



Coordination in the Irish Beef Sector

– Analyses of partnership arrangements

Martin Andersson

*SLU, Institutionen för ekonomi
Företagsekonomi
D-nivå, 20 poäng*

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Samordning i den irländska nötköttssektorn – analys av samarbetsformer

Martin Andersson

Supervisor: Jerker Nilsson

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Sveriges lantbruksuniversitet
Institutionen för ekonomi
Box 7013
750 07 UPPSALA

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Uppsala, March 2006
Martin Andersson

Summary

Beef production is an important part of the Irish food sector. There are more than one million dairy cows and suckler cows in the country respectively. In 2002 the beef industry's annual turnover was €3.8 billion. In the same year the self sufficiency of beef in Ireland was almost 900 percent which makes the country one of the largest beef exporters in Europe.

The business relation between the primary producers and the processors is generally a transactional approach with price as means of control. Despite the large export share, there are indications that the type of solution is not optimizing the profitability in the beef production chain. Better coordination can therefore result in a better profitability.

The aim of the study is to *empirically investigate and theoretically explain partial vertical integration in different forms of partnership arrangements between primary producers and processors in Irish beef industry*. The project is conducted with financial support from LRF (the Swedish Farmers' Association) and *Kungl. Skogs- och Lantbruksakademien* (The Royal Swedish Academy of Agriculture and Forestry). With the help of Irish expertise four successful partnerships in the Irish beef sector were chosen as study objects. During four weeks representatives from the partnerships were interviewed in Ireland.

The processors in the partnerships are paying the farmers a fixed bonus for the beef in addition to the variable market price. The level of the bonus is higher during times of year when production costs are higher. All the partnerships are based on monetary incentives for the producer to deliver cattle. If the price is too low the producers can without prior notice, stop delivering cattle which motivates the industry to keep the price at a high level.

The production in one of the partnerships are regulated by the processor while the other partnerships give the producer the freedom to choose production method as long as the product meets the requirements set up by the processor. The price risk is shared between the producers and the processors by the use of market price and bonus. Fixed prices are preferred by the producers by the risk for the processors for that is too high due to low margins in processing.

The producers are motivated by the fact that the bonus is only paid if the cattle meet certain specification. In one of the partnerships the processor provides free advice to the producers in order to get more consistency in the cattle delivered. All the contracts are kept simple and do not require specific investments that will lock up the producers. Renegotiations are carried out regularly and the production is adjusted by market signals from the retail level.

In two of the cases the producers are organised in a producer group and the price negotiations for all members are conducted by a representative, which lowers the costs of negotiations and gives the producers a better situation of negotiation. A lot of things are coordinated without written contract in order to minimize the risk of expensive law suits. If a conflict occurs, the parties will rather quit the co-operation.

Sammanfattning

Nötköttsproduktionen är en viktig del av Irlands livsmedelsproduktion. Över en miljon varde-
ra av dikor och mjölkkor producerar råvara till en industri som år 2002 omsatte 3,8 miljarder
euro. Samma år hade Irland en självförsörjandegrad av nötkött på nära 900 procent vilket gör
landet till en av de största exportörerna av nötkött i Europa.

Affärsrelationen mellan primärproducenterna och industrin är oftast en marknadslösning med
pris som det absolut viktigaste styrmedlet. Trots den stora exportandelen finns det indikatio-
ner på att denna lösning inte ger en optimal lönsamhet i produktionskedjan. Bättre samord-
ning kan i vissa fall leda till en bättre lönsamhet.

Studiens syfte är att *empiriskt undersöka och teoretiskt förklara den partiella vertikala integ-
rationen mellan primärproducenter och processindustrin i olika samarbetsformer inom den
Irländska nötköttssektorn*. Projektet är genomfört med ekonomiskt stöd från *LRF* och *Kungl.
Skogs- och Lantbruksakademien*. Med hjälp av representanter från University College Dublin
valdes fyra väl fungerande samarbeten ut som studieobjekt. Under en period av fyra veckor
intervjuades representanter från de olika studieobjekten på plats på Irland.

I samtliga samarbeten betalas en fast bonus ut som ett tillägg på grundpriset, vilket varierar
över säsongen. Alla samarbeten är baserade på att det hela tiden finns starka ekonomiska inci-
tament för producenterna att leverera djur. Om priset är för dåligt kan de utan förvarning sluta
leverera vilket motiverar industrin att hålla ett högt pris

I ett av fallen är produktionen detaljstyrd från slakteriet medan de andra samarbetena ger stor
frihet för primärproducenten att utforma produktionen så länge slutprodukten uppfyller de
uppsatta kraven. Prisrisken delas mellan parterna genom den fasta bonusen och det marknads-
prisbaserade grundpriset. Fasta priser tilltalar producenterna men innebär för stor risk för in-
dustrin på grund av låga marginaler.

Bonus betalas endast ut om djuren uppfyller vissa specifikationer vilket motiverar producenten
att uppfylla specifikationerna. I ett av samarbetena bistår slakteriet med gratis produktions-
rådgivning för att säkerställa en jämnare kvalitet på råvaran. Kontrakten är enkelt uppbyggda
och kräver inte specifika investeringar som låser upp parterna. Omförhandling sker löpande
och styrs av marknadssignaler från detaljhandeln.

Prisförhandlingar sköts i två av fallen centralt vilket minskar förhandlingskostnaderna samt
ger producenterna en bättre förhandlingsposition. Många saker hanteras utan skrivna kontrakt
för att minimera risken för dyra rättegångskostnader. Vid en konflikt går parterna hellre skilda
vägar. I de fall då skrivna kontrakt finns är de mycket enkelt uppbyggda samt lätta att förstå
för alla parter.

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1. Introduction

This chapter gives the background to this study. It contains a brief introduction to the structure and the conduct of the Irish beef sector. The problem is introduced and scrutinised before the aim of the study is fixed. Afterwards the structure of the study is presented.

1.1 Background

Beef production plays an important role in Irish agriculture. There are in the country over one million dairy cows and one million other cows, which supply the raw material to a beef industry with an aggregate turnover of €3.8 billion in 2002. The same year the level of self-sufficiency on beef in Ireland was 820 percent, which makes Ireland one of the largest exporters of beef in EU (Bord Bia, 2004, The department of agriculture and food 1, 3, 2005). The beef processing industry in Ireland consists of three major companies and several smaller ones.

In general there is a *transactional approach* between two of the parts of the production chain; the farmers and the processors. The farmers are free to sell their cattle to the processor offering the best price of the day and the processor can buy cattle wherever they wish (McKinsey, 1998). Although the approach seems to be efficient according to the large export share there are indications that there might be benefits with other solutions. Better coordination between the different parts of a production system may under some circumstances have positive result such as raw material with a quality that better suits the processing industry and cheaper information transfer (Nilsson & Björklund, 2003).

Since the late 90s a few partnerships between producers and processors have been established in Ireland. Recently the Bord Bia (The Irish food board) chief executive Aidan Cotter addressed this issue by suggesting that partnership arrangements between producers and processors were being used to gain access to high value markets (www, Irish Farmers Journal, 2005). In 1999 a committee assigned by the minister of agriculture presented an action plan for the development of the Irish beef industry. The committee recommended partnership arrangements between producers and processors in order to ensure long-term and mutual supportive relationships.

Therefore it is interesting to investigate the coordination in existing partnerships in the beef sector. Conducting such empirical studies will hopefully contribute to the understanding of these partnerships and also give inspiration to the beef sector in Ireland as well as in other European countries. Nevertheless, before defining the final purpose of this study the problem has to be explained further.

1.2 Problem

Coordination

The production chain for beef consists of four major parts, pedigree breeders, producers, processors and retailers. Since the focus of this study is on the relation between the producer and the processor, these parts of the production chain are explained in detail. Nevertheless

brief explanations on the other parts, pedigree breeders and retailers, are included since they are important parts of the production chain as well.

If different parts of a production or distribution chain are linked together with market mechanisms there is no common governing of the transactions. This type of arrangement makes the different parts free to buy and sell to whomever they desire. Price is a very important factor for this type of approach. On the other hand, if two or more parts of a production or distribution chain have common governing to some extent it is a form of *vertical integration*. This arrangement makes it possible to coordinate the production or distribution to a greater extent than in the transactional approach. The reason for this is that it is possible to use other things besides price signals in the interactions between the involved parties. In this case the importance of price signals will decrease (Nilsson & Björklund, 2003, p 18).

Integrated systems often include only some parts of a production chain from primary producer to the consumer. While some systems involve only two steps of the production chain, like wholesale and retail, other systems might include several steps, for example primary production to packing and distribution. It is important to clarify that the coordination in reality always is a mix between transactional approach and vertical integration. Therefore it is relevant to use the term *partial vertical integration* for every type of system that exists between the two extreme forms i.e. transactional approach and vertical integration (Nilsson & Björklund, 2003, pp 18-19).

The production chain

The *producers* contribute to the production chain by breeding and fatten¹ the cattle. There are a few different types of producers: Suckler herds produce calves, which they sell or finish. Finishers finish cattle that they have bought from suckler herds or dairy herds. A lot of the cattle are by-products from the dairy herd; most of the bull calves and the heifer calves will not be used in dairy herds. There are approximately 72,000 specialised cattle farms in the country. The size of the production units varies a lot in this part of the production chain. There is everything from part time farmers producing only a few cattle every year to large feedlots producing hundreds of cattle per annum.

Almost 80 percent of the agricultural area in the country is devoted to grass. Half of this land area is pasture and the rest is used for silage and hay production. The large acreage of pasture creates opportunities for the production on the farm level. Ireland seems to be a good place for growing good feed for cattle. Cattle farmers, especially with grazing cattle, will be affected by biological factors such as weather when trying to optimise production. The possibility of getting subsidies will also contribute to decisions concerning production. This may result in variations in production over the year. With a production period of 18 months or more, the cattle farmers can hardly make rapid changes in size and direction of their production. This involves a risk of not being able to sell the produced good when it's finished. All this alongside with the fact that farmers probably have limited knowledge of consumer demands especially on export markets makes it difficult for the primary producer to adjust production to the consumer markets.

The next steps in the production chain are *slaughtering and processing*. After slaughtering the cattle the processors process the beef, in other word bone, cut-up, pack and sell the product.

¹ Fatten cattle is to feed cattle intensively prior to slaughter in order to reach a certain classification.

Close contact to consumer markets gives the processors the opportunity to adjust production to consumer demands. This part of the production is much more industrialised than the production at farm level and there are possibly economies of scale. The important factor for the profitability of the processors is efficient use of the available capacity and the margin on the processed product. Efficient use of production capacity requires an even flow of cattle during the year. An even supply of required quality is important. Hygiene and health aspects are important especially for exporting companies. Food disease prevention also requires traceability, i.e. that the processors can be sure where the cattle are produced.

Partnership arrangements

From what is stated above a conclusion can be drawn about the possible outcome of the production. If acting independently, farmers and processors will optimise their production according to different factors. This gives both parties incentives to try to coordinate production. Skilled farmers need processors that are willing to pay for good quality meat and the processors need skilled farmers to provide good raw material during the whole year. Both the processors and the farmers will benefit from a farm production that corresponds to the demand on the consumer market. It is obvious that if one of these parts of the production chain is not working well, there will be no successful beef production. One major issue is therefore most likely how the coordination between the farmer and the processor is organised. This might even be crucial, because it has a great influence on the profitability in the rest of the production chain. Specific features shown above such as long production periods for the primary product increase the importance of this coordination.

1.3 Aim

The assumptions above lead to the aim of the study:

The aim of the study is to empirically investigate and theoretically explain partial vertical integration in different forms of partnership arrangements between primary producers and processors in Irish beef industry.

Hence, the focus of this study is:

- *How* the connection between the farmer and the slaughterhouse works and
- *Why* it works in that specific way.

The focus leads to some concrete questions:

- How is the classification and pricing system constructed?
- Is the coordination regulated by contracts and in that case how are these contracts formulated?
- How are the risks in production shared between the two parts?
- Is food safety an issue in negotiations and price?

Studies of these systems can give answers to how market signals reach the primary producers and what mechanisms control the production. Conclusions from this study can hopefully give guidance for future coordination in the beef sector in Ireland as well as in other European countries.

1.4 Theoretical framework

In order to analyze the problem there is a need for an appropriate theoretical framework. Since the problem is somewhat complex and deals with agricultural production, the theories presented by Olesen in “*Organization of agricultural production – A contract theoretical approach*” (2002) will be suitable. The author argues that transaction cost and principal-agency theory can be used to comprehend and in some cases improve existing contracts. They present a robust analysis of production contracts on a theoretical as well as practical level. Three main problems in contract design are presented:

1. Coordination
2. Motivation
3. Transaction costs

The first problem deals with what are produced and where it’s produced and at what time. The second problem concerns the contracting parties’ individual incentives to make decisions and the third problem is about providing the first two at the lowest possible cost.

1.5 Structure of the study

In the second chapter of this paper, the Irish beef sector as well as the beef production chain with its’ different actors are presented. Further, in the third chapter, the theoretical framework mentioned above is explained much more thoroughly accompanied by statements of the reasons for the choice of theory. Subsequently the methodology used for gathering empirical data is presented in the fourth chapter.

The fifth chapter contains the empirical findings, which are used together with the theoretical framework in the analyses in the sixth chapter. Finally the results of the study are presented in the seventh chapter, which also contains a discussion. In that part, the discussion, the findings of the study are exposed to a freer interpretation and additional thoughts concerning the subject are discussed. The structure of the study is also presented in figure 1.1.

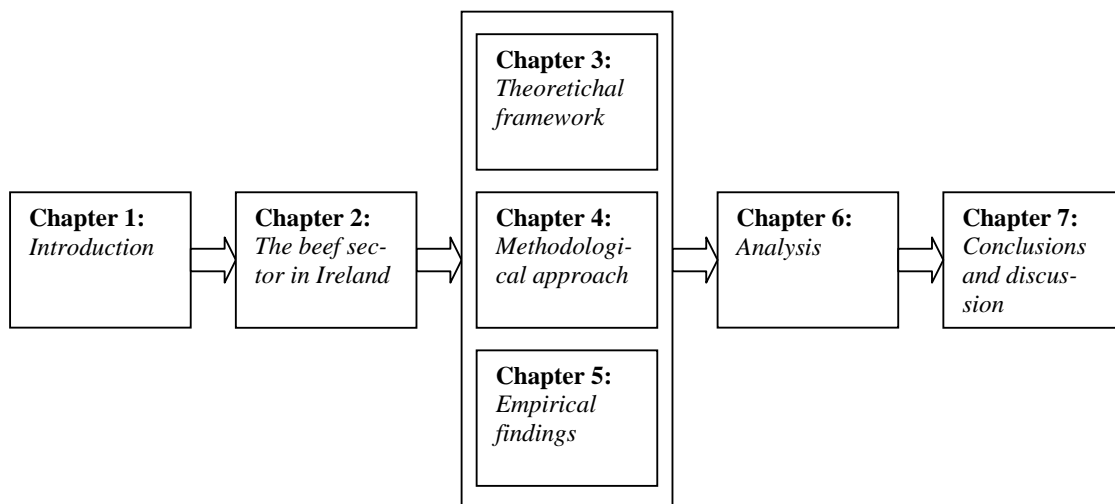


Figure 1.1: The structure of the study

2. The beef sector in Ireland

This chapter contains a presentation of the Irish beef sector. Relevant facts and figures about the beef sector are presented as well as legislation and food safety issues. Furthermore, the different parties in the beef production chain are explained.

2.1 Overview

Ireland's geographical location, on the edge of the Europe, makes exports expensive. The population of 3.9 million form a rather small domestic market. Because of the Irish membership of the European Union Irish agriculture and consequently the beef sector is very much affected by the EU common agriculture policy (CAP). This will affect not only the possibility to export to foreign markets but also the conditions for the beef producers in the country since the CAP include a lot of support to production. An issue related to the CAP is the current WTO trade negotiations. Ireland beef sector is somewhat protected by the EU import tariffs and quotas on beef from for example South American countries. In the current WTO negotiations there is a strong pressure on EU to lower tariffs and quotas on all agricultural products including beef. What effect that would have on the beef sector is not clear but there will most likely be more beef imported to the union. The recent enlargement of the EU leads to more potential customer but also more competition (The Department for Agriculture and Food, 2).

Facts and figures

Primary agriculture in Ireland stands for 5.7 percent of employment and 4.8 percent of exports. The whole agri-food sector, which includes primary agriculture, food, drinks and tobacco, stands for 8.5 percent of employment and 8.4 percent of exports. The land area of Ireland is 6.9 million hectares. About 62 percent or 4.3 million hectares is used for agriculture. Almost 80 percent of the agriculture area is devoted to grass i.e. production of silage, hay or pasture. Average land price in 2004 was €16,156 per hectare (The department of agriculture and food, 1, 2005).

In 2003 there were 135,000 farm holdings in the country. The average farm size was 32.3 hectares in the same year. Some 11 percent of the family farm holders were under 35 years of age while 42 percent were over 55 years of age. The numbers of people employed in agriculture in 2005 were 109,600. In 2000 a survey showed that 60 percent of farm household income comes from off-farm sources. Farms are divided into full time farms and part time-farms. The first had an average income of €30,650 in 2004 while the latter had an average income of €6,407. In the same year the owner on 52 percent of the farms had an off-farm job (The department of agriculture and food, 1, 2005).

In December 2004 there were a total of 6,211,000 head of cattle in Ireland and the self-sufficiency in beef was 820 percent. The value of beef exports in 2004 was €1,300 million, approximately 18 percent of the value of all exports of agri-food, drinks and tobacco. The value of cattle output at producer prices was €1,344.6 million, 26.7 percent of total output of primary products in agriculture (The department of agriculture and food, 1, 2005).

There is also a lot of live export of cattle from Ireland to other European countries such as Italy and France. Figure 2-1 shows the annual output of cattle per annum.

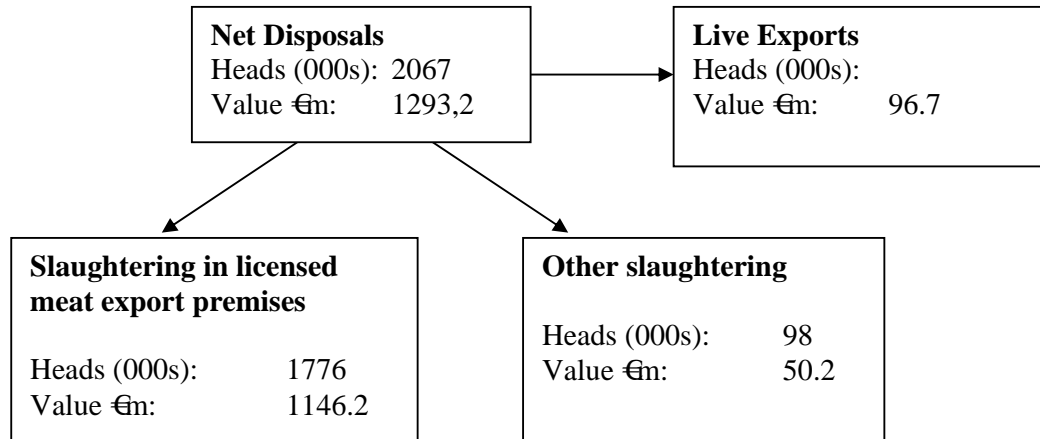


Figure 2-1: Output of Cattle and Calves (Value and Volume) new methodology, 2003.
(Source: www, The Department of Agriculture and Food 4, 2005)

Legislation

Since Ireland is a member of the European Union (EU) the EU *Common Agricultural Policy* (CAP) affects the Irish beef sector. CAP is based on three principles: a single market, community preferences and common financing. The financing is an integral part of the EU budget. The CAP has been reformed several times and most recently in 2002. That reform was called the *Mid Term Review* (MTR) and provided for the decoupling of direct payments from production for example in the case of livestock production. The EU countries were able to choose between partial decoupling and full decoupling. The direct payment is available only for farmers that meet certain requirements concerning food-safety, environmental and animal welfare measures. Besides the direct payment CAP also includes rural development programmes (www, Department of agriculture and food, 2).

Joe Walsh, the minister for agriculture and food, said in May 2004 that the MTR reform is the “most radical reform of the CAP since its foundation”. Further he argued that Ireland was facing “a period of major adaptation and change at farm level, processing level and indeed for the administration, which supports the sector”. Ireland chose early to fully decouple the supports for the agricultural sector. In practice, the result of the MTR is that the Irish beef farmer will receive support, a single payment, independently of the production of beef. The value of the support will be calculated on the support received for the reference years, 2000-2002 (The Department for Agriculture and Food, 2).

Important actors

In 1994 the *Bord Bia* (the Irish food board) was established by the Irish parliament. Bord Bia acts as a link between food and drink suppliers and existing and potential customers. The focus is on developing export markets for Irish food and drinks. Subsequently the Bord Bia has an extensive knowledge about the food and drinks industry and can provide information and statistics on export, production, quality standards as well as the latest development in the industry (www, Bord Bia, 1, 2005).

Teagasc, the Agriculture and Food Development Authority, is a semi-state organisation established by the Irish government. The organisation operates in partnership with all sectors of the

agriculture and food industry and provides integrated research, advisory and training services. The Minister for Agriculture and Food appoints the board of directors, which include representatives from farming organisations, the food industry, the universities, the Department of Agriculture and Food and Teagasc staff. Teagasc employs over 1,500 staff at more than 100 locations. There are 550 advisors located at various places throughout the country. EU funding and the Irish exchequer stands for more than 75 percent of the yearly budget (www, Teagasc, 1, 2005).

Food safety

After the BSE² crisis in 1996 there was a need of tightening up the conditions for processing and production of cattle and beef in Ireland in order to ensure the safety of consumers. As a result the *National Beef Assurance Scheme* was enacted into national law. The purpose of the scheme, to provide additional guarantees about the safety of Irish cattle and beef, is accomplished by the development of high standards for the producing and processing. Furthermore a process of registration, inspection and approval enforces the standards. Additionally an animal identification and tracing system operated. All persons engaged in the primary production and processing of cattle and beef are affected by the scheme. Accordingly they must all meet the prescribed standards controlled by mandatory inspection. The animal identification system requires all cattle to be tagged at birth and when moved to a new location they must be accompanied by a cattle identity passport. All movements of cattle are recorded in the Cattle Movement Monitoring System in order to validate the origin of cattle before they enter the food chain (www, Department of Agriculture and Food, 1, 2005).

Bord Bia operates the *Beef Quality Assurance Scheme* (BQAS). The focus of the scheme is to ensure quality and safety in the whole beef production chain. Therefore the BQAS involve the farmers, the beef plants, and the customers. A farmer participating in the BQAS must follow a code of practice covering issues like stockmanship, welfare, nutrition, use of veterinary medicines, animal traceability and environmental controls. Furthermore the farmer must allow a detailed farm inspection when entering the scheme but also random inspections later. The requirements for the meat plants cover both the product and the process. There are for example requirements for hygiene, chilling and product traceability along the production chain. Additionally the factory must develop a food safety management plan. Independent inspectors contracted by the Bord Bia carry out the inspections on the factories as well as on the farms. Plants that meet the requirements are allowed to use the quality assured logo on produce, packing and/or point of sale materials (www, Bord Bia, 2, 2005).

² BSE (Bovine Spongiform Encephalopathy) is a transmissible, neuro degenerative, fatal brain disease of cattle. The disease has a long incubation period typically four to five years - but this range may vary.(www, Teagasc, 2, 2005)

2.2 The beef production chain

The whole beef production chain, from the pedigree breeders via the producers and the slaughterhouses and processors to the retailers and wholesalers, is here described. Since the purpose of this study mainly deals with the relation between the producer and the processor, those parts are described more thoroughly. However, a brief explanation of the other parts is important to include for the reader to understand the whole production chain.

Pedigree breeders

The first part of the beef production chain is the pedigree breeders. They keep suckler herds for breeding mainly pure bulls, which they sell to other suckler herds. Among the many breeds of cattle represented in Ireland there are some that are more popular. Charolais, Limousin, Belgian Blue, Simmental and Blonde d'Aquitaine are the so-called "continental breeds". These breeds all origin from continental Europe and they are large, fast growing cattle. However there are two more popular breeds; Aberdeen Angus and Hereford. They are smaller cattle than the continentals and both origin from UK.

Producers

There were in total 7,044 thousand cattle in Ireland in 2004 of which 1,157 thousand were dairy cows and 1,214 thousand were other cows³ (suckler cows). In the range of one to two years old cattle there were 1,543 thousand (Bord Bia, 2004). Even though there are a lot of cattle in Ireland the size of each cattle holding unit is not very big. In 2000 there were 72,000 specialist beef producers and 20,700 units with mixed grazing and livestock (www, The department of agriculture and food, 3).

Producers breed and fatten cattle. Cattle producers can be divided into a few different types: suckler herds and finishers. Suckler herds keep suckler cows and produce calves, which they sell or keep until they are ready for slaughter. Finishers buy cattle, which they fatten and sell to the processors. Since a lot of the cattle comes from the dairy herd some of the finishers will finish those cattle. Almost all the cattle are cross bred i.e. they are crosses between two or more beef breeds or crosses between suckler and beef breeds. Profitability for the producer depends to a large extent on the cattle price that they receive plus the subsidies. The quality of the market, into which the beef is sold, has a great influence on the cattle price (McKinsey, 1998).

There is still some uncertainty in how the decoupling of CAP subsidies will affect the Irish beef production. Estimations by Teagasc and FAPRI⁴ show that Irish suckler herds could fall from 1.2 million cows to 0.9 million cows as a result of the new policy. Most of the decline would occur in the end of 2006. In 2002 the national farm survey showed that the bottom 25 percent of farms in all cattle systems had a negative gross margin per hectare excluding premium. This means that one quarter of all beef farms actually lose money by producing beef since they will receive the subsidies even without production. Furthermore, in 2003 only the

³ In the official statistics the total number of cows in the country is divided into dairy cows and other cows. The other cows are mainly from suckler herds

⁴ FAPRI is a partnership between Teagasc, the Department of Agriculture and Food and six universities in Ireland. The Partnership produces and publishes objective analyses of agricultural policy options.(www, Teagasc, 3, 2005)

top 10 percent of the cattle farmers were making profit from their farming activity excluding premium (Smyth, 2004).

Processors

The processor slaughters, cuts up and sometimes packs the beef. Ireland has three large beef processors, which together have a market share of 60-70 percent. In addition there are a large number of smaller, more local processors. The three largest ones are presented below.

The processor adds only a small part of the overall value of an animal and makes only a small profit on every animal processed. Therefore the processor wants to have a high throughput in the factory. In general the throughput in factories and margin on the cattle processed are more important for the profitability of the processors than the actual cattle price (McKinsey, 1998).

The *Kepak Group* companies business is divided into four Strategic Business Units: beef, lamb, convenience foods and trading. Kepak processes more than 400,000 cattle and 2.5 million lambs per annum. Over 2,000 people are employed and the annual turnover is in excess of €500 million. Kepak runs nine manufacturing facilities in Ireland and the UK. The Beef division offers a broad range of products and specifications to customers in the retail, food service and manufacturing sector. Additionally there is a range of “designer beef” sold under a few different brands: *KK Beef-club*, *Certified Irish Angus Beef*, *Kepak Gold* and *Nature’s Tradition*. The cattle are taken from quality assured farms and all the factories have the highest level of food safety accreditation and have achieved approval from the *Beef Quality Assurance Scheme* (www, Kepak, 1, 2, 3, 2005).

AIBP, which operates in Ireland, is the largest beef processor in Europe with a beef turnover in excess of €1 billion. The company started in the mid 60’s and is the longest established beef processor in the country. Farms providing cattle are part of the BQAS. At the moment AIBP operates nine slaughtering and processing facilities in Ireland. A quality management system is operated to satisfy customer requirements. Besides a normal product range there are three premium brands: *Harmony Farm*, *Irish nature*, *Hereford prime*. In addition to the Irish activities the company has an international trading division with sales to Europe, Russia, middle and Far East. Furthermore the company supplies South American beef to retailers and wholesalers (www, AIBP, 1-5, 2005).

In 1980 the *Dawn Group* was established in Ireland. Today it is a part of Ireland’s largest privately owned agri-business, the *Queally Group*. Dawn group slaughters 500,000 cattle and 1,500,000 lambs per annum. Some 200,000 tonnes of meat products are produced including 55,000 tonnes of consumer packs. The group employs 2,600 people and operates slaughtering, de-boning and retail packing facilities throughout Ireland, England, Scotland and Wales. Besides the normal range Dawn offers a premium beef brand called *Nature’s Meadow*. Distribution and sales operations are located in several European countries including Italy and France (www, Dawn Group, 2005).

Wholesalers and retailers

Tesco Ireland (a subsidiary of Tesco plc) with 90 stores and *Dunnes Stores* with 123 stores are the two largest supermarket chains in Ireland. *SuperValu* is a franchise concept with 211 supermarkets. *Superquinn* has only 18 stores and *Marks and Spencer* operates a small number of supermarkets (www, Wikipedia, 2005).

3. Theoretical framework

This chapter gives a theoretical base for explaining coordination in the production chain. One appropriate theory is the agency theory since it deals with the interaction between two or more parties in a production chain. Another one is transaction cost theory, which deals with transactions between parties. This chapter is based on the book Organization of agricultural production – a contract theoretical approach by Henrik Ballebye Olesen (2002). Olesen presents a holistic framework for the analysis of contracts as well as a checklist for the development of contracts based on this framework and findings from real contracts. None of the examples in Olesen's book are about beef but the principles are considered to be similar for different agricultural contracts.

3.1 Basic assumptions

A basic assumption for contract theory is *rationality*; people will act in a rational manner, choosing the best option to achieve their goals. They will make their decisions based on the information available. Complete information will never be available and people will not be able to foresee all possible states of nature. Therefore it is relevant to talk about *bounded rationality*; people will act as rationally as they possibly can, given the information available and the future occasions they can foresee. Furthermore contract theory is based on the assumption of *opportunism*. People are selfish and will try to exploit every situation for their own benefit. Subsequently a person will lie or withhold information if an agreement is not beneficial for him (Olesen, 2002, p. 143).

Olesen argues that contract design is a multi-criteria decision problem and therefore it will lead to a sub-optimal solution if only one problem in contract design is considered. There is a need to use a system's view when considering contracts. The practical solution is to use a *goal hierarchy*; to identify a number of goals that a contract should satisfy. Subsequently the goals are divided into sub-goals which are again divided etc. Every new level must contain goals that give a full explanation of the goals in the level above. The goal hierarchy for contracts is presented later in this chapter (Olesen, 2002, p. 144).

From an economic point of view it is logical to argue that the main goal for a contract is to *maximise the integrated profit*. In other words the parties should maximise the profit for both the processor and the producer. If a contract can achieve this it is called a *first best* contract. There are two fundamental purposes with a contract. First it must *coordinate* production, make sure that the producers are producing the right quantity of the right product at the right time and place. Secondly the contract must *motivate* the parties by giving them personal incentives to coordinate production. Furthermore for a contract to be efficient it must contribute to motivate and coordinate in the cheapest way possible. Costs for monitoring, planning and motivating are all included in the term *transaction costs*.⁵ To sum up: maximum integrated profit is the overall goal with the contract and coordination, motivation and transaction costs are the three main objectives for achieving the goal. These issues are further explained below (Olesen 2002, p.145-146). Figure 3-1 provides an overview of the theoretical framework.

⁵ In this paper as well as in Olesen (2002) the narrow use of transaction costs is used. Furthermore it is assumed that transaction costs and production costs are separable.

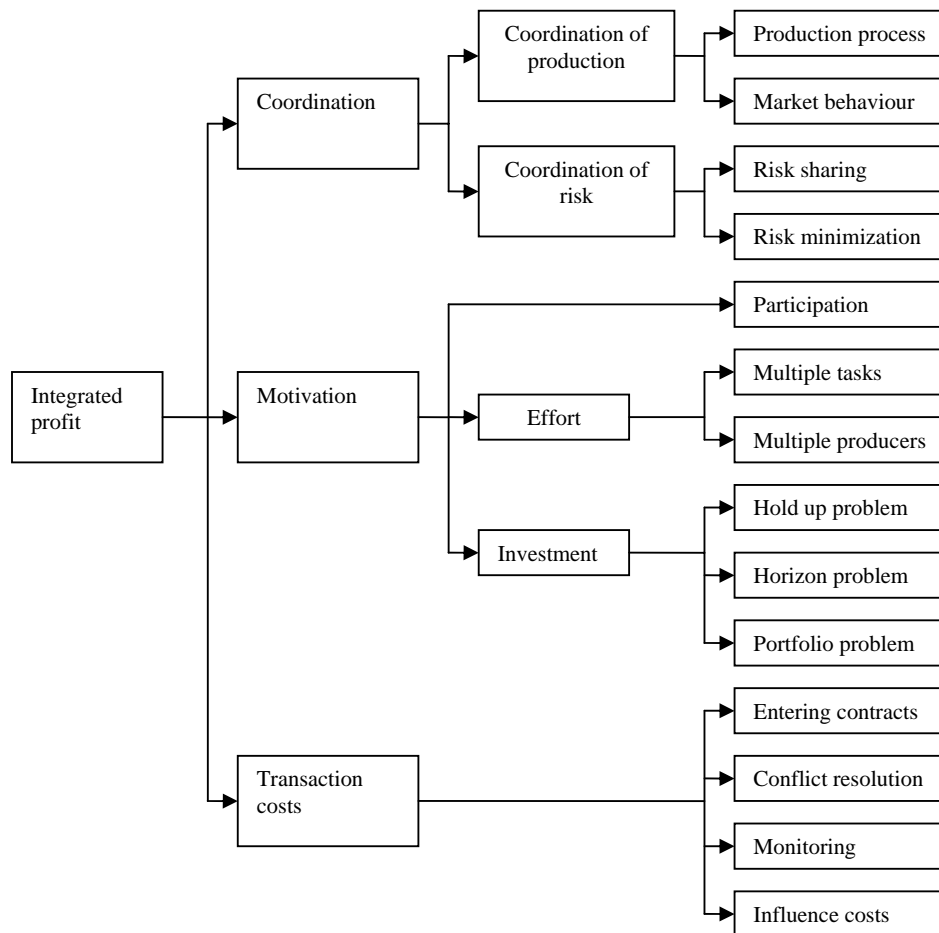


Figure 3-1: Hierarchy of goals for contract design (Source: Olesen, 2002, p 145)

In the end of each explanation of the main objectives a few rules are presented. These rules of thumb for contract design are based on the theoretical arguments about the main objective in the prior sections.

3.2 Coordination

Coordination of production

Coordination of production can be achieved in two fundamentally different ways. The coordination can be achieved via instructions to the producers via a central decision maker. This approach is called *hierarchical planning*. Another approach is the *market approach*, where coordination is achieved by price signals and by the invisible hand of the market. For many contracts, the coordination is achieved by using a combination of these approaches. Quantitative aspects of production are often coordinated through prices while qualitative aspects are coordinated through instructions.

In order to achieve coordination of production it is important to share *information* between the different parties of the production chain. Often the parties have information about their own

costs and revenues. Processors and producers are, because of opportunistic behaviour, not willing to reveal their information if it is not in their own interest. The processor is not willing to reveal information about the margins on the product and the producers is not willing to reveal the production costs. Doing this would decrease the bargaining power for each party. This problem can be solved by hierarchical planning or by decentralised decision-making if there are incentive schemes that motivate each party.

Another coordination issue is the *double marginalization* problem. It occurs when each part of a market chain reduces the quantity in order to increase price. The result is decreased integrated profit. The reason for this problem is often that the processor chooses level of production based on the price paid to the producer instead of the producers' production costs. A common solution for this problem is two-folded contracts where the processor first pays according to production costs and then pays a fixed part of the profit.

Coordination of risk

Because most agents are, to a certain extent, risk-averse⁶, risk can be considered to be costly. The cost of risk, the risk-premium, is the difference between the expected payment and the actual payment that gives the agent the same utility. There are two aspects of risk to be considered in a contract, (1) sharing risk and (2) minimizing risk. Larger firms are often less risk averse than small family farms since the large firms' assets are better secured. The family farms cannot spread the risk in the same way the larger corporation can. Given these conditions the processor should carry all risk. Hence the producer will receive a fixed payment. On the other hand that will result in a lack of motivation for the producer since there is no incentive to make the production more efficient.

Agricultural production is exposed to different types of risk. *General risk*, mostly weather conditions, can be removed from contracts by yardstick competition. Prices of input and output vary which creates *price risk*. The producer cannot control the price risk and it should therefore be borne by the least risk averse party, the processor. This speaks for a fixed price however the same motivation problem as described above will in that case occur. Besides, the desired level of effort can be affected by price changes, which talks in favour for the use of market prices in contracts. At last there is an *idiosyncratic production risk*. That risk is not connected to the actual production but gives indirect information about the effort of the producer. Hence, this type of risk should be distributed between the parties to increase motivation.

The level of risk can be affected by the design of the contract. Changed market conditions might require changes in production. If the contract is *non-adjustable* it will prevent parties to make the necessary changes. Long-term contracts with *fixed product prices* eliminate the risk of changing sales prices for the producer. However, fixing the sales price will not automatically decrease the total risk since input factors can vary. One solution is to avoid long-term contracts. Another is to let the producer price follow a certain price index.

Rules for coordination

1. *Coordinate production*. The independent decision makers must coordinate their actions. Coordination can be achieved through price signals or through instructions.

⁶ i.e. they try to avoid being exposed to risk

2. *Balance the costs and benefits of decentralization.* Decision-making rights must be allocated between the parties in such a way that coordination can be achieved. Furthermore costly communication must be minimised and important information utilised.
3. *Minimise the costs of risk and uncertainty.* Risk should be shared in a way that the costs of risk are minimised. This involves issues about the parties' risk aversion.

3.3 Motivation

Contract theory assumes that people act opportunistically. Motivation is therefore required to align the interests of processors and the producers.

Participation

Contracts must be constructed in a way that makes people willing to participate. Participating must give at least the same utility as not participating for the individual party, i.e. *reservation utility or reservation value*. If the producers are withholding information about their production costs and reservation utility its difficult for the processor to select the most appropriate producers, an *adverse selection* problem exist. If the processor offers a payment equivalent to the average reservation utility, some producers with low costs will be over compensated. That overcompensation is called *information rent*.

There are a few options for the processor to deal with the adverse selection problem. One solution is to lower the payment to exclude producers with high production costs. The result will be fewer but better contracts since only producers with low production costs will be included. Another solution is to *condition the payment* to for example volume. Large producers will get a higher price since their reservation utility is often higher. Finally the processor can offer a *menu of contracts* where each type of producer can chose an appropriate type of contract. If for example two contracts are offered, one where large volumes are paid a high price and one independent of volume, the large producer will chose the first contract while the small producer will chose the latter.

Even if the same contract is used for all producers it is possible for the processor to lower the information rent by differentiating the payment between producers. This can be achieved either by volume, as mentioned above or by using *relative performance evaluation*. When using relative performance evaluation producers are divided into different groups. The producers compete internally in the groups and the processor can use different payment to different groups in order to reduce the producers' information rent.

Effort

Since the producers are opportunistic it must be in their own interest to follow the production plan. Each producer maximises his utility by adhering to the production plans. This is called the *incentive compatibility* constraints. *Monitoring* as well as *reward and penalty mechanisms* can be used to ensure *incentive compatibility*.

Monitoring can be related either to the input in production or the output of production. In the first case the reward and penalty mechanisms can be linked directly to the input factors the parties are trying to regulate in the contract. In most cases it's, however, impossible to monitor the producers' inputs, which means that the output must be monitored instead. Since the

goods are biological the output is uncertain. The output can be bad even if a producer tries really hard. Therefore it's difficult to monitor the level of the producers' effort. *Reward and penalty mechanisms* can also be used to motivate producers. Payment can increase when the processor receives positive signals about the producers' effort.

If payment is to vary with effort it is important to minimise uncertainties in the level of effort. Information about producers' capacity and conditions are therefore valuable for the processors. The degree to which the payment depends on performance is called incentive intensity. Whether it attractive or not to increase the incentive intensity depends on four factors: (1) Higher effort by the producer must give higher profit for the processor. Otherwise there are no incentives to increase the intensity. (2) It is not costly to expose a risk tolerant producer to more risk. There are incentives to increase the intensity if the producer is risk tolerant. (3) The precision by which the producer can estimate the desired activities. A higher precision by the producer decreases the uncertainty whether the target will be reached. Therefore the risk premium can be lower. (4) Higher intensity means higher risk and higher effort only if the producer is responsive to incentives. If the producer is not responsive, the only effect of increasing the incentives is that the producer is exposed to higher risk. On the other hand incentives can be stronger if the producer is very responsive.

Often the producer performs multiple tasks i.e. animal welfare, taste and quantity. In that case it is important to balance the incentives. Otherwise there is a risk that the producer puts too much focus on one task. An opportunistic producer adjusts his different tasks to the point that marginal revenue is equivalent to marginal cost for all tasks. If the tasks are measurable in time, the producer will spend time in a way that marginal revenue per hour is the same for all activities. There will be no time spent on activities with lower marginal revenue since time is limited.

Some tasks are much easier than others to monitor. Processors might be tempted to put very high incentives on such, easily monitored, tasks since the risk is limited. However, this behaviour makes the producer focus more on the easily monitored tasks and less on other tasks. It is important to be careful when dealing with multiple tasks in order to avoid such problems.

Investment

As soon as the producer and/or the processor has to make investments in order to follow a certain contract some issues can occur. If an investment has a higher value when dealing with a certain processor than any other alternative relationship, a *hold-up problem* will occur. In that case the processor is able to exploit its position keep a bigger part of the profit. The producer will pay the cost of the investment but not benefit from the revenues it generates. The same problem may occur if the processor makes an investment where the revenue depends on a few specific producers. Fear of the hold-up problem can result in under-investment or under-production.

For the hold-up problem to occur two conditions must apply, *specific investments* and *incomplete contracts*. Specific investments are more valuable within the contract than outside the contract. They can be further specified in five different types: (1) *Geographically*, investments are restricted because of location. Transport costs make it profitable only to deal with a processor close enough. (2) *Physically*, investments are very specific and can only be used for a certain type of production. (3) *Human*, people that are educated and trained for a specific type of production. Their skills cannot be used for any other type of production. (4) *Dedicated*

assets, assets designed for meeting special requirement from the processor. (5) *Special brands*, investments in marketing and development of new brands.

Incomplete contract is the second condition for the hold-up problem. Incomplete contracts are contracts that do not specify how the parties should behave in every possible situation. Therefore they cannot prevent every possible hold-up problem situation. In reality it's impossible to create a long-term contract that is not incomplete. Contracts will always require renegotiation at some stage.

Rules for motivation

1. *Reduce the costs of post-contractual opportunism.* It's often hard for the processor to monitor the producer after the contract has been signed. Therefore the contract should motivate the parties to make the right decisions about production.
2. *Reduce the costs of pre-contractual opportunism.* Parties will often have private information i.e. about their costs or skills. This information can be used for the producer to obtain information rent. The contract should enable the processor to minimise the information rent.
3. *Do not kill co-operation.* The only way to achieve full economic benefits from their production is for the parties to co-operate. The contract should motivate sharing of information. Furthermore it's important that changes can be made without costly negotiation or conflict resolution.
4. *Motivate long-term concerns.* The contract must deal with and make the parties aware of long-term issues, such as specific investments.
5. *Balance the costs and benefits of renegotiation.* Parties must have the possibility to renegotiate in order to respond to changes in the market. However, renegotiation may lead to strategic behaviour and less commitment.

3.4 Transaction costs

The existence of *transaction costs* is one major reason why neither the markets nor the companies are perfect. Transaction costs occur when a transaction in the market takes place both between actors and within firms, i.e. search costs for identifying potential trading partners, costs for motivation and costs for coordination. Transaction cost theory seeks to identify and minimise transaction costs. Olesen (2002) present and analyze four types of transaction costs.

Entering a contract

Three types of transaction costs occur when entering a contract. (1) The difficulty to foresee future events. (2) The understanding of the contract. The contract must be written in a way that all involved parties have the same understanding of the content. (3) The cost of making a contract legally binding. One method for minimizing these costs is to minimise negotiation by using the same contract for all producers. The processor can negotiate with a representative for a group of producers. The representative will have to make sure that the producers act according to the contract.

Conflict resolution

Conflicts will always occur and they bring about the same costs as mentioned in the prior section. Therefore it is important that the contract provides tools for *conflict resolution*. A rather simple solution is to let one party be responsible for everything that is not included in the contract. This requires a lot of trust between the parties. Trust can be acquired in two ways. The first one is *long-term contractual relation* where the contract is renewed every year. At the point of renewal one party can punish another party for bad behaviour by leaving the contract. Depending on the *relation* is the other way to ensure trust. This is based on the argument that it will be harder for a party to conduct business if the reputation is damaged.

Monitoring

Monitoring creates transaction costs such as costs for personnel and information systems. These costs can be minimised by precise and clear information and incentives that motivate effort. Costs for monitoring must be well balanced with the revenues created.

Influence costs

Influence costs occur when one party tries to increase its utility by influencing the other party's decisions. Common examples of this are to withhold information or lie. The actual costs are the time and energy spent on trying to get influence instead of producing. The risk for influence costs increase with the number of decisions required and the amount of information shared. Therefore, reducing either the number of decisions or the amount of information will decrease the risk of influence costs. This can be achieved by making the contract very simple. On the other hand as many parameters as possible should be regulated in the contract in order to minimise risk. There need to be a balance between these two factors.

Another way of decreasing the cost is to only regulate objective parameters since such parameters give less room for discussion compared to subjective ones. Furthermore it's possible to follow very strict regulations. By doing so, there are fewer decisions to influence. Finally a standardised contract with infrequent negotiations can be used in order to decrease the number of decisions.

Rules for transaction costs

1. *Reduce the direct costs of contracting.* The costs that must be reduced are, for example, costs for information collection, monitoring, bargaining, and conflict resolution.
2. *Use transparent contracts.* Bounded rationality must be taken into account. The contract must be easy in order for the parties to understand what actions to take and what decisions to make.

4 Methodological approach

This chapter contains an account of the method of collecting primary data and an explanation of the selection of data sources. Furthermore there is a brief presentation of the interviewees.

4.1 Gathering of primary and secondary data

In order to gather accurate and relevant information for this study, a study trip to Ireland was made during four weeks in September and October 2005. During this time two persons at University College Dublin (UCD) Dr. John O’Connell and Dr. Laurence Harte acted as supervisors for the project. The information about the Irish beef sector in general and the partnerships in particular was gathered from homepages, newsletters, discussions with the supervisors at UCD, newspapers and interviews. Being in Ireland was necessary for conducting this study since meeting the interviewees in person is important for creating trust in the interviewing situation.

The primary data used in this thesis was assembled through a number of qualitative interviews with persons in the Irish beef sector (see Table 4-1). Semi-structured interviews were used in order to get relevant answers from the interviewees but also to make it possible to ask follow-up questions.

Selection of partnerships and interviewees

The investigated partnerships were selected in collaboration with Dr. O’Connell and Dr. Harte. Mr. Michael Deely at Bord Bia was interviewed in order to get some general information about the Irish beef sector. During that interview Mr. Deely stated that the selected partnerships were among the most successful in the Irish beef sector. No interviews were booked as I left Sweden but they were arranged during my stay with the help from Dr. O’Connell and Dr. Harte. Besides the persons named below, three farmers from the Dawn-Teagasc partnership and two farmers from the Angus partnership were interviewed. These persons are kept anonymous.

Table 4-1 List of interviewees

<i>Name</i>	<i>Position</i>	<i>Organization</i>	<i>Partnership</i>
<i>Charles Smith</i>	<i>General Manager</i>	<i>Aberdeen-Angus Producers (Ireland) Ltd.</i>	<i>Irish Angus Beef</i>
<i>Robert Malone</i>	<i>Procurement officer</i>	<i>Kepak Group</i>	<i>Irish Angus Beef/KK Club</i>
<i>Jerry Giggins</i>		<i>Keenan System</i>	<i>KK Club</i>
<i>Pat McFeely</i>		<i>Dawn Meats</i>	<i>Dawn-Teagasc</i>
<i>Paul Gilligan</i>	<i>Advisor</i>	<i>Teagasc</i>	<i>Dawn-Teagasc</i>
<i>Colm O’Loughlen</i>	<i>General Manager</i>	<i>AIBP</i>	<i>Hereford Prime</i>
<i>Eoin Ryan</i>		<i>AIBP</i>	<i>Hereford Prime</i>
<i>Robert Deverell</i>	<i>Founder</i>	<i>Irish Hereford Prime</i>	<i>Hereford Prime</i>
<i>Noel Lynch</i>	<i>Technical Sales Representative</i>	<i>Alltech</i>	<i>Hereford Prime</i>
<i>Michael Deely</i>		<i>Bord Bia</i>	

Formulation, conduct and compilation of the interviews

The theories presented in the previous chapter were used as a base for a question guide. Besides general questions, questions that covered all the rules of thumb for contract design that Olesen (2002) presents were made. This was done in order to get relevant information about all the three parts of contract design, namely coordination, motivation and transaction costs. The same base questionnaire was used for all the interviews, although it was altered slightly to better suite each interview situation.

The interviews were conducted at different locations – at UCD, at the annual Ploughing Championships (this year held in the Cork area), at companies' offices, and at farmers' farms. One phone interview was made with Mr. Ryan, AIBP, in the presence of Mr. O'Loughlen, AIBP, at UCD. At the interview with representatives from AIBP Dr. O'Connell was present. Furthermore there were a lot of follow-up questions since the questions were somewhat unrestricted. All interviews were recorded except some of the interviews with farmers. All interviewees gave permission to record the interviews.

4.2 Methodological discussion

The type of interviews chosen will result in subjective opinions about the coordination between producers and processors. These subjective opinions are required to create an explanation of the partnerships since there is no objective source to get the information from.

There are possible objections to the selection of study objects for the thesis. One might be the choice of partnerships on the basis of success. First success is hard to measure and secondly it might be easier to find potential problems with partnerships in those that have failed. The success of the selected partnerships is not measured in any comparable way. However, the fact that they have all existed for a number of years and mostly include well-known brands indicates some degree of success. In addition the number of members increase in the partnership and they have evolved during the years in order to adapt to market situations. The decision to only include successful partnerships can be motivated by the difficulty to get people to talk about failures. If studying a failed partnership there is a risk that the persons involved would all blame the failure on someone else. This would result in difficulties to identify the real reasons for the failure.

Since the purpose of writing this thesis is to inspire people in the beef sector in Ireland as well as in other European countries to develop better coordination between producers and processors, it is more motivating to read about successful examples. Future will tell if the selected partnerships were success for a long period of time and if they can survive future shocks to the sector.

5. Collected information and data

This chapter presents four partnerships in the Irish beef sector. The information was gathered through a series of interviews as described in chapter 4 and from publication and homepages. The focus is on the relations between the processors and the producers (farmers). Hence, the relations with the other parties, such as distributors and retailers are explained briefer.

5.1 Partnership 1: Aberdeen-Angus Producers & Kepak

In this partnership, the producers are the members of *Aberdeen-Angus Producers (Ireland) Ltd.* (AAP), a producer group. AAP has about 1,300 members who provide 15,000 cattle per annum (see table 5.1). The processor involved in this partnership is Kepak Group. The purpose of the partnership is to produce and process certified beef, *Certified Irish Angus Beef*. The beef is sold in *Tesco* stores in Ireland as a part of the *Tesco Finest** range, which is a premium quality private label brand. The value of the beef sold exceeded €10 million at retail level in 2005. Another involved party is the founder of AAP, the Irish Angus Cattle Society. The society owns the brand, *Certified Irish Angus Beef*.

Table 5.1: Facts for partnership 1; Angus Beef

Founded, year	1995
Number of members	1,300
Cattle processed, numbers per annum	15,000
Average cattle/member and year	11,5
Type of production	Suckler herd

Background

In the early 1990's the Irish pedigree Angus breeders had a problem with decreasing numbers of cattle sired with Angus bulls. The reason for the decrease was competition from popular continental breeds such as Charolais and Limousine. Farmers choose the continental breeds because of better growth and classifications. Facing these threats six pedigree Angus breeders tried to find a way of utilizing the advantages of the Angus breed. Compared to the continentals the Angus has much easier calving and it is held that the Angus meat has better eating quality (pers., Smith, 2005).

Subsequently the AAP was formed. In 1995 Kepak Group slaughtered 49 cattle for the group every week (AAP). Also involved from the start was Tesco, one of the largest retailers in the country. Since the beef was sold as a premium product in Tesco supermarkets, with a rather high price compared to normal beef, the group could offer its members a premium price. As a result it was possible to promote the breed to farmers not only because of easy calving but also because they could be offered a premium price. In 1997, 35 members delivered cattle but the group expanded when consumer awareness grew (pers., Smith, 2005). In 1997 the value at retail level was €450 000 and in 2005 the value exceeded €10 million for the first time.

Coordination

A board of directors manages the AAP. Almost all the members of the board are also members of the Irish Angus Cattle Society. Every month the board has a meeting where it discusses the directions of the group and the budget. The board also approves applicants for

membership. One of the board members is the general manager of the group. Procurement of the cattle, i.e. to organise when the cattle should be delivered to the factory, is a part of the general managers' job. The general manager has a close contact with Kepak and he will often be present at the factory when the cattle are delivered. Furthermore he cares about administration of the group and explains the benefit of Angus beef to customers (pers., Smith, 2005).

All communication between the farmers and Kepak comes through the AAP. The same applies for communication between the farmers and Tesco. AAP organises public meetings for the farmers in every region. At the meetings, representatives from Tesco, Kepak and Teagasc are present as well as people from the Angus cattle society. (pers., Smith, 2005)

The members of the AAP are suckler herd farmers or finishers, mostly with small herds. On average, every member produces eleven cattle per annum for the partnership. In order to become a member the farmer must meet some requirements. Primarily the prospect members must complete a producer group farm inspection visit, become a member of An Bord Bia Farm Assurance Scheme and provide information on supplement feed fed to animals during winter period. Furthermore the farmer must be proposed and seconded by the board of directors at a monthly producer group meeting. Finally the prospect member pays a membership fee of €127. For the membership fee the farmer gets 100 shares in AAP. Every member has the same amount of shares in the group (AAP, pers., Smith, 2005).

All animals put through the scheme must be polled Angus type cattle and carry a name Angus or Angus cross on their identity card. Furthermore the cattle must be sired by an Angus bull, which implies that the member owns an Angus bull or uses Angus AI. Occasional checks and sample DNA testing are carried out to ensure that the cattle meet these specifications. There are also age, weight and grade specifications for animals to be suitable for the scheme (see table5.5) (AAP).

If animals meet the requirements there will be a premium paid for the carcasses. There is a weekly set base price that the group has negotiated with the factory and the premium is fixed on to each animal grade.

A representative from the group inspects all animals at the meat factory. If delivered cattle do not meet the specifications the member is contacted and given two options: either the cattle will be slaughtered and paid for as commercial beef (the base price will be lower and there is no premium) or the animal will be sent back to the member. A number of cattle are rejected every week (pers., Smith, 2005).

Mr. Smith thinks that the partnership only partially protects farmers from risk:

“We have examples like the BSE crises; the producer group won't be able to protect from things like that. But when the price was really low the premium was still there. There is that small level of buffer there that always insures the farmer” (pers., Smith, 2005)

The farmers are not tied up to Angus in such a way that they can sell cattle only to the partnership. There are no sanctions for selling cattle to a competitor. Mr. Smith explains:

“It's highly unlikely that a farmer would be able to negotiate a better price from a competitor than what we can offer for the same cattle.” (pers., Smith, 2005)

He mentions, though, that there can be cases when transport costs might make it more profitable for a farmer to sell to a competitor. It is always the producer who pays for transports, unless there is a need for extra cattle in a specific factory. In that case the Certified Angus will pay for transport costs (pers., Smith, 2005).

Certified Angus has chosen Kepak as a processor because of the quality of the factory. Certified Angus is paying Kepak to have the cattle slaughtered at the facility.

Kepak slaughters the animals, processes the carcasses and packs the beef. The cattle are slaughtered in a few batches every Friday. The beef is processed and packed in a sellable fashion, which is very important for the retailers. The Angus beef is kept separate from other beef. There is a stamp on the retail packs that says that the beef has been processed at the specific Kepak facility (pers., Malone, 2005).

In retail sale there is some crossover in the sense that Kepak personnel are involved in retail sale. The Angus society is marketing the beef it selves (pers., Malone, 2005).

Motivation

AAP runs a scheme called *Certified Irish Angus Beef*. All the beef that is produced in the scheme is labelled with the trademark *Certified Irish Angus Beef*.

“The sale of Irish Angus bulls exceeded all expectations this year [2005]. This is mainly due to the huge success of the Irish Angus Producer Group who is marketing “Certified Irish Angus Beef”. (Western People)

Mr. Smith mentions two reasons for an increase of the number of Angus cattle in Ireland in the future. If the number of part-time farmers increases, which Mr. Smith thinks will happen, the number of Angus cattle will increase because the Angus suits that type of production. The reason is easy calving and that the Angus suits the Irish conditions. Another reason for an increased number of Angus cattle is the Angus partnership and the bonus price paid. Mr. Smith wants to see growth in numbers and premium, but there is one risk that mentions:

“It’s going to be growth in what we’re doing as well, but we have to be careful not to grow too quickly and flood the market and not be able to sustain the premium.” (pers., Smith, 2005)

5.2 Partnership 2: Irish Hereford Prime & AIBP

In the second partnership the producers are the members of the *Hereford Prime Ireland (HPI)*, which also is a producer group, very similar to the AAP. Between 150 and 200 cattle are provided every week by about 1,000 members (see table 5.2). The beef is processed by *AIBP* in Ireland. The purpose of the partnership is to produce and process a branded high quality beef, *Hereford Prime Beef*. The beef is sold to high-class restaurants and hotels in Ireland and France. All the beef is distributed by Pallace Foods.

Table 5.2: Facts for partnership 2; Hereford Prime

Founded, year	1998
Number of producers	1,000
Cattle processed, numbers per annum	9,000
Average cattle/member and year	9
Type of production	Suckler herds

Background

Between 1994 and 1996 there was a decrease in the use of Hereford bulls in suckler herds in Ireland. The pedigree breeders were troubled and argued that one reason for that development was that the benefits of the breed were not taken advantage of. It is generally held that Hereford cattle have easy calving and produce beef with good eating quality. An opportunity for the pedigree breeders arose in 1997 when Robert Deverell, a successful Hereford pedigree breeder, was contacted by a French chef. The Frenchman was looking for Hereford beef because of its good taste. Mr. Deverell saw a market opportunity and knew he could provide the cattle required (pers., Deverell, 2005).

Subsequently Mr. Deverell contacted AIBP, a large processor, asking if AIBP could process the cattle. One year later the first delivery of Irish Hereford prime was made to the chef in France. Mr. Deverell and the other pedigree producers started a producer group, *Hereford Prime Ireland Ltd.* (HPI) and established the brand *Hereford Prime*. The group slowly increased supplies from 17 to about 30 cattle weekly in 2000. At that stage, in order to increase in numbers of members and cattle, the group decided to enter the Irish market. Mr. Deverell promoted the product by personally visiting Irish restaurants, showing them the good quality of the Hereford beef. Many restaurants wanted to buy the product and as the demand increased the group recruited more members. At the moment there are about 1,000 members supplying 150-200 cattle every week. The group primarily ran distribution but now a distributor, Pallace Foods, runs it (pers., Ryan, 2005 pers., Deverell, 2005).

Coordination

Both *instructions* and *price signals* are used for coordinating the production of beef for this partnership. Different pricing systems have been used. At the moment there is a base price that is negotiated regularly with the factory. Before the year 2000 there was a flat premium of 14 cents/kg on top of the base price all year round. That had to be changed since it resulted in a surplus of cattle in September and October and a lack of cattle in the spring months. At the moment the highest bonus, 17 cents/kg, is paid in May and June and the lowest bonus level, 6 cents/kg is paid in September and October. That system keeps the farmers happier because they receive a higher bonus at times when it is more expensive to deliver cattle (pers., Deverell, 2005).

There are certain specifications for the cattle in the partnership (see table 5.5). First all the cattle have to be Hereford or Hereford crosses. Consequently all animals must be sired by a pedigree Hereford bull in order to qualify for the scheme. Also the animals should be about 300 kg in order to get meat cuts of the same size. The limits are a bit wider, 250-370 kg, because it is not practical to have the specifications very tight. The average weight of cattle is about 300-320 kg. Most of the cattle get an R or O grade and a fat score of 4L. R grades are preferred (pers., Deverell, 2005).

Up to 2004 Mr. Deverell procured all the cattle to the factory, but now there's a person employed for doing that. The stream of cattle to the factory is planned one month ahead. If there is a need for more cattle the members are contacted and asked if they have any cattle that are ready to deliver. At times when there is a temporary surplus of cattle the members are requested to hold on to their cattle a little longer. According to Mr. Deverell, despite the simplicity of the method, it's working very well. An attempt to plan three months in advance by using a form for the farmers to fill in did not work well. Mr. Deverell explains why:

"It's very hard to know three months in advance when an animal will be fit" (pers., Deverell, 2005)

Motivation

In association with Alltech, Hereford prime tries to get more farmers to feed the cattle natural products such as grass, grass silage, hay, and native grain. Mr. Deverell claims that the beef has a nicer taste if the cattle are grass fed (pers., Deverell, 2005).

Hereford Prime representatives meet people from AIBP four times a year. At those meetings both parties bring up any problem they have identified. When the problems have been discussed and hopefully solved, the information is brought back to the farmers via Hereford Prime. According to Mr. Deverell that system works very well (pers., Deverell, 2005).

"Hereford Prime shows that a partnership with four different partners involved works very well. Many years ago the farmers used to fight the abattoirs and vice versa. Now we're able to communicate and solve our problems mutually. That's the way forward." (pers., Deverell, 2005)

When signing up with Hereford Prime the farmer is not tied to sell all the cattle to the partnership. There is no penalty if a member sells cattle to any of AIBP's competitors. A couple of years ago members sometimes sold their cattle to other abattoirs when the price was not good enough but at the moment that is not a problem. (pers., Deverell, 2005)

Mr. Deverell states that it's important to keep the relationship between the producer and the processor simple. A large number of rules and regulations will deter farmers from becoming members of the Hereford Prime.

"The Irish farmer doesn't like too many rules and regulations. He likes a good price." (pers., Deverell, 2005)

Transaction costs

Farmers pay a one-time registration fee of €127 to become members of the HPI. The requirements for becoming a member are similar to the requirements for AAP, only the pedigree bull must be of Hereford breed. Certification by the Bord Bia quality scheme is also required. Compulsory inspections for new members are carried out (pers., Deverell, 2005).

All the members are inspected by representatives from HPI. The monitoring is done by spot checks on the members' farms. Since the new quality insurance systems for beef has been in-

troduced in Ireland⁷, it's much easier for Hereford Prime to assure the quality. If a member has any type of problem, the Hereford Prime will be contacted. A field officer visits the farmer and tries to solve the problem. All the inspections are financed by Hereford Prime. Mr. Deverell also mentions that Hereford Prime prefers members who don't run big feed-lots. According to Mr. Deverell it's very hard to monitor what such farmers feed to their cattle. The average 100 acre (40 ha) farmer is preferred as a member (pers., Deverell, 2005).

The deal between AIBP and Hereford prime is a so-called "gentlemen's agreement". There is no signed contract between the two companies (pers., Deverell, 2005).

5.3 Partnership 3: KK Beef Club

In this partnership, the producers are the 250 members of the KK Beef Club. The members, which are farmers with large feed-lots, produce 50,000 cattle every year (see table 5.3). The cattle produced by the members are processed exclusively in the Kepak Group factory in Clonee. The purpose of the partnership is to produce a "customer tailored" beef to exact specifications with complete traceability from farm to customer. In this case the processor, Kepak, has developed a blueprint with exact instructions for the beef production, which the farmers have to adhere to. Also involved in the formulation of the blueprint was Keenan Systems, a well-known mixer wagon manufacturer and feeding advisory company. The beef produced in the partnership is mainly exported to Italy, where it's sold to consumers by a large retail chain.

Table 5.3: Facts for partnership 3; KK Club

Founded, year	2000
Number of producers	250
Cattle processed, numbers per annum	50,000
Average cattle/member and year	200
Type of production	Finishers

One representative from Kepak, procurement officer Robert Malone, was interviewed at Kepak's factory in Clonee, where all the KK beef is produced. Following the interview, Mr. Malone showed Kepak's feed-lot; one of the largest in Ireland, producing almost 5,000 cattle per annum. Additionally a person from Keenan systems, Jerry Giggins, was interviewed in the Keenan stand at the Ploughing championships of 2005. Unfortunately, because of lack of time, none of the farmers participating in the KK Beef Club were interviewed.

Background

In the late 90's the prices for young animals in Ireland dramatically dropped. Kepak sold some animals to the Italian market, but it had a problem with keeping the quality consistent. Among the 500-600 animals killed/day it selected whatever was suitable for Italy; one day five cattle were suitable, the next day 50 cattle qualified. It was very hard to guarantee a constant supply to the customer. Some of the production in Kepak's own feedlot, one of the largest in Ireland, was devoted to produce beef for the Italian market. The Italian customer wanted a pink coloured meat with white flesh. Even though Kepak was using its own feedlot the

⁷ National Beef Assurance Scheme and Beef Quality Assurance Scheme, for further explanation, see Section 2.1 under the Food safety heading.

company couldn't constantly meet the specifications set up by the Italian customer (pers., Giggins, 2005).

The problem was presented for Jerry Giggins, a feeding specialist at Keenan Systems. Mr. Giggins tried different feeds to get the required specifications and came up with a feeding system that worked for animals of different ages. The feeding system was replicated at a few selected farms where the owners were Keenan customers. The result was great consistency in both meat and fat colour on animals fed by the blueprint instructions (pers., Giggins, 2005).

Coordination

The KK Beef Club members sign a contract with Kepak where they regulate the classification, breed and age of the cattle they will deliver at a certain time. The farmers source the cattle from the market or take them from their own suckler herds. Kepak is booking in those cattle in the projections for cattle supply for the next six months. Six months is the general projection time for the partnership. The actual slaughters of the cattle are arranged about three months in advance (pers., Malone, 2005).

“We go to farmers today [September] and say that next April we need heifers under 24 months of age and we need them on the farm for at least 120 days. Those farmers realise they'll have to have those animals by the end of the year” (pers., Malone, 2005)

The farmers are paid a price above commercial price. They are often given some indication of price, or sometimes even a minimum price, when they sign the contract. The minimum price will be equivalent to a break-even price for the farmer. In this case the farmer will not risk losing any money. Kepak offers a price that is a certain percentage above the market price at the day of slaughter. The level of the bonus differs from as much as 20 percent in the summer down to 5 percent in the winter.

Of the total of about 250 members in the club there is a core of 70 members that supply cattle all year round. The rest of the farmers are seasonal producers; they'll finish cattle during the winter months. Feeding cattle in sheds during the summer months brings extra overhead costs and also extra feed costs. Additionally there is often an extra cost for vaccine against pneumonia (pers., Malone, 2005).

For the participating farmer there are a lot of specifications to be met. The programme of planned production nutrition involves, besides the blueprint for feeding, the following: Planning of the production, forward budget on the profitability of the system, assessment of cattle on farm prior to feeding, detailed ration formulation, planning of slaughter schedule, monitoring cattle on an ongoing basis for performance and suitability, selling cattle and providing forward slaughter schedule for the factory. (www, KK Beef Club, 2005)

“It's a way for the traditional feeders, farmers that feed cattle all year around, to get a premium price for quality. But they do actually have to put in a little bit of extra effort and cooperation with the factory” (pers., Malone, 2005)

The feeding system will be adapted to the specific breed and type of animal. The specifications are very tight but if the farmers are following the feeding instructions 95-96 percent of the cattle will meet the specifications. On fat and meat colour 100 percent of the animals will

meet the specifications (pers., Giggins, 2005). Most animals will have a 100-day finishing period on a diet with very high starch content. There is no grass silage or fresh grass in the diet during that period of time (pers., Malone, 2005).

The farmers in the club have a much closer connection to the factory compared to what producers of commercial beef would have. The person who is responsible for the scheme at Kepak has regular contact with all the members and purchases roughly 1,000 cattle every week from the participating farmers. At a total there are seven or eight other people at Kepak directly involved in the club. They inspect the cattle pre-slaughter but are also looking at the cattle three months before slaughter to make sure that they have the right confirmation and the correct age (pers., Malone, 2005).

Besides sourcing the cattle, Kepak also has the possibility to tell the farmers when to deliver cattle. Even if the farmer thinks the cattle are ready for slaughter the procurement officer can tell him to keep the cattle a bit longer. The cattle produced by club members get prioritised over any other cattle in the factory; meaning that they are slaughtered as quickly as possible when they arrive at the factory. This is especially important for bulls and subsequently there is a time limit for bulls at one hour maximum. The reason is that the bulls start to fight if left in the pens for a long time, which affects the quality of the carcass (pers., Malone, 2005).

All the 70 core farmers produce beef that is guaranteed GM-free, which means that the feed for the last 100 days must be free from any genetically modified organisms. Soybeans is the most common protein feed in Ireland and because most of the soy available is genetically modified Kepak has to source GM-free soy beans for the farmers. At the moment (September 2005) GM-free soybean is about €12/tones more expensive than general soybeans (pers., Malone, 2005).

The procurement officers visit all of the 70 core members twice a year in order to estimate how many cattle will be delivered during the coming months. Kepak tries to plan forward as much as possible, and the procurement officers are constantly aware of how many cattle the members have in their sheds and when the cattle will be ready for slaughter (pers., Malone, 2005).

Motivation

The decision to start the KK Beef Club can be seen as a strategic move by Kepak. With a market share of about 30 percent, Kepak is the smallest of the top three companies slaughtering cattle. Instead of trying to grow bigger Kepak wanted to find and supply higher quality markets. Such markets require a year-round supply of good quality beef. At the factory in Clonee, approximately the same amounts of cattle are slaughtered every week all year round, whereas in other factories the amount slaughtered in September might be four times the amount slaughtered in May (pers., Malone, 2005).

Feedback from the farmers is gathered through a phone call every six months. With the farmers delivering cattle every week the contact is more regular just to make sure that the quality is consistent. If a certain carcass differs in quality it can be tracked back to the farmer it came from. The farmer will be contacted and asked if there is anything that has changed, such as feeding practices, management, handling, or transports. All issues are sorted out before they get really serious. There is a follow-up in quality issues every week (pers., Malone, 2005).

Producing cattle is a small margin business and all comes down to the gross margin made on every cattle. Spending money on supplying high quality markets can lead to increased profits. The price received for KK Beef Club-beef is higher than any other beef that Kepak sells (pers., Malone, 2005).

A couple of years ago, Keenan and Kepak representatives used to have a lot of meetings about strategies and planning. Now the farmers have learnt the feeding practice and therefore don't need advice to the same extent. If, for any reason, Kepak want to change the meat quality it's easy to develop a new feeding practice and communicate that to the farmers (pers., Giggins, 2005).

Transaction costs

At the moment the KK Club is based in Clonee and that's also the only place where KK club cattle are slaughtered. All KK club cattle must be transported to the factory in Clonee. The farmers always pay for transport costs. For some cattle it will be a four-hour journey to the factory; probably the longest journey for any cattle in Ireland (pers., Malone, 2005).

On request from the customers in Italy Kepak employees do a lot of testing on the cattle, both on the farms and in the factory. The customer wants water, blood and urine samples from animals from every farmer annually to test for hormones and heavy metal levels. Kepak does a quality report on every farm once a year (pers., Malone, 2005).

5.4 Partnership 4: The Dawn-Teagasc partnership

In the fourth partnership the processor is *Dawn Meats*. The producers are 240 farmers selected by Dawn. The farmers produce more than 20,000 cattle for the partnership every year (see table 5.4). The purpose of the partnership is to increase the farmers' profitability and get them to produce better quality animals through instructions and a special advisory service. Teagasc provides the advisory service. The beef is not kept separate from other Dawn beef and is therefore not sold to any specific customers.

Table 5.4: Facts for partnership 4, Dawn-Teagasc

Founded, year	2000
Number of producers	240
Cattle processed, numbers per annum	20,000
Average cattle/member and year	83
Type of production	Suckler herds and finishers

One representative for Dawn was interviewed, namely the coordinator of the partnership Pat McFeely. The interview was conducted at UCD. Three of the participating farmers were interviewed at their farms. The farmers were selected by one of the advisors from Teagasc, Paul Gilligan. Mr. Gilligan was present at the farm visits but did not participate in the actual interviews. Mr. Gilligan was also interviewed in connection to the farm visits.

Background

The partnership was initiated by Dawn in 2000 in order to encourage confidence among beef farmers. Mr. McFeely mentions that the traditional approach between farmers and factories

were totally price based. Dawn wanted to do something different; the main goals were viability and profitability among the farmers. For this Dawn needed advisory skill and therefore contacted Teagasc, an advisory company for the farm sector. Self-interest for Dawn was the ultimate reason for initiating this partnership. As Mr. McFeely puts it:

*“If farmers are not going to stay in business, were not going to stay in business”
(McFeely)*

People at Dawn were worried about lower profits in primary production. If there were no profit in production the number of farmers would decrease. In that case it's important for Dawn to keep as many producers as possible (McFeely).

The beef produced in the partnership is mainly sold in the UK and Italy, although it's not kept separate from other beef. Mr. McFeely comments upon that fact:

“The ideal would be that it would be sold to a particular customer, but it's very difficult to negotiate with retailers.”

The measure of success is the bottom-line result for the farmers but also to manage to produce a type of beef that the market requires. Dawn will use its procurement managers to select farmers suitable for the scheme. A couple of reliable farmers (suppliers) were selected by the procurement officers at Dawn. A majority of the member are finishers (pers., McFeely, 2005). The members meet in discussion groups with about 15 members each (Farmers Journal).

Coordination of production

Both *price signals* and *instructions* are used for coordinating production. The specifications (*instructions*) that are set up for cattle produced by partnership members are as follows: The cattle can be either steers or heifers and must be under 30 months of age. Weight and grade specifications are presented in table 5-5. All cattle must be approved under the National Beef Assurance Scheme. There can be no digestive enhancers or animal fat in the feed (Today's Farm, 1, 2005). The specifications are driven by customer demands, mainly from the UK. Since the R4H grade is not included and the weight limit for steers is 400 kg, the specifications are quite demanding (McFeely). Some of the farmers agree that the weight limit is a problem:

“It's hard to keep them under 400 kg. You can have very, very good cattle and don't get a good price because they are too heavy.”(Farmer 1)

Others find no difficulty at all in meeting the specifications. The advisors educate the farmers in how to meet the specifications required by Dawn, for example how to buy a better stock bull and how to buy good cattle on the cattle marts. It's hard to feed cattle into a good grade and it's therefore important to know how a R- or U-grade animal looks like. Dawn also encourages farmers to sell cattle when the bonus and the price are at the highest levels. In this case there are two periods where the payment is best; November to January or May to June (Gilligan).

A number of pricing methods (*price signals*) have been tried. An early attempt to predict forward price didn't work because it was impossible to get a forward price from the retailers. An attempt to use a minimum price failed as well. Farmers either viewed it as a worst-case sce-

nario or thought it was too low. According to Mr. McFeely the farmers prefer a market price. Currently Dawn pays a premium for the cattle in addition to the base price. In the beginning of the partnership the premium was paid all year round but now the farmers have to sell the cattle in certain months in order to get the premium.

Table 5-5: Requirements for cattle in the partnerships

Partnership	Breed	Type	Age	Carcass weight	EUROP-Grades
Angus Beef	Angus and Angus cross	Heifers/Steers	< 30 months	230-280 kg	U,R,O (3-4H)
Hereford Prime	Hereford and Hereford cross	Heifers/Steers	< 30 months	230-320 kg/ 230-350 kg	E,U,R,O (3-4H)
KK Club	Continental cross	Heifers Bulls	< 16 months/ < 18 months	240-280 kg/ 340-410 kg	E,U,R (3,4L,4H)/ E,U,R (3-4L)
Dawn-Teagasc	Continental cross	Heifers/Steers	< 30 months	280-380 kg/ 300-400 kg	U(3-4), R(3-4H)

One of the interviewed farmers commented the sharing of production information with the factory:

“I don’t mind sharing as long as they are sharing. It’s a two way street that one.”(pers., Dawn farmer 1, 2005)

Coordination of risk

There’s no discipline or sanction for the farmers if delivered cattle don’t meet the specifications, other than that there will be no premium paid. Nevertheless, the farmers will never have a problem with selling their cattle to Dawn. At times when demand for cattle is limited the partnership farmers will be prioritised (pers., McFeely, 2005).

According to Mr. McFeely it takes a while to get farmers not only to focus on price. Negotiations can affect price only marginally; the retailers set the price. Consequently the message to the farmers is to focus on what they have control over; the cattle from when it arrives to the farm until it departs the farm. Dawn tries to keep the farmers informed on future demand and prices but there is a lot of guessing (pers., McFeely, 2005).

There is no written contract that prevents the farmers to sell their cattle to another processor, even though it’s not appreciated by the Dawn people, who see it as an ongoing risk. If the farmer sells to a competitor once there’s no penalty, but if it happens often the farmer will be excluded from the partnership. Mr. McFeely again:

“Our message: you’re free to go to anyone, but in that case you will get no free technical advice.”

During the periods of the year when there is no premium Dawn considers it important to pay the farmers a competitive market price for the cattle (pers., McFeely, 2005). One of the farmers considers it to be a loose arrangement and claims that he’s not prevented from selling to other processor. Mr. Gilligan thinks it’s a fare deal; however he argues that farmers should always offer their cattle to Dawn and Dawn should always match the potential price from a competitor. Still the partnership is a two-way thing; if a farmer is not contributing he should

be excluded (pers., Gilligan, 2005). Despite the partnership, the relationship between Dawn and the farmers is still a bit fragile. However, had it not been for the partnership the parties would have no relationship at all (pers., Gilligan, 2005).

Motivation

For educational reasons, the farmers have been invited to the factories. At the factories they got the opportunity to grade their own animals prior to slaughter. When the cattle were slaughtered and graded by professional graders the farmers saw what a certain grade looked like. In addition to this the sales people showed the farmers what type of beef they could sell. Clear results were reached; in a matter of months the more skilled farmers delivered cattle with better and more consistent quality. This initiative was appreciated among the farmers. One farmer said that his changed feeding practice was a direct effect of that visit. Prior to this visit the farmers were strangers to each others. Initially there was a problem with making the farmers believe that Dawn meant what it said. Besides that, some of the farmers had very little experience of getting advice about production (pers., McFeely, 2005).

There are two advisors working for Teagasc that provide all type of advice to the farmers, anything from ration formalisation to financial issues. The advisors have back-up from the whole Teagasc service including specialists. The advisors are hired by Dawn on a two-year contract. According to Mr. Gilligan, the collaboration with Dawn is good PR for Teagasc. Teagasc does not have any costs for participating in the partnership (pers., Gilligan, 2005).

Transaction costs

The contracts between the farmers and Dawn are all verbally agreed upon. Mr. McFeely argues that it's better to base it on a relationship rather than going the legal road with written contracts. By doing this the risk of costly legal processes is reduced.

“That’s the ultimate measure of success; that we can see and the farmer can see that the profitability is increasing.” (pers., McFeely, 2005)

6. Analysis

In this chapter, the empirical data of the prior chapter and the theoretical contents of chapter 3 are amalgamated. The analysis follows the structure of chapter 3; coordination, motivation and transaction costs in each partnership is analysed under each heading respectively. In the end of each section there's a summary where the partnerships are compared to the rules of thumb for each section.

6.1 Introduction

The four partnerships exhibit some general patterns about the similarities and the differences. All partnerships are quite recently established; the Angus partnership, which was established first of the four in the study, started in 1995 and the Dawn-Teagasc partnership, which was initiated most recently, started in the year 2000.

Concerning the members of the partnerships there some differences. As concerns number of delivered cattle per member, the KK Beef Club Members is on one end of the scale and the Hereford Prime along with the Certified Angus members are on the other. The Dawn-Teagasc partnership members are in-between. While the average member in the Hereford and Angus partnerships deliver roughly 10 cattle each every year, the KK Beef Club members deliver on average 20 times as many cattle. Some of the KK Beef Club core-members deliver cattle every week and deliver over 1,000 cattle every year. With 83 cattle per year on average, the Dawn-Teagasc members also deliver much more than the Angus and Hereford members. These differences are important to keep in mind when comparing the other dimensions of the partnerships, for example income from cattle as a part of the total personal income. It is likely that income from cattle is much more important for the average KK Beef Club member and the Dawn-Teagasc member than for the average Hereford or Angus member.

Another observation is that the Angus partnership and the Hereford partnerships are much alike in most respects. The structures of the partnerships are almost identical. Since the Angus partnership started earlier, the Hereford partnership can be considered to be a copy of the Angus partnership. Despite the similarities there is one important difference; the Angus partnership includes a large retail chain, which the Hereford partnership doesn't. Since these partnerships are so much alike they are sometimes in this chapter considered to be one partnership type. So, they're referred to as the *producer groups*.

One major difference between the partnerships is if the producers have control over the relationship between the processor and the retailer. This issue separates the Hereford and the Angus partnership from the other two. In the first partnerships, the producers, via the board of directors have control over pretty much the whole production chain. They negotiate directly with the retailer in the Angus case and with the distributor in the Hereford case. In the KK case the producers know to some extent where their beef is being sold but they have no direct contact with the retailer. In the Dawn case the producers have no idea where their product is sold and they have therefore no contact with the customer.

6.2 Coordination in the partnerships

Coordination of production may be considered the most important aspect in contract design and it is therefore a logical point-of-departure for the analyses.

Coordination of production

Coordination of production is about getting the right quantity of the right product in the right place at the right time. This is achieved in all the partnerships but in slightly different ways.

Price signals and instructions

In all four partnerships both price signals and instructions are used in order to achieve coordination of production. Similar for all partnerships is the use of variable price plus a bonus. In three cases, Angus, Hereford and Dawn, the bonus is a certain amount (cents) for a certain quality. Furthermore the bonus in these partnerships is either given by the processor, in the Dawn case, or centrally negotiated by the producers, in the Angus and Hereford cases. In the KK case the bonus can be either a fixed number of cents or a certain percentage of the base price. Additionally there is a possibility for the single farmer in the KK beef partnership to negotiate the level of the bonus, which seems not to be the case in the other partnerships.

Olesen (2002) mentions that quantitative aspects of production are often coordinated through prices while qualitative aspects are coordinated through instructions. How these aspects are coordinated in the partnerships are presented below.

The *qualitative* aspects of the production in the *producer group* partnerships are regulated by clear instructions combined with price incentives. The cattle have to be Angus or Angus cross or Hereford or Hereford cross respectively. There are also specifications regarding fat score and classifications that have to be met. If the specifications are met there is a bonus paid. There are also different levels of bonus. Subsequently the farmer will be rewarded for producing very good cattle. *Quantitative* aspects are also regulated by price. The bonus per animal is the same despite how many cattle the producer delivers, accordingly that doesn't give incentives to deliver more cattle. However the bonus is higher during times of the year when the production costs for the farmer is higher. In that way the quantity is affected by the bonus. This is an example of trying to counteract seasonal differences in beef supply. Since the product is specific it's the customer demand that sets the volume to be produced

In the *KK Beef Club* the *qualitative* aspects are also coordinated through instructions, even more than in the previously mentioned partnerships. A very precise feeding system must be used. The specifications for the cattle, regarding grade and fat-score are very strict. There is a bonus price paid for the cattle. Since the feeding system is very precise the bonus is a compensation for high production costs as well as a reward mechanism. Quantitative aspects are regulated by contracts, where the producer promises to deliver cattle at a certain time. The bonus is higher during the summer months because of higher production costs. As in the producer groups the market sets the volume.

For the Dawn partnership the *qualitative* aspects are coordinated with a combination of price and instructions equivalent to the producer groups. However, the advisory service is a way of coordinating qualitative aspects. Apparently that system works well. Quantitative aspects are

coordinated with price signals in the same way as in the other partnerships. Since the product is commercial beef the volume is not restricted.

Information

Olesen (2002) explains the importance of sharing *information* between the parties of the production chain. A problem that could occur is that the bargaining power is weakened for the party that reveals much information about production costs.

This could be a problem in the *Dawn* case. The processor is helping the producers to lower the production costs by giving them advice and access to the Profit Monitor Programme. However by doing this, Dawn can easily get information about the producers' production costs. Subsequently the producers will lose bargaining power if the processors know their real production costs. Competition does to some extent prevent Dawn to do this since it cannot pay a lower price than the competitors. One of the farmers comments upon that:

"I don't mind sharing as long as they are sharing. It's a two way street that one."(pers., Dawn farmer 1, 2005)

Maybe that's the price the farmers have to pay. It's economically rational if they lose less money than it would have cost to buy the advisory service themselves. Maybe Dawn is trying to build a long time relationship with the farmers and in that way trying to get them more loyal to the company. Considering the long time hostility between the parties, this will probably be hard to do.

In the producer group cases the processor probably has no information about the producers' production costs. In the Hereford and Angus case the producers probably know the margins in the processing since they have information about the price to the retailer and the distributor, respectively. The producers use the processor only for processing.

The *double marginalization problem* could arise in the producer group partnerships. The board of directors in the producer groups can limit the number of producers and therefore limit the volume, which would raise the price. That would affect the retailers and the processor. Mr. Smith mentions that the Angus producer group doesn't want to grow very fast i.e. increase the quantity as that might threaten the price level. According to theory this behaviour decreases the integrated profit. Is that true in this case? The production price for this product is not much higher than any other commercial beef with the exception that it's produced in small units. If the producer group would increase the quantity there is a risk that the product would become like commercial beef. It is also in Tesco's interest to keep a high price in order to target a market segment where the consumers are willing to pay a premium price.

One way of dealing with the double marginalization problem is to use *two-folded contracts*. The price system in the Hereford and Angus cases are maybe a type of two-folded contracts. The base price corresponds to the average production costs and the bonus is a part of the profit created in the production chain. In the KK Beef club this is not the case since the processor has a good idea about the producers' production prices.

Coordination of risk

Risk is considered to be costly and should be borne by the least risk averse party, which is often the larger firms. The larger firm is the processor in all four partnerships. The smaller, more risk averse party, is consequently the producer. Even in the cases of Angus and Hereford the producer is the smaller part even if the whole producer group is considered to be the producer, since the processor in both cases is a very big company. These conditions correspond to the conditions in the theory.

Sharing risk

Since beef is an agricultural product the members in all partnerships are exposed to a *general risk*. This risk for the producers is probably mostly the risk that the cattle get sick or that they cannot meet the specifications. Weather conditions can also be ascribed to general risk.

In the *producer group* partnerships the general manager is responsible for delivering a specific number of cattle to the processor every week. From the processors point of view it's almost like one producer is delivering 15,000 or 10,000 cattle per annum respectively. The *general risk*, the risk that the producer is not able to deliver cattle is spread between all the producers. If one producer fails to deliver cattle it's possible for the general manager to source the cattle from another producer. In this way the general risk is reduced in the producer groups. Subsequently the processor is exposed to a low risk, which is also lowered by the fact that the cattle are of a consistent quality.

Since the producers in the KK club sign up to deliver a certain number of cattle with a certain quality at a certain time the producers seem to be exposed to a lot of risk. The risk is lowered by the fact that the feeding system is very good. Using the feeding system there is more than 90 percent chance that the cattle will meet the specifications. This also lowers the risk for the factory; it can always deliver good quality meat to its customers.

In the Dawn partnership there is a use of yardstick competition since the producers are compared through the Profit monitor programme.

All the producers in all the partnerships are exposed to a *price risk*. There is no way that the price risk can be totally avoided. Input and output prices vary. One general comment is that commercial beef is probably more exposed to price risks than branded beef since it is a generic product. Therefore the producer groups KK's beef is less exposed to risk because the products are specific and branded with well known quality brands. Dawn beef is not kept separate and sold as a specific product; therefore it's more exposed to price risks.

Beef processing is a small margin business. The processors are making the profit through a small margin and a big flow of cattle. Therefore it's crucial for the processors to keep a margin on every cattle produced. If the processor gives the producers a guaranteed forward price and the market price drops, that small margin could easily disappear. That would result in a loss for the processor.

Some of the bonus in the partnerships is probably the result of less risk and lower production costs for the factory. Mr. Giggins talks about better consistency. It's more cost efficient to process beef that has the same and the right specifications. In that way it's possible to pay the bonus even if the market price is really poor. Mr. Smith also mentions this:

“We have examples like the BSE crises; the producer group won’t be able to protect from things like that. But when the price was really low the premium was still there. There is that small level of buffer there that always insures the farmer” (pers., Smith, 2005)

In the Dawn case probably all the bonus comes from better consistency in the factory since there is nothing else that could motivate the bonus. What talks against that is the fact that the beef from the partnership is only about 5-7 percent of the total production at Dawn. Can that much cost be saved on such a small part of the total production? Another explanation is that Dawn is only doing this in order to get good publicity.

Both in the Hereford and Angus partnerships the price is negotiated regularly. The boards of the Hereford and Angus producer groups control the whole chain and they are probably aware of the price difference between the retailer and the processor or the distributor, respectively. Since the producers are not tied up to deliver to the producer groups, there is a strong incentive for the producer group to pay a bonus price. It’s highly unlikely that the producer groups will pay a price below the market price level.

Minimizing risk

All the contracts seem to be adjustable and therefore it’s possible for the parties to make necessary changes. In the Dawn case there is no written contract between the producer and the processor. Dawn could probably quit paying bonus at any time. The advisors are contracted on a two year basis but after the two years Dawn can quit the cooperation.

The contracts used between the producers and Kepak in the KK Beef club are also adjustable. It’s for example easy to formulate new feeding regimes if there is a need to do so. The producers are probably willing to change their production since they’ve done it at least once to be able to participate in the partnership.

Fixed product prices have not been used in any of the partnerships. However, the Dawn Partnership tried to use a minimum price. That didn’t work well since the factory risked losing money. Some of the producers were also discontent since they thought the minimum price was set too low and it was used as a reason for paying a lower price. That indicates that it was set below the producers’ production costs. In that case it’s understandable that the farmers were discontent. In this case Dawn really did put more risk on the producer because the factory should be less risk averse.

In the KK club case long-time contracts are used although the price is not totally fixed. Sometimes a minimum price is used. The minimum price is set at the level of the producers’ production cost, in that case reducing the risk for the producer. The difference to the KK Beef is that the production costs are higher and the producers can not get compensation for the extra costs from someone else than KK. Furthermore it’s important for Kepak to get the beef from a certain producer since it has estimated the supply to the customer. It can’t risk that the producer sells the beef to someone else.

The prices are in a sense linked to a certain price index since they follow the market price, for example in the KK partnership. Those contracts are a combination of long-term and a contract that follows a certain index. The same goes for the producer groups.

6.3 Motivation in the partnerships

Participation

There is no reason for claiming that the farmers in the partnerships are more or less opportunistic than any other economic actor. Motivation is primarily about making people, in this case farmers, willing to participate. It's quite clear that the partnerships have succeeded in this, especially the producer groups where the number of members is increasing all the time.

The *adverse selection problem* is mentioned by Olesen (2002). That problem will occur if the producers are withholding information about their production costs. This can only be the case for the Dawn and the KK partnerships because in the other cases the processor only negotiates with the producer group representative. In the KK case it seems as the processor has a very good idea about what the production costs are. It is, for example, paying a minimum price, equivalent to production costs. Therefore adverse selection is not a big problem.

In the producer groups there is probably information rent since the price negotiation is done centrally. The price is probably based on an average production cost and therefore some producers with low production costs will receive information rent.

Effort

Given the producers' opportunistic behaviour there must be individual incentives to make the producers follow the production plan. A few conditions must apply to make it useful to increase the intensity in the incentives.

(1) *Higher effort by the producer must give higher profit for the processor:* Better graded cattle will probably result in a better beef that is worth more on the market. Since the producers can affect the outcome of the production a higher effort from the producers will result in a higher profit for the processor.

(2) *It is not costly to expose a risk tolerant producer to more risk:* All the producers run rather small farms and are therefore risk averse. Hence, there is no incentive to increase intensity.

(3) *The precision by which the producer can estimate the desired activities:* In the KK partnership the producers are very certain to meet the specifications according to Mr. Giggins. In the producer group partnerships the precision by which the producer can estimate the desired activities probably differs a lot. Since they are part time farmers they are most likely not as good as the KK members in estimating the outcome of the production. That statement is supported by Mr. Deverell:

“It's very hard to know three months in advance when an animal will be fit” (pers., Deverell, 2005)

This could be compared to KK where the planning is done six months ahead and the slaughtering is definitely planned three months in advance.

(4) *Higher intensity means higher risk and higher effort only if the producer is responsive to incentives:* The producers can all to a large extent affect the outcome of the production and they are therefore responsive to incentives.

Investment

The *hold up problem* could occur if two conditions apply. First let's consider if there is risk of any specific investments in any of the partnerships. Since there are so many cattle and processors in Ireland it's unlikely that the hold up problem would occur because of *geographically specific* investments. The facilities used by the producers are specific for beef production, but since they could all easily switch to producing commercial beef there can be no hold up problem because of *physically* specific investments in any of the partnerships.

Human assets can also be specific. Concerning this type of investments the same conditions as above apply. The producers have skills in producing beef for the partnerships but they can also produce commercial beef. Besides, because they are farmers, they probably have skills in other type of farming activities besides beef. Therefore this cannot be considered a problem.

The requirements for participating in the partnerships, such as following a certain certification system, could be seen as *dedicated assets*. On the other hand, the certification systems used in the partnerships are quite wide-spread general systems. The producer can therefore probably make use of the certification systems outside the partnerships as well. The members of the KK Beef Club partnership have some *dedicated assets* since the feeding system is specific for the partnership. However, the processor paid for the development of the system and therefore the dedicated asset is not a problem for the producer.

Three of the partnerships, Angus, Hereford and KK, contain a brand, and therefore there are specific investments in the form of *special brands*. In the Angus and Hereford cases the producers have invested in the brand and they are also the ones that control the brand. It's really the pedigree breeders that control the brand. The producers want to stay in the partnership in order to get money back for investments in the brand. But that money is deducted every time they delivered an animal and will be so even if they deliver more animals in the future. The only way they can get more profit is if the money spent makes the brand stronger in the future.

The second condition that must apply in order for the hold up problem to occur is incomplete contracts. The contracts in the partnerships are all incomplete, most of them are not even written contracts.

6.4 Transaction costs in the partnerships

Finally the transaction costs in the partnerships are analysed. The objective is to identify transaction costs and evaluate how these costs are reduced in the partnerships.

Entering a contract

Three types of transaction costs occur when entering a contract. These are presented and commented upon respectively.

(1) *The difficulty to foresee future events*. The parties can never foresee every possible future event. In these partnerships there is not much that is regulated in detail. The parties will have to improvise a lot if an unexpected situation occurs.

(2) *The understanding of the contract:* Since most contracts are verbal it's hard to know if the parties have the same understanding of the contracts. In the cases where the written contracts are used, they are kept very simple, which makes them easy to understand.

(3) *The cost of making a contract legally binding:* This problem is avoided in the Dawn case by the fact that the contract between the producer and the processor is only a "gentlemen agreements". Dawn has deliberately chosen not to have written contract just to avoid expensive lawsuits.

The method of using the same contract for all producers is used in the producer group partnerships. All the producers receive the price that is centrally negotiated by the general manager. The producers also get the same bonus for the same type of cattle. The other way of lowering this type of transaction cost is used in the producer group partnerships. The processors are negotiating with representatives from the producer groups, the general managers. Compared to negotiating with over a thousand members in each partnership the transaction cost can be reduced substantially.

Considering this, the general manager is a very important person in the producer group. A poor effort by the general manager in negotiations with the factory will affect the income negatively for all the producers.

Conflict resolution

As in all contract situations, conflicts between the producers and the processors will occur in the studied partnerships. The solution suggested in theory, to let one party be responsible for everything that is not included in the partnership, is not utilised in any of the partnerships. In order to use that suggestion as a *tool for conflict resolution*, there must be a lot of trust between the parties. The level of trust in the partnerships is worth commenting upon even if the tool just mentioned is not used. Also lack of trust could be the reason why that tool can not be used. In general, the level of trust between producers and processors must be considered to be very low. Both the interviewed farmers and people from the industry mentioned this.

In the *producer groups* there is a rather simple but effective way of dealing with conflicts. If there is a conflict with the farmer, a representative from the producer group will visit the person, attempting to solve the problem. The producer group will probably not offer a lot of resources on trying to solve a problem with a single producer since every producer only contributes with a very small portion of the total number of cattle in the partnership. Furthermore the general managers and the board of directors have regular contact with the processor and the retailer. For example the Hereford Prime representatives meet people from AIBP four times every year and discuss any issues. In that way there is a good chance that conflicts will be solved at an early stage.

The level of trust between the producers and the general manager is probably very good. The farmers have given up their possibility to negotiate price and have to rely on the general managers' ability. Besides, the general manager and the board of directors are all farmers or from farming background and they will therefore get more trust from the farmers. Mr. Deverell makes a good summary concerning this:

"Hereford Prime shows that a partnership with four different partners involved works very well. Many years ago the farmers used to fight the abattoirs and vice versa. Now

we're able to communicate and solve our problems mutually. That's the way forward."
(pers., Deverell, 2005)

In the *KK Beef Club* case any issues between the producers and the processors are sorted out at a very early stage. It's important to do so, since the delivery of cattle from every producer is important for the partnership, especially the producers in the core group. Compared to the producer groups, every member in the *KK Club* contributes with a larger share of the total number of cattle. The level of trust in this partnership is probably much better than in general. The producers know that the type of cattle they produce is very important for *Kepak*. Subsequently they know that *Kepak* must uphold the good relation with the producers.

Conflict resolution in the *Dawn-Teagasc* partnership is not regulated since there are no written contracts. Conflicts are solved verbally when they arise. Mr. McKeely from the *Dawn* partnership mentions that there has been a lack of trust for many years in the beef sector. One reason for initiating the partnership could have been to change this condition. It's a clear disadvantage for the processor if bad trust prevents the use of instructions in order to get a better raw material from the producers.

Monitoring

Monitoring requires personnel and information systems, which creates transaction costs. The costs can be minimised by *precise and clear information* and *incentives that motivate effort*. Monitoring is conducted in all the partnerships, although in slightly different ways. However, monitoring is never paid for directly by the producer. In the producer group cases the producer group pays for monitoring as a part of common costs. The processor pays for monitoring in the other two partnerships.

Because of bonus payment, there are good incentives that motivate effort in trying to produce the required type of cattle for the partnerships. Monitoring of these requirements is automatically conducted when the animal is graded.

In the producer group partnerships the breed of cattle is important for the quality of the product and for the reputation of the brand. Subsequently the type of breed used is monitored in advance, by securing that the producer has a pedigree bull. However, the same condition is also monitored when the cattle is delivered to the factory and by checking the animal passport. Because this condition is very important for the brand, it can be motivated to use a lot of resources on monitoring this. Furthermore there are spot checks of the producers' facilities carried out. This monitoring is perhaps not as important for the product quality as it is for the brand reputation. A health scandal at one of the farms in the partnership would be devastating for the brand reputation. Consequently, compulsory checks on all facilities would be to prefer. On the other hand that would probably be too expensive. The producer group relies on the quality insurance programmes instead. That is most likely a wise decision considering the limited resources.

For the *KK Club* more resources are spent on monitoring the producers. Obligatory tests are carried out and the results are sent to customers. These are probably well invested money, since the product is guaranteed GMO free. The guarantee in the producer group beef is less specific, since it's marketed as "natural beef". Also the *KK Beef* is sold on an export markets where customers are perhaps more suspicious, especially since the BSE crises. The monitoring is simplified by very *precise and clear information* to the producers, concerning feed etc.

Monitoring in the Dawn partnership is done by the advisors from Teagasc. Given that the advisors regularly visit the producers for other reasons, the costs are lowered. Monitoring of the profitability is conducted through the profit monitor programme. But because participating in that programme is not compulsory for the members that monitoring is not complete.

Influence costs

The problem with *influence costs* will occur if one party tries to influence the other parties' decisions. Whether this is the case in the partnerships is hard to measure, but considering the initially low level of trust it's possible that the parties would lie or withhold information. The risk for this happening is highest in the Dawn case.

Reducing the risk of *influence costs* can be done by making the contracts very simple, which seems to be the case in all partnerships except the KK Club. Another way of reducing *influence costs* is by using objective parameters. The EUROP grading system is an objective system and also most other parameters are objective.

6.5 Partnership compliance with the rules of thumb for contract design

The rules of thumb for contract design give concrete guidelines to how to construct a contract. Below is a presentation of how well the contracts in this study comply with these rules. A summary of this presentation is shown in table 6-1.

Compliance with rules of thumb for coordination

1. *Coordinate production.* Both price signals and instructions are used in the partnerships in order to coordinate production. The problem with seasonality is handled by using market price by also by giving more bonuses at times when production costs are higher. Very clear instructions about production combined with price incentives are used in the KK partnership, apparently with good results. It seems as the production is more planned and coordinated in more detail in the KK partnership compared to the other partnerships. This does not mean that the involved parties have failed in coordination in these partnerships. The level of coordination suits the type of producers in these partnerships. They are often part time farmers with small herds, and it is harder for them to put a lot of effort in coordinating the production. Too much coordination would probably put off a lot of farmers from participating in the partnerships. The specific coordination in the KK partnership on the other hand suits the type of producers that are specialised in beef production. In the partnership they can really make good money because of their special skills and their time spent in specialised beef production.

Table 6-1: Compliance with the rules of thumb for contract design

	Rule of thumb	Certified Angus	Hereford Prime	KK Beef Club	Dawn - Teagasc
Rules for coordination	<i>Coordinate production</i>	Price signals and instruction well adapted to seasonality	Price signals and instruction well adapted to seasonality	Price signals and instruction well adapted to seasonality	Price signals and instruction well adapted to seasonality
	<i>Balance the costs and benefits of decentralisation</i>	Production decisions made by producers	Production decisions made by producers		
	<i>Minimize the costs of risk and uncertainty</i>	Risk sharing through pricing system and many producers	Risk sharing through pricing system and many producers	Risk sharing through pricing system and very strict production system	Risk sharing through pricing system and advisory service
Rules for motivation	<i>Reduce the costs of post-contractual opportunism</i>	Bonus payment linked to specific quality and measured by EUROP-system	Bonus payment linked to specific quality and measured by EUROP-system	Bonus payment linked to specific quality and measured by EUROP-system	Bonus payment linked to specific quality and measured by EUROP-system
	<i>Reduce the costs of pre-contractual opportunism</i>	The processor receives a fixed payment for processing cattle	The processor receives a fixed payment for processing cattle	The processor knows the producers' production cost	
	<i>Do not kill co-operation</i>	Close contact between management and processor	Close contact between management and processor	A lot of information sharing	A lot of information sharing
	<i>Motivate long-term concerns</i>	Not a problem	Not a problem	Not a problem	Not a problem
	<i>Balance the costs and benefits of re-negotiation</i>				
Rules for transaction costs	<i>Reduce the direct costs of contracting</i>	Simple standard contracts	Simple standard contracts		
	<i>Use transparent contracts</i>	Simple standard contracts	Simple standard contracts	Good communication with producers	Simple standard contracts

2. *Balance the costs and benefits of decentralisation.* The decision-making rights are allocated between the parties in different ways in the partnerships. In the producer group partnerships most of the decisions about the production is made by the producers. Even though there are some rules to follow the producer group doesn't interfere much in the individual producer as long as the right type of animal is delivered to the abattoir. In the KK beef club almost all production decisions are monitored by the processor. Producing the type of beef produced in this partnership does probably require this type of arrangement and the producers are willing to give up a lot of their own deci-

sion rights. In the Dawn partnership there is a very good example how to utilize important information. When the processor explained and showed the producers what type of cattle it was looking for the producers managed to produce much better cattle almost instantly.

3. *Minimise the costs of risk and uncertainty.* The processors are probably least risk averse despite the small margins since they are very big companies. Given this they should bear all the risk. However risk is shared with the producer through the pricing system. The bonus is negotiated in advance and works as an insurance for the farmers. In the producer groups the risk is spread among all the producers since it is possible to procure cattle from many different producers simultaneously. The Dawn partnership also lowers the risk for the factory since the variation in quality in the cattle delivered is smaller.

Compliance with rules of thumb for motivation

1. *Reduce the costs of post-contractual opportunism.* Concerning qualitative aspects of production, there are clear monetary incentives that motivate the farmers to deliver the right type of cattle. The quality is easily measured by the use of the EUROP system and the farmers receive a payment only if the cattle apply to the requirements.
2. *Reduce the costs of pre-contractual opportunism.* Concerning this question the partnerships vary a bit. In the KK and the Dawn case the processors are trying to get hold of information about the producers' production costs. In that way they can avoid the problem of information rent. In the producer group partnerships the processor can not get information about the single producer's production costs. On the other hand the processor is paid a fixed sum for processing the cattle and can therefore be certain to make a profit on the operation.
3. *Do not kill co-operation.* In the KK and the Dawn partnership there is a lot of sharing of information. In fact the Dawn partnership is to a large extent about sharing information. The processor is sharing information about the production, what type of cattle it needs and what the production looks like via the presentations at the factories. The producers share information about production costs and effort via the profit monitor program and the advisers. This is important because of the low level of trust. In the KK club the processor needs a very specific product and shares therefore information with the producers. Information about the market is transferred to the producers in the producer groups. The problem with renegotiation is dealt with by the possibility for the producer and the processor to quit. There will be no expensive lawsuits. In the producer group partnerships the co-operation works in a different way. The managers of the groups have close contact with the processor and also with people in the rest of the production chain. This makes the negotiations easier and creates more trust. The farmers are probably happy as long as the managers do their job and negotiate a good price for the cattle.
4. *Motivate long-term concerns.* None of the contracts require specific investments by the producers. Therefore there is no problem with long term concerns.
5. *Balance the costs and benefits of renegotiation.* Renegotiation is ongoing all the time in all of the partnerships. This is a way of coping with a volatile market.

Partnership compliance with rules of thumb for transaction costs

1. *Reduce the direct costs of contracting.* The contracts in the producer groups are very simple, and the same type of standardized contract is used for all the producers. This lowers the cost of contracting. Furthermore the cost for negotiating price is much lower in the producer group since one person negotiates for all the producers. This is not the case in the other partnerships. Monitoring is probably a large cost in the KK partnership, but the strict requirements from the customers require that type of monitoring. There are quite a low number of producers in this partnership and that makes the monitoring less expensive. In the Dawn partnership monitoring can be conducted in connection with the advisory service.
2. *Use transparent contracts.* The contracts are easy to understand for all parts in the case of the producer groups and the Dawn partnerships since the contracts are kept simple. It is hard for the producers to know at what time of the year they should deliver the cattle since they are not given a guaranteed price. However the processors are not willing to take the risk of giving fixed prices. The bonus system is a way to deal with this problem.

7. Conclusions

This chapter contains the conclusions that can be drawn from the analyses in chapter 6.

As stated in chapter 1, the purpose of this study is to *empirically investigate and theoretically explain partial vertical integration in different forms of partnership arrangements between primary producers and processors in Irish beef industry*. Furthermore was the focus of the study presented as two questions: (1) *how does the connection between the farmer and the slaughterhouse work* and (2) *why does the connection work in that specific way*? In the following paragraphs these questions are answered

A few general conclusions can be drawn from this study. The first one is the fact that it's possible for the producers and processors to leave the transactional approach and initiate partial vertical integration. The producers and the processors are co operating in all the partnerships. This might seem like an obvious statement but considering the long period of low trust between the parts it's important to emphasise. Furthermore it's clear that it is profitable to cooperate; in all the cases the producers receive a bonus price for the cattle and they are all participating in the partnerships by free will. Whether it's profitable for the processors to participate in the partnerships is not clarified in monetary terms but on the other hand, they wouldn't have joined the partnership in the first place if it wasn't profitable. Also the processors are free to leave the partnerships at any time which strengthens the argument that it is profitable to stay in the partnerships.

In all the studied partnerships the processors pay a higher price for the producers' cattle than the producers could have received for commercial beef. This is a consequence of how the relationships between producers and processors are built up. These relationships are not purely market based – there is a certain degree of vertical integration. For example, the processors provide advisory services to the producers, and they provide special feeding systems. Such measures to create stronger links between the processors and the producers may be profitable for both parties, as they induce the producers to deliver a better and a more consistent product.

In the absence of delivery obligations and contracts, there is, however, a risk that the producers abuse these measures, selling their cattle to another processor. This problem is ameliorated as the processors' assistance to the producers concern the production of a very specific type of beef. Thereby the processors can strengthen their market position and raise their profitability which means that they are able to pay the best price for that specific beef. Hence, the producers remain loyal to the processors for economic reasons. The KK Beef Club is an example of this model.

A processor may also give advice if the producer delivers to this particular processor, like in the Dawn case. Dawn has to pay above the market price for the beef; otherwise the producers will sell to someone else. Dawn's only way of inducing the farmers to be loyal is the promise of providing free advice also in the future, but this promise is a weak incentive for the producers. Hence, Dawn has a problem, and this problem is aggravated by the fact that the beef, marketed by Dawn, is not sold at a specific market so the customers are not willing to pay a higher price. The degree of vertical integration is lower in the Dawn case.

These two cases illustrate the importance of close links between the different parties in the value chain. On a more general level the conclusions from the study can be summarised in a few short statements:

- It pays to work with the best product qualities and to collaborate with the best partners. The production and marketing of standard products imply intense price competition and probably poor profitability. A lucrative way of differentiating one's products from the bulk products is to aim for the top of the market, as competitors would have difficulties to copy such a strategy.
- The processors as well as the products should focus on what they have control over, and they should make efforts to have as much control over as much of their operations as possible. By establishing partnerships with other parties of the value chain, they can extend their range of control, i.e., reduce some uncertainties. Provided that one firm is able to assist another one in obtaining profitable business, the latter
- It's possible to arrange partnerships between producers and processors, provided that win-win situations can be discerned. Once such partnerships have been established there are good opportunities for them to develop positively. As the parties experience respectively that they benefit from the collaboration, trust evolves whereby the collaborative arrangements may be further strengthened.
- The relationships between the processor and the producers should be simple and easily understood whereby the risk for conflicts is reduced and the costs for conflict resolutions are reduced. Written contracts with many and detailed clauses may give the partners the impression that they could not trust each other. Mutual benefits function gives stronger glue to a relationship than any formal contract.
- The partnerships must be based on a strong brand. Given that the consumer is the king, profitability origins from a good market position, including of course good relationships to the retail industry.

To sum up this chapter and indeed the whole thesis, a few things can be said as a final conclusion. The connection between the farmer and the processor in the studied partnerships works in slightly different ways, which have been described in this thesis. However, what is similar is the fact that there is sharing of information, the parties communicate, in order to coordinate production. The reason for this behaviour is an adaptation to market conditions: Farmers experience lower income due to decreasing subsidies from CAP and processors need to be more efficient and differentiate their products in order to supply specific markets and cope with competitors.

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Distribution:

Sveriges lantbruksuniversitet
Institutionen för ekonomi
Box 7013
750 07 Uppsala
Tel 018-67 10 00

Swedish University of Agricultural Sciences
Department of Economics
P.O. Box 7013
SE-750 07 Uppsala, Sweden
Fax + 46 18 67 35 02