, such as the one proposed by Marsh and Runsten (1994) in the case of the communal landholders in Mexico.

a) **Ensuring that a profitable market exists** is the first requirement, since many initiatives have failed through an activity being started up simply because the land was suitable, the technology existed and the product was believed to be more valuable than the traditional crop. The counterpart to this is a firm market and an agreement which includes safeguards against the risk of price fluctuations. (See box 21.)

**Box 21**

**LOSSES DUE TO LACK OF MARKET RESEARCH**

The Aceites Finos y Humectantes company entered into an association agreement with two communal landholdings producing avocados in the State of Michoacán (Mexico) without carrying out a proper evaluation of the market for the oil derived from this product. To encourage the initiative, the government provided a loan of 400 million pesos for which the communal landholders were the joint debtors. However, not only did the prices for the product not match up to those forecast when the agreement was signed and production started, but when the partnership was dissolved the landholders were left with the debt and 17 tonnes of raw avocado oil, for which they could find no buyer.

One factor common to all cases where partnerships have endured over time is the certainty of being able to place a predetermined volume of produce at prices calculated under terms established in advance and applied with a reasonable degree of transparency, even in those cases – far from exceptional – where the small producers have shown doubts as to whether the criteria were being applied fairly. The fact that such partnerships have continued even where other alternatives exist shows the importance attached by the producers to having a guaranteed market.

b) **Technical assistance and training.** In the transition from traditional crops to more valuable ones intended for more demanding markets, training is a crucial factor. Clearly, the cost of giving training and technical assistance to a group of small producers is greater than the cost that would be incurred if the agroindustry were to opt instead for a couple of large producers, so the latter alternative is preferred if it exists; if the agroindustry is to be persuaded to opt for the first, these costs must be compensated, at least for as long as it takes for the partnership to consolidate. In cases where these costs have been met by the firm, it has been found that: significant profits were expected, the option of turning to other types of producer did not exist or the wage and transaction costs involved in undertaking cultivation itself were very high. (See box 22.)

**Box 22**

**PRIVATE AND PUBLIC TRAINING INITIATIVES**

When it wished to introduce asparagus cultivation, ASAGRO found it was obliged to train the producers not only in irrigation techniques but in the cultivation of small plots with staggered ripening times. This, together with the need to offer sufficiently attractive prices and terms to ensure acceptance, meant that the initiative was almost unviable until a new government, once the producers were trained and organized, redefined the terms of the agreements, not without a degree of conflict with the producers. The experiences of FIRA in Mexico over a number of years, and more recently of INDAP in Chile, illustrate the encouraging effects that can be produced when government agencies take on all or part of the costs of the training required to get this type of initiative off the ground.

c) **Financing.** Once it has been ascertained that a profitable domestic or foreign market exists and that the technology is available, and a training programme has

been devised, it has to be borne in mind that the amount of investment needed to introduce and sustain crops with a high unitary value of the type considered particularly suitable for this type of partnership is significantly higher than that required for traditional crops: the costs per hectare can be more than twelve times greater as is the case, for example, with jalapeño chilies compared to maize in Guatemala, or with strawberries as against maize in Mexico. In view of this, access to credit becomes a necessary condition for activities to be started up. (See box 23.)

**Box 23**

**FINANCING AS A BARRIER**

Through its training and technical assistance programme, the Instituto Salvadoreño de Educación y Asesoría Cooperativa (ISEAC) helped a group of 700 smallholders to begin growing various vegetables so that, on the basis of an agreement with McCormick, they became regular suppliers to this company. The experience gained led the institute to explore the possibility of extending this type of partnership to another eight hundred producers, bringing them over to tabasco and jalapeño chili production, with McCormick to buy the produce once primary processing had been carried out. However, even though the market, technological know-how and organisation were all in place, lack of financing to complete the construction of the plant required prevented this potential from being realised.

d) **Organization.** It was pointed out earlier that when small producers are organized the transaction costs to the company or development agency can be reduced, as the processes of training, financing, supervision, etc. are facilitated. In addition to this, the producers gain a bargaining power with the company that they would not have as individuals. It should also be borne in mind that the greater the relative homogeneity of the family units making up the organization and the more democratic and transparent its leadership, the better are the chances of the organization and its links with the agroindustry being successful and durable.

e) **Reducing risk.** To some extent, contract agriculture is a mechanism for distributing risk between the agroindustry and the farmer. Generally speaking, whilst the company accepts the marketing risks, the producer accepts the cultivation risks. However, given how interdependent these processes are, and given that outside agencies may be involved, there is always scope for redistributing the risks depending on the negotiating power of the parties.

The risks faced by a small producer who gives over all or some of his land to a product destined for an agroindustry can come from various quarters, including those attributable to the risks inherent in agricultural production, price fluctuations, tardy arrival of credit and supplies, late delivery of a perishable product, etc. In partnership agreements, the terms under which risks are distributed between the agribusiness and the producer may or may not be spelt out, and this distribution may or may not be equitable. Nonetheless, whatever the situation, in the absence of any system of insurance and in so far as all or part of the risk may be borne by the small producer, there is a need to incorporate mechanisms to dampen the effects of an adverse result, given the grave implications that this may have for the subsistence of the family unit. Although crop diversification and the inclusion of some proportion of traditional crops and/or produce for

home consumption are ways of reducing risk, they may be inadequate and have to be supplemented by other measures. (See box 24.)

**Box 24**

**EFFECTIVE AND INEFFECTIVE INSURANCE MECHANISMS**

A partnership agreement between a horticultural firm and communal landholders in the State of Querétaro in Mexico provided, in one of its clauses, "a warranty for a minimum amount of two tonnes of maize for every hectare included in the contract in the event that losses (of the product to which the contract referred) are not attributable to producer negligence". By contrast, rice producers, affected by heavy and unexpected rainfall at harvest time which caused the grains to crystallize and part of the harvest to be lost, found that this contingency was not included in the insurance taken out with the Aseguradora Nacional (ANAGSA). Many of them, unable to pay back the loans they had taken out, were obliged to rent out their land.

f) **Information.** As will be shown, there is great asymmetry in access to information between agribusiness and small producers in respect not only of markets for supplies and technology, factors influencing price changes (above all in export prices), regulations on pesticides in foreign markets, etc. but also, on occasions, the effects that the use of particular inputs and the cultivation of particular products can have on the health of the producers themselves and the condition of their land. (See box 25.)

**Box 25**

**THE SEVERE CONSEQUENCES OF INSUFFICIENT INFORMATION**

A group of tomato producers in Panama and Ecuador, the latter having a contract with the Desarrollo Agropecuario company, suffered from an infestation of nematodes as a result of continuous cultivation without the necessary knowledge of proper crop rotation or chemical control. In some cases this infestation was so severe that farmers were obliged to sell their land and emigrate, while the company moved to uninfected areas.

4. **Main conclusions**

A number of considerations, arising out of what has been said so far, provide a basis for drawing up a strategy to modernize family farming, relying on the potential of agroindustry as an agent for change. These may be summarized as follows:

- i) a policy of *laissez faire*, even within a framework of reasonable macroeconomic balances, is not sufficient to bring about modernization in family farming and thus draw it into a process of growth with equity.
- ii) Certain agroindustrial and/or agribusiness centres have great power to bring about technical progress in their agricultural hinterland in general, and among small farmers in particular.

- iii) The public authorities have not in the past proved very successful when they have taken on the task of promoting technical progress in family farming. Under the conditions brought about by the adjustment process their powers have been even more limited, so there is a need to find formulas to increase the efficiency of government action in these new circumstances.
- iv) Concerted action by the public sector and agroindustries or agribusinesses, with greater capabilities in terms of promoting technical progress, appears to be the right way to realize this potential on a much more effective basis than can be achieved by spontaneous initiatives.

If the potential offered by stronger links between agroindustry and agriculture is to be realized, the following measures, among others, will be required:

- i) Decentralization of public administration and the resources that go with it, establishment of complementary functions at a local level and creation of local forums for joint action by the public and private sectors such as to ensure transparency and symmetry in relations between farm producers and agroindustry;
- ii) establishment of a set of measures to encourage agroindustries, chosen for their potential, to carry out the tasks of training and transferring technology to small producers with the ability to turn themselves into stable suppliers to these agroindustries. Among other things, these incentives must provide for subsidization of the higher transaction and training costs involved in creating this supplier base. One possible way of attaining these objectives would be to set up public funds or trusts for this purpose;
- iii) encouragement to small producers to organize, taking care that a reasonable degree of homogeneity exists between members in terms of potential, expectations and motivation. Such organizations, by making it easier for producers to communicate and cooperate in their work, allow them to present a united front to the agroindustry and also point the way to the establishment of cooperative agroindustries or mixed partnerships with private businesses;
- iv) the necessary degree of flexibility in applying the sequence of activities described earlier.

## Source of Tables

Table 1	Different characteristics of peasant and commercial agriculture (Schejtman, A., 1980)
Table 2	Mexico: types of family unit (ECLAC, 1989)
Table 3	Types of agroindustries
Table 4	Factors influencing the type of coordination chosen

## Source of Boxes

Box 1	Rural development programme for the Ecuadorian Sierra (De Janvry, A. and Glikman, P., 1991)
Box 2	Cuatro Pinos: the choice for small producers (von Braun, J. et al, 1989 and Carletto C. et al, 1996)
Box 3	Communal land as an area of expansion for agroindustry (Dutrenit, G. and Oliveira, A., 1991)
Box 4	Rural dairies in Ecuador (H. Valencia, ECLAC, 1995)
Box 5	Organic producers of Del Cabo (Runsten, D. and Key N., 1995)
Box 6	Loans to encourage association (Dutrenit, G. <i>op. cit.</i> )
Box 7	Producer organizations as intermediaries with agroindustry (Glover, D. and Kusterer, K., 1990)
Box 8	Components of a comprehensive agreement (Echenique, J., FAO, 1993)
Box 9	Partnership between commercial farmers and smallholders to overcome problems of scale and marketing in rice processing (Matsusaki, P., 1994)
Box 10	The case of poultry production in Brazil (Sorj, B., 1982)
Box 11	Kidney bean production in Chile (Echenique, J., <i>et al</i> , 1989)
Box 12	Industrial tomato production in Chile (Tomic, T., 1991)
Box 13	FIRA: relative importance of the different types of partnership (Dutrenit, G., <i>op. cit</i> )
Box 14	Technical progress applied to staple crops (for Chile, Echenique J., <i>op. cit</i> , von Braun, D. <i>et al</i> , 1989)
Box 15	Tomato paste in Peru (Figueroa, A., 1995)
Box 16	Contrasting forms of coordination for a similar product (for Chile, Tomic, T., 1991 and for Ecuador, Valencia, H., <i>op. cit</i> )
Box 17	Transaction costs as the reason for switching for small producers to large ones (March, R. and Runsten, D., 1994)
Box 18	Market failings and linked markets (Figueroa A., <i>op. cit</i> )
Box 19	Costs of formal credit to smallholders (Runsten, D. and Key, H., <i>op. cit</i> )
Box 20	Market-led growth necessary but no sufficient (Ramos, J., 1993)
Box 21	Losses due to lack of market research (oral report of Secretaría de la Reforma Agraria, 1993)
Box 22	Private and public training initiatives (for ASAGRO, Glover, D. and Kusterer, K., <i>op. cit</i> and for FIRA, Dutrenit, G., <i>op. cit</i> )
Box 23	Financing as a barrier (interview of Liudmila Ortega to the Director of ISEAC)
Box 24	Effective and ineffective insurance mechanisms (Dutrenit, G. and interview to Secretaría de Reforma Agraria, 1993)
Box 25	The severe consequences of insufficient information (Glover, D. and Kusterer, K., <i>op. cit</i> )

### **Source of Figures and Graph**

- |          |  |
|----------|--|
| Figure 1 | Options for linkage between agroindustry and small farmers (Runsten, D. and Key, N., 1995)               |
| Figure 2 | Factors causing forms of coordination to change (Dirven, M., Agricultural Development Unit, ECLAC, 1996) |
| Figure 3 | Schematic contrast between strategic options at either end of the spectrum (Fajnzylber, F., 1991)        |
| Graph 1  | Production and transaction costs   |



## REFERENCES

- Borja, J. (1987), "Descentralización del Estado, movimientos sociales y gestión local", Santiago, Chile, Ibero-American Cooperation Institute/ Latin American Faculty of Social Sciences/Latin American Social Sciences Council (ICI/FLACSO/CLACSO).
- Carletto, C. and others, "Knowledge, toxicity, and external shocks: The determinants of adoption and abandonment of non-traditional export crops by smallholders in Guatemala", Berkeley, University of California, April.
- ECLAC (Economic Commission for Latin America and the Caribbean) (1990), Changing Production Patterns with Social Equity: The Prime Task of Latin America and the Caribbean development in the 1990s (LC/G.1601-P), Santiago, Chile. United Nations publication, Sales N°: E/90.II.G.6.
- \_\_\_\_ (1982), Economía campesina y agricultura empresarial: tipología de productores del agro mexicano, Mexico, D.F., Siglo Veintiuno editores, fourth edition.
- De Janvry A. and P. Glikman (1991), "Encadenamientos de producción en la economía campesina en el Ecuador", International Fund for Agricultural Development/ Inter-American Institute for Cooperation on Agriculture (IFAD/IICA).
- Dutrénit G. and A. Oliveira (cons.) (1991), "Factores de éxito y fracaso de las asociaciones de empresarios agropecuarios y productores rurales en México. Análisis de casos", Mexico, D.F., Regional Office of FAO for Latin America and the Caribbean.
- Echenique J. and N. Rolando (1989), "La pequeña agricultura", Agraria, Santiago, Chile.
- Echenique, J. (cons.) (1993), "Las modalidades y proyecciones de la articulación entre la agroindustria y la pequeña agricultura en Chile", Santiago, Chile, Regional Office of FAO for Latin America and the Caribbean.
- Fajnzylber, F. (1991), "International insertion and institutional renewal", CEPAL Review, N° 44 (LC/G.1667-P), Santiago, Chile.
- \_\_\_\_ (1989), "Industrialization in Latin America: from the 'black box' to the 'empty box': A comparison of contemporary industrialization patterns", Cuadernos de la CEPAL series, N° 60 (LC/G.1534/Rev.1-P), Santiago, Chile.
- Fajnzylber, F. and A. Schejtman (1995), "Agricultura, industria y transformación productiva", América Latina a fines de siglo, José Luis Reyna (ed.), Fondo de Cultura Económica, first edition.
- Figueroa, A. (1981), La economía campesina de la sierra del Perú, Lima, Pontificia Universidad Católica del Perú.
- Glover, D. and K. Kusterer (1990), Small Farmers, Big Business: Contract Farming and Rural Development, Nueva York, Saint Martin's Press.

- King, R. (1992), "Management and financing of vertical coordination in agriculture: An overview", American Journal of Agricultural Economics, vol. 74, N° 5.
- Marsh, R. and D. Runsten (1994), "From gardens to exports: The potential for smallholder fruit and vegetable production in Mexico", March.
- Matzuzaki, P. (1994), "Participación campesina en la sociedad La Campana", Agroindustria y pequeña agricultura, La Paz, Food and Agriculture Organization of the United Nations/Latin American Institute for Social Research (FAO/ILDIS), S.R.L., La Paz.
- Ramos, J. (1993), "Growth crises and strategic turnarounds", CEPAL Review, N° 50 (LC/G.1767-P), Santiago, Chile.
- Runsten, D. and N. Key (cons.) (1995), "Contract farming in developing countries: Theoretical issues and analysis of some Mexican cases", Economic Commission for Latin America and the Caribbean (ECLAC), August, unpublished.
- Schejtman, A. (1980), "Peasant economy: internal logic, articulation and persistence", CEPAL Review, N° 11 (E/CEPAL/G.1123), Santiago, Chile.
- Sorj, B. y otros (1982), Camponeses e agroindústria, Rio de Janeiro, Colecao Agricultura e Sociedade.
- Tomic, T. (1991), "La agroindustria de la pasta de tomate para exportación en Chile", Cadenas agroexportadoras en Chile (LC/L.637), Santiago, Chile.
- Valencia, H. (cons.) (1995) "La industria lechera en el Ecuador", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), unpublished.
- Von Braun, David Hotchkiss and Maarten Immink (1989), "Non-traditional export crops in Guatemala: Effects on production, income, and nutrition", Washington, D.C., International Food Policy Research Institute.
- Williamson, O. (1979), "Transaction-cost economic", Handbook of Industrial Organization, vol. 1, R. Schmalensee and R.D. Willig (eds.), Amsterdam, Elsevier Science Publishers B.V.