

Chapter 2 - Theoretical understanding of contract farming

In the previous chapter, the concept of vertical coordination was introduced. In this chapter, the various vertical coordination mechanisms used by agro-processors and exporters to source the commodities is discussed. Contract farming through the lens of transaction cost economics approach is explained in section 2.3. Nature and functioning of contract farming are discussed in section 2.5.

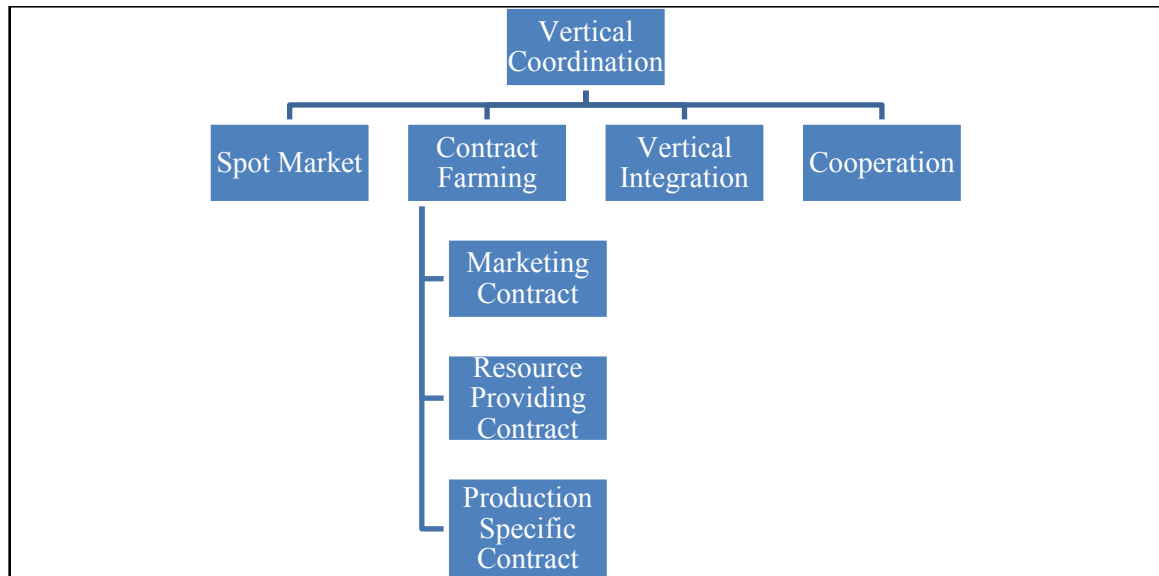
2.1 Vertical Coordination: an Introduction

. Vertical coordination is the general term that includes all the ways of harmonizing the vertical stages of production and marketing. This coordination occurs along the “vertical” chain of functions: production, grading, packaging, transport, processing, storage, and distribution. In this chapter and thesis, the focus is on the coordination mechanism of agro-processors at the production stage. As discussed in the previous chapter that agro-processing firms need continuous supply of raw materials at the right time, price and quantity. Therefore, in the agriculture sector, vertical coordination is required due to its distinctive characteristics like the sharp seasonal fluctuation of supply, delayed supply response, perishability of products, wide variation in quality and geographic dispersal of production (Minot, 1986, p. 5). According to Mighell and Jones (1963), vertical coordination is a process by which supply and demand are adjusted toward each other about product quantity, quality, location and time of delivery. King (1992) refers vertical coordination as “the alignment of direction and control across segments of a production/marketing system”. The factors that are aligned and controlled in vertical coordination are price, quality and terms of exchange (Peterson, Wyoski, & Harsh, 2001, p. 150). These terms of exchange refer to when and how to produce and/or to deliver output, payment terms, penalties in case of default, etc.

2.2 Types of vertical coordination mechanisms

The market-price system, vertical integration, contracting and cooperation singly or in combination are some of the alternative means of coordination (Mighell & Jones, 1963, p. 1). Figure 2.1 gives a diagrammatic presentation of the kinds of vertical coordination.

Figure 2.1 Types of Vertical Coordination Arrangements



Source: Adapted from Mighell and Jones (1963)

2.2.1. Market price system

The market price system is also referred to as open spot markets in which there are no advance agreements about purchase or sale of goods and services. Open spot markets are the simplest institutional context for vertical coordination, in which transactions are arranged and completed relatively quickly and involve no continuing obligations on either side. According to Minot (1986, p. 6), spot markets are highly efficient when conditions approach perfect competition, i.e., relatively homogeneous product, good information about the market and, many small buyers and sellers so that, there is no participant with market power to set the prices. In spot markets, vertical coordination is accomplished primarily through the price mechanism. Price provides an incentive to buyers and sellers in such a way that demand is equal to supply.

In India open spot markets for agricultural commodities is mainly carried out through APMC markets. For e.g., rice millers in India purchase rice mostly from APMC markets (Banerji & Meenakshi, 2004). Similarly, many organized retailers selling fruits and vegetables procure from APMC markets. Therefore, spot markets seem to work well for Indian rice millers to procure the rice, as the product being homogenous and available in plenty. However, the reality may be different for some crops especially, in horticulture. As Collins, Mueller, and Birch (1959) have pointed, prices may not always communicate clearly the requirements of processors needed for mass-production. In the case of India, Singh and Asokan (2005) mention that the presence of a large number of

intermediaries in supply chain results in the weak transformation of price and quality to the farmer. For e.g., grapes exporter would need grapes which are of specific standards set by the importing country. Also, potato chips manufacturer needs chipgrade potatoes which is neither available in APMC markets nor available throughout the year. Moreover, it should be of a certain grade, size, and technical specifications as per the manufacturing requirements. Therefore, spot markets exhibit certain deficiencies, (a) in transferring product information especially technical and food safety norms required in the exporting countries, (b) in transferring marketing information, regarding quality, timing, and future demand, and (c) in overcoming problems resulting from imperfect input markets. These failures are common in agriculture, as supply response is slow, as production is seasonal. Overall, the open spot markets may work well for some commodities but may not in the case of some commodities where it needs to be supplemented or replaced by other coordinating arrangements (Mighell & Jones, 1963).

2.2.2. Vertical integration

Vertical integration is an institutional solution to the problems of spot market failure as the firm itself undertakes all the functions regarding the production and marketing (Minot, 1986, p. 18). From the perspective of agriculture, under vertical integration, an agro-processing firm shall produce the required raw materials by acquiring or leasing in sufficient land (Singh & Asokan, 2005). Vertical integration seems to perform better where the quality of the raw materials or commodities have to be of the specific. For instance, when local growers are unfamiliar with the production technology and when supplies must be carefully scheduled. Many ayurvedic firms, need special herbs which they grow in their own or leased in the land as they want to avoid the risk of contamination. If economies of scale are large and agribusiness firm may not manage it completely efficiently, then vertical integration may not be very efficient. In this case, contract exchange can be seen as the intermediate co-ordination mechanism carried out efficiently.

Vertical coordination, vertical integration and contract production are often used interchangeably especially in American literature (Allen, 1972; Cramer and Jensen, 1988). However, British literature makes a distinction between contract farming and vertical integration, whereby vertical integration is meant that processors grow a large part of the raw materials required of the own (Rehber, 1998).

2.2.3. Contract farming

The concept of contract farming was introduced in Section 1.2. Contract farming as a governance strategy lies primarily in between the two ends of vertical coordination continuum i.e. between spot markets (in which supply and demand are coordinated through prices alone) and vertical integration (in which supply and demand are coordinated by having one firm, carrying out multiple stages in the market channel) (Minot N. , 2007, p. 1). Contract farming is a form of vertical coordination between the producer and contractor (processing or marketing firm or a third party such as input manufacturing or service provider⁶) where latter directly influences the production decisions under the obligation of purchasing the produce. Contracting is most likely when coordination requirements are high. For instance, in the case for commodities which are highly perishable, high quality specificity⁷, and/or exported, which have large input requirement and are labor intensive and/or involve careful husbandry, high value to weight ratio and which have economies of scale in production and marketing. Moreover, contract farming, which normally incorporates new agricultural practices, needs constant feedback and communication with farmers. Such interaction between farmer and the firm is needed especially for the products that are destined for export markets, which require traceability and/or food certification. There farmers need extension services and have to be advised on acceptable plant protection measures, new varieties, etc. (Delgado, Narrod, & M. Tiongco, 2008; Eaton & Shepherd, 2001, p.115; Hobbs & Young, 2001). Contract farming is a strategy by agribusiness firms through which farmers remain a source of reliable and inexpensive raw materials (Singh & Asokan, 2005). Nature and functioning of contracts is discussed in detail in section 2.5

2.2.4. Cooperation

Farmer cooperative is also an instrument using which farmers can exercise joint control over production and marketing stages preceding or following production on the firm' (Mighell & Jones, 1963, p. 2). Farmers come together and aggregate their output

⁶ To name a few agri-input manufactures which are also involved in contract farming in India are Rallies Limited (a pesticide manufacturer), JISL, Deepak Fertilizers, etc. these firms provide extension service to the growers and mostly encourage farmers to adopt good agricultural practices using their respective firms' products (Deepak Fertilisers and Petrochemicals Corporation Ltd., 2014; Ferroni & Zhou, 2012; Singh & Asokan, 2005)

⁷ High quality specificity refer to color, size, grade, Total soluble solids (TSS), etc. of the commodity. These things are very important for processors as their products consistency is dependent on these qualitative parameters of agro-commodities.

via a cooperative, which essentially makes them one larger supplier from the firm's perspective. For e.g., there are many village level or district level cooperatives supplying milk to Gujarat Cooperative Milk Marketing Federation Ltd. (Gandhi & Jain, 2011). Staal, Delgado, and Nicholson (1997) described the prevalence of specialised producer co-operatives, such as dairy co-operatives that process and market milk in East Africa. Delgado (1999, p. 177) mentions that cooperatives often play a similar role to CFAs in facilitating access to technology, information, services, and markets, especially for perishable items.

Cooperatives can also act as an intermediary between the processing firms and farmers. These kinds of cooperative are also referred to marketing cooperative. In South Africa, the companies in the snacks industry procure maize (e.g., GM-free, other) through cooperative, which acted as an intermediary between the processor and the farmers (Vermeulen, Kirsten, & Sartorius, 2008, p. 214). Similarly, in China's Shandong province, Wang, Zhang, and Wu (2011, p. 496) found the prevalence of cooperatives supplying vegetable crops to firm. Farmers sell their crops to their cooperatives, which in turn pass it on to the firm. The reason being firms do not want to sign contracts directly with a large number of individual small farmers because of the high transaction costs.

2.3 Choice of vertical coordination mechanism: Transaction cost economics approach

Vertical coordination may not be an end in itself but is a means to accomplish some objective. The objective could be any task such as procuring the raw materials or selling the output. One of the approach to understanding, which type of vertical coordination mechanisms should be adopted and the complications arising from the same is explained within the transaction cost economics (TCE) framework.

Whether, firm wants to buy its raw materials from the spot market or customized made as per the specifications, all this depends on the business strategy of the firm (Mighell & Jones, 1963). Coase (1937) contributed to literature of economics organisation by developing a framework to predict whether the firm would 'make or buy', i.e., whether the firm would perform certain economic tasks by itself or through markets. Using the theory of marginalism, Coase explains that firm would undertake those operations, whose costs borne by the firm are lesser compared to the costs of carrying out the same transaction by means of an exchange in the open market or through

another firm (p. 395). Coase introduces transaction costs, whereby he mentions that alongside production costs, there are costs for preparing, entering into and monitoring the execution of all kinds of contracts, as well as costs for implementing allocative measures within firms in a corresponding way. Coase (1937) and Williamson (1985) considered that economising on transactions costs, by assigning transactions to those different governance structure (market exchange, own production or arrange it through other firm), whichever would cost less. This principle is one of the important basis of theory of TCE.

Coase (1937) and Williamson (1985) considered the firms and markets as alternative means of economic organisation. TCE applies to study of all kinds of economic organization. The focus of TCE runs from market exchange at one end to centralized hierarchical organisation at the other, with the intermediate modes like relational contracting filling in between (Williamson, 1985, p. 16). Relational contracting is in contrast with the neoclassical system, where the reference point for effecting adaptations remains the original agreement between the two parties. However in relational contracting the “entire relation as it is developed through time. This may or may not include an original agreement, and if it does, may or may not result in great deference being given it” (Macneil (1978, p. 890) as cited in Williamson (1985, p. 72). Relational contracting is associated with forms of procurement that place more reliance on reputation and trust in small numbers contracting (Parker & Hartley, 2003, p. 101). According to Baker, Gibbons, and Murphy (2002, p. 39), relational contracts are informal agreements involving unwritten codes of conduct that powerfully affect the behaviours of firms. Eaton, Meijerink, and Bijman (2008) term relational contracts as self-enforcing contracts, whereby the parties have economic and social incentives to honour it in all contingencies. In case of India, contract farming of agriculture and livestock commodities is line with the relational contract theory, given the fact the problems associated with legal ordering.

2.3.1 Assumptions of TCE

TCE is more micro analytic and self-conscious about its behavioural assumptions⁸. When dealing with contracts, the assumption of bounded rationality helps us to

⁸ TCE assumes humans are subject to bounded rationality (i.e., they are intendedly rational, but in a limited way) and opportunism, which is a condition of self-interest seeking with guile (Simon, 1961, p. xxiv; Williamson, 1985, p. 30)

understand the existence of incomplete contracts. As bounded rationality makes it impossible or prohibitively costly to attempt to write the comprehensive contract. Cox (1958) cited in Williamson, (1975, p. 75) mentions that one cannot simply spell out the each and every detail of life in an industrial setting. Similarly, Hart (1995) cited in Gow, Streeter, & Swinnen (2000, p. 254)] mentions “contracts are naturally incomplete as agents find it difficult and expensive to foresee all possible contingencies and to enforce these contracts, especially when outcomes are unobservable or non-verifiable by a third party”. However, parties try to make provisions for unforeseeable contingencies in contracts in a general and flexible manner. While assumption of uncertainty and opportunism makes us aware that ex-post institutions especially private ordering (kind of arbitration machinery) matter as compared to court ordering.

2.3.2 Asset Specificity

TCE also focusses on asset specificity and uncertainty involved in transactions. Asset specificity as a concept important in functioning of relational contracting type of vertical coordination mechanisms. According to Williamson (1985, p. 55), asset specificity refers to “durable investments that are undertaken in support of particular transactions, the opportunity costs of which investments is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated.” When both the parties have made some transaction specific investments, then continuity of relationship is valued by them and they work towards it. As both the parties, do not want to jeopardise the relationship, as finding a new business partner entails time and transaction costs.

Asset specificity could be non-specific, mixed, or highly specific. Therefore, highly specific asset specificity may lead to self-enforcing contracts, as breaking down of relationship would lead to losses. For e.g., in case of broiler production, farmers would have made investments in infrastructure such as shed, brooders, lighting, feeders, drinkers, etc. such investments are specialized and do not have alternate uses. Therefore, in absence of other broiler contracting firms, farm firm would value continuity of relationship. Whereas when assets undertaken pertaining to transactions are not specific, then the parties would be ready to leave the contractual relationship, if it is not beneficial. For e.g., farmers investing in drip irrigation for CGP cultivation under contract is a non-specific or mixed type. Here, if the farmer finds CGP cultivation under

contract less profitable compared to the other crops. Then farmers can switch over to other crop cultivation and use the irrigation investment for other crops.

Williamson (1983) also distinguishes asset specificity as site specificity, physical asset specificity, human asset specificity, and dedicated assets. Site specificity refers to assets that are highly immobile. For e.g., land allocated for farming or broiler production or farm building or shed built on farm, such assets are immobile, and once a set-up is made its costs and/or reallocation costs are very high.

Physical asset specificity refers to when one or both parties to the transaction make investments in equipment and machinery that involves design characteristics specific to the transaction and which have lower values in alternative uses (Williamson, 1983, p. 526). Examples of physical asset specificity for farmers refers to fencing undertaken for grape cultivation or potato planters and harvesters for potato cultivation or investments in irrigation facilities like wells, pipeline, submersible pumps, drip and sprinklers. Physical asset specificity is going to be important if large fraction of production requirement is associated with specific supplier.

Human asset specificity refer to investments in relationship-specific human capital (human skills) that often arise through a learning-by-doing process (Williamson, 1983, p. 526). In case of agriculture, if the contracting firm contract with a farmer and who adopts a new crop, then the contracting firm has to train him with agriculture practices needed for crop cultivation. The farmer gains those skills through learning by-doing. If the farmers breaks the relationship, then the contracting firm would have to search for other farmers and need to train them as well. These would involve certain transaction costs.

Another asset specificity relates to dedicated assets, i.e. a discrete investment in a plant that cannot readily be put to work for other purposes. These investments are specifically made by a supplier with the intent to be used in the process with the prospect of selling a significant amount of product to a particular customer. If the contract were terminated prematurely, it would leave the supplier with significant excess capacity (Williamson, 1983, p. 526). In agriculture, dedicated assets include tree crops, livestock structures, crop processing facilities, and specialized machinery. Key and Runsten (1999) mention that high asset specificity on the part of firms serves to discourage firms from contract farming, while high asset specificity on the part of farmers has the opposite effect (p. 390). Investment in specific assets by the farmer, may lead to becoming overly

dependent on their contract crops, which may lead to a loss in bargaining power versus the firm. Thus, contracting firms may take advantage of such situation and exploit farmers (Warning & Key, 2002, p. 256).

Another type of asset specificity was added by Malone, Yates, and Benjamin (1987, p. 486) to Williamson's list was time specificity. An asset is time specific if its value is highly dependent on its reaching the user within a specified, relatively limited period. This concept is very relevant in the case of agriculture very perishability is high. For e.g., a perishable commodity like milk will spoil unless it arrives at its processing plant within a short time after its production. Similarly, in the case of sugarcane, the recovery reduces, if the sugarcane is not harvested and reached to sugar factory within a certain time frame.

2.4 Advantages and disadvantages of vertical coordination mechanisms: Indian agriculture perspective

Advantages and disadvantages of vertical coordination mechanisms based on price, quantity, quality and timeliness parameters are presented in Table 2.1. Based on section 2.2 and Table 2.1, it seems contract farming is better than vertical integration from the cost perspective. This is so because, as firms would have to buy or hire resources to produce the commodities, which may involve additional transaction costs. Many times, it would not be feasible to buy or lease out land if the requirement of commodities is high. This, is when the firm would prefer to procure through intermediary mechanisms' such as procuring through spot markets or contract farming or cooperatives. However, in India, except milk and sugar, cooperatives, there are few functional across some commodities. As forming and functioning of cooperatives requires dynamic leadership and commitment of all the members. Dynamic and committed leaders in cooperatives may not be present in reality.

Contract farming is better than spot markets on quantity, quality and timeliness parameters. But under perfect market conditions⁹, spot markets are more efficient especially due to costing considerations, hence, then there contract farming would not be

⁹ In economics, perfect market involves homogenous products, perfect market information i.e., there is a perfect information, on prices and quality of products are assumed to be known to all consumers and producers. Perfect market further includes where there is no participant with market power to set the prices, no barrier to entry and exit for the buyers and seller, equal access to technology for the producers, etc. (Stonier & Haque, 1980)

needed (Singh & Asokan, 2005, p. 12). As organizing contract farming, also has its set of transaction costs. Transaction costs of agribusiness processor refer to the costs of searching for suppliers, establishing a contractual relationship, training, providing raw materials, monitoring the production process, and procurement, etc. (Sartorius & Kirsten, 2007, p. 642).

Table 2.1: Advantages and disadvantages of procurement options

	Price	Quantity	Quality	Timeliness
Spot markets	Low	Uncertain	Uncertain	Low
Vertical integration	High	Certain	Certain	High
Contract farming	low	Certain	Certain	High
Cooperation	Low	Certain	Certain	High

Source: Adapted from Singh and Asokan (2005, p. 12)

2.5 Nature and functioning of contracts

2.5.1 Process of contracting

Barrett et al. (2012) provide a conceptual framework for the process of how the firm contracts with the farmer.

Stage 1: Firm choice of a procurement location

Initially the firm look for the regions based on agro-climatic suitability, proximity to the processing plant, irrigation facilities. After selection of a region, companies identifies the villages which are suitable for cultivation based on soil, cropping pattern, ownership of irrigation, labour availability, and access to the motorable road (Barrett et al. 2012, p. 717; Singh & Asokan, 2005). Barrett et al. and Singh and Asokan argue that firms generally would procure from regions whose expected profits are greater than the other regions', balancing the risk management and quality considerations according to the firm's priorities. The firm would only consider regions that yield expected profits exceeding the firm's reservation level, i.e., that it would satisfy the firm's participation constraint'. As was observed in the case of gherkin, the company adopted cluster approach for procurement. Companies in gherkin strategically selected those villages which were not dominated by horticulture crops. The reason being these farmers increase or decrease the acreage of crops based on the expected market trend. Such kind of behaviour would not have suited the company's requirement as it wanted to have famers who can provide a steady supply of gherkins (Singh & Asokan, 2005).

Stage 2: Firm contract offer

After selection of the region, firms try to identify best contracting partners. In the case of gherkin in Karnataka, the company identified the influential people in the village, and through them, they tried to reaching out to other farmers. It is observed that where quality control is important to firm it takes great care in the selection of the contract farmer. As was observed in basmati paddy, safflower, where quality control was not important, the company welcomed whosoever evinces the interest in growing crop. However, companies do verify progressiveness, resourcefulness, and commitment of farmer towards contract (Singh & Asokan, 2005). Different forms and nature of contracts are dealt in the section 2.5.2.

Stage 3: Farmers' contract acceptance

A farmer accepts the contract if his subjective perception of welfare is greater in participating in the contract than he not doing so (Barrett et al., 2012, p. 719)

Stage 4: Firm and farmer decision to contract

Having agreed on a contract, the firm and the farmer each decide whether to honour or renege on the agreement. A farmer can renege on contract by selling the total or part of produce to other firm or in alternate markets. Farmers also have opportunities to breach by diverting some of the firm-provided inputs to non-contracted crops, by not adhering to the production schedule agreed upon with the firm or by failing to deliver the agreed volume and quality on time. The firm may breach by not showing up to collect contracted harvest, by inappropriately rejecting produce, by lowering the sales price after the supplier has incurred production costs, or by delaying or defaulting on final payment. The opportunities for breach of contract are many because of the multidimensional nature of contract terms and because of the time lags and the relationship-specific investments involved (Barrett et al., 2012, p. 720).

After the transaction in the contract is complete, both the farmer and firm update their prior belief based on the contract performance before reevaluating the decision whether to follow the stages of 1-4 again. This part of farmers participating and exiting from contract has been dealt in section 3.1.

2.5.2 Nature of Contracts

Contracts can be distinguished through the concept of timing. For e.g., there are the contracts between the firms made before production is undertaken or the arrangements for sales made between stages or after production is complete. The advance contract method is sometimes called forward contracting or contract production, whereas the later or the method in which no advance agreements are involved is often called open production. For e.g., there are firms who procure from farmers directly at the time of harvest. Firms' employees or agents may visit the farms and then try to fix the sale. Contract production is production for a forward market. A forward market is one in which transactions have to do with goods and services to be delivered at a later time. A standard farming contract regulates in advance price, production practices, product quality, and credit facilities, if any.

Contract farming could range from just buying certain quantity at a pre-negotiated price to have complete control over production from supplying inputs to harvesting. Classification of agricultural production contracts was developed by Mighell and Jones (1963, p. 13-14) by the number of functional stages and degree of coordination¹⁰:

2.5.2.1. Market-specification contracts:

In market-specification contracts, only quality standards of the commodity are specified and input provision is often minimal (Eaton & Shepherd, 2001). The farmer transfers the part of the risk and management function to the contractor. The farmer becomes more certain of his market for at least one production period, and the price or the basis for the price is stated. Thus, farmer need not worry about finding the buyer for the produce, and also price risks are reduced. However, the farmer maintains most of the decision rights over his farming activities. Farmer continues to make the production operating decisions, provides and finances inputs, assumes the uncertainties of production. The management function transferred, is limited to that part related to the decisions as to what shall be produced and as to when and where it is to be marketed. But some functions transferred are small relative to the number remaining in the farm firm.

2.5.2.2. Production-Management Contract:

¹⁰ Degree of coordination means the number of farmers' decisions controlled by firm (Collins et al. 1959, p. 61).

Production-management contracts are like market-specification contracts but call for more direct participation by the contractor in production management. Such contracts are adopted when the quality of output is important to the buyer. Such kind of contract gives more control to the buyer than the market specification contract, as the buyer would inspect production processes and specify input usage. Under this type of contract, farmers agree to follow precise production methods and input regimes; he is willing to do so because the buyer takes on most of the market risks and some of the production risks (Eaton et al. 2008). The farmer needs the assistance of the firm especially when new crop or technology is adopted.

2.5.2.3. Resource-providing contracts:

In resource-providing contracts, the contracting firm not only furnishes a market and participates in production management, but also provides important inputs like seeds, plant protection chemicals, etc. Providing inputs is a way of providing in-kind credit, the cost of which is recovered either partly or fully at the start or upon product delivery. How much decision-rights and risk is transfer from the farmer to the buyer, depends on the actual terms of the contract (Eaton et al., 2008, p. 24). Examples of resource providing contracts are common in broiler contracts where firm provides day-old chicks, feed, veterinary products, other chemicals, extension and advice to broiler growers (Kalamakar, 2011; Ramaswami et al., 2006; Simmons et al., 2005; Singh & Asokan, 2005). Broiler producers in India, relinquish to the contractor, the function of providing most of the operating resources, such as chicks, feed, and medicine. The contractor owns the commodity produced and is responsible for its sale. The contractor assumes the additional risk of losing his investment inputs. Because of this, he usually controls production more closely and claims most of any profits. Thus, regarding the number of stages or functions that the traditional farm firm transfers to the processing or marketing firm, this kind of coordination is next to complete vertical integration.

A form of the contract depends on the economic characteristics of a good or services traded (Williamson (1975) cited in (MacLeod, 2007)). The type of the contract and the degree of coordination depend on the nature of the commodity, the company's objective, technological and market conditions, etc. (Asokan & Singh, 2005; Mueller & Collins, 1957). For instance, in vegetable and fruit processing industry, quality attributes such as colour, size, the degree of maturity and absence of insect damage, together with

the timing and rate of deliveries to the plant would be vital for the final good production. Thus, if the need for quality control for the farmer produce is high, greater would be the degree of coordination between farm and firm.

Stigler (1951) argues that size and the state of development of industry also strongly influences the extent of degree of coordination. When market exists for seed or other inputs required for the produce of that particular commodity, the company may then only go for market specification contract. Examples of such contracts were observed in the case of basmati paddy, safflower (Singh & Asokan, 2005); organic banana and cotton (Sarkar, 2003). But when the market for seed or other inputs is thin or does not exist, then the company would like to go in for resource providing contracts by providing the required inputs on entirely or partly on cash or credit. Planting material is provided by the company (not necessary other inputs are provided) which is common for crops viz., seed farming; gherkin in AP, Karnataka; potatoes, cotton in Tamil Nadu (TN) (MANAGE, 2003), white onion in Maharashtra (Jain, 2008), etc. Birthal et al. (2008) reported that in the case of dairy in Rajasthan, milk processors followed market specification or resource providing contract or combination of both of them.

2.5.3 Formal or informal contract

Contracts may take the form of an informal (oral) agreement or of a formal (written) agreement. Generally, written contract clearly mentions the role of the farmer and company. Acreage, sowing dates, inputs, and services provided by the company, contract duration, details of the delivery arrangement, rates for different grades of produce, payment schedule, a method of payment, conflict resolution mechanisms, etc. Most of the vegetable and fruit contracts are exclusive in nature, i.e., a farmer cannot sell the produce to any other party without the consent of the contracting party (Narayanan, 2011; Roy, 1963; Singh & Asokan, 2005).

Written contracts were also reported in the case of poplar (Deshpande, 2005), and various vegetables in Punjab by FieldFresh (Pandey, Sudhir, Ahuja, & Tewari, 2010), marigold in TN (Narayanan, 2011). Singh and Asokan (2005) in their study reported that written contracts for many of the crops were in vernacular languages viz. Kannada for gherkin in Karnataka, Tamil or Telugu for broilers in TN, Gurumukhi for roses and tomatoes in Punjab. Out of these only roses and broiler contracts were in stamp paper rest on ordinary paper. Thus, in many crops, as mentioned above, contracts were not

legally binding. PepsiCo experienced in case of tomatoes in Punjab that written agreement did not serve any additional purpose than just to record the relation. Thus it had oral contracts (verbal understanding) in the case of basmati paddy. Oral contracts were also observed in crops like gherkin, oil palm in AP, (Dev & Rao, 2005), baby corn, chillies, maize, in Karnataka (Nagaraj, Chandrakanth, Chengappa, Roopa, & Chandakavate, 2008), papaya and broilers in TN (Narayanan, 2011). It is observed that where quality control is not very important, companies tend to follow oral contracts.

Narayanan (2011) in her literature review says the contract is a very broad representation of the relationship, where agreements on particular aspects are no more than notional. Given the nature of farming, it is impossible to specify every contingency in a way, thus rendering contracts incomplete (Morvaridi, 1995). Moreover, across the globe, it has been observed written contracts were seldom legally enforceable (Eaton & Shepherd, 2001; Minten, Randrianarison, & Swinnen, 2009; Narayanan, 2011; Singh, 2002). Thus, companies try to build the relationship with farmers which is based not on written agreement but trust.

2.6 Concluding remarks

In this chapter, the ways in which agro-processors procure their raw materials, or agribusinesses fulfil their requirement is explored, and contract farming is one of them. Contract farming has to be viewed from the relational contracting theory within TCE literature. TCE is principally concerned with finding out which governance structures are more useful for which type of transaction (Williamson, 1985, p. 46).

The strategy to procure the commodities from spot market or through contract farming is purely that of the firm. Which kind of vertical coordination mechanism is chosen by the firm, depends on kind of market imperfections, firm faces in regard to commodities required?

Literature so far suggests that CFAs are often informal and are based on trust. In the next chapter, the past literature about research questions (section 1.4) is reviewed.