

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

IMPLICIT CONTRACTS
AS A METHOD
OF
VERTICAL CO-ORDINATION
IN THE
NEW ZEALAND MEAT INDUSTRY

A Thesis submitted in partial fulfilment of the requirements
for the degree Master of Agricultural Economics.

M. Jozefa Wylaars

Massey University

1994

MASSEY
UNIVERSITY
LIBRARY

ABSTRACT

A framework is developed using Williamson's seminal discussion of contractual arrangements and governance choice. The New Zealand Meat industry is the subject of this study in that contractual arrangements exist along-side more conventional trading relationships. The main body of the paper is devoted to; the review of other empirical studies of vertical co-ordination and; the collection and primary analysis of data. Primary results show the form and extent of vertical co-ordination in a small non-random sample. While the neo-classical contract to supply stock is used, many producers and processors operate and co-ordinate with a relational, implicit contract in which the producer deals almost exclusively with one company and develops a long term and 'important relationship' with an agent. Several regressions on measures of co-ordination, included in the appendices, while far from robust, show interesting patterns related to the transaction cost hypothesis.

TABLE OF CONTENTS

Chapter One: Introduction	1
Chapter Two: Literature Review	3
2.1 Vertical Co-ordination	3
2.2 Transaction Costs	4
2.2.1 Introduction	4
2.2.2 The Governance Structure	6
2.2.3 Asset Specificity	7
2.2.4 Uncertainty	7
2.2.5 Frequency of Transaction	8
2.2.6 Opportunism	8
2.3 Networking and Co-operation	9
2.4 Empirical Evidence	10
2.5 Vertical Co-ordination in Agriculture	15
2.6 Vertical Co-ordination in the New Zealand Meat Industry	18
Chapter Three: Methodology	21
3.1 Introduction to the New Zealand Meat Industry	21
3.2 An Alternative hypothesis	22
3.2.1 Introduction	22
3.2.2 Asset Specificity of the Farm	23
3.2.3 Asset Specificity of Meat Processing Company	24

3.2.4 The Governance Structure	26
3.3 Methodology for this Study	27
Chapter Four: Research Method	28
4.1 Data Collection - Farmer First Sample	28
4.2 Data Collection - Survey	29
4.3 Survey Summary	30
4.4 Attributes of Sample Farms	31
Chapter Five: Primary Results	32
5.2 Method of Sale	32
5.2 Analysis of Proportions of Stock Sold	34
5.3 Method of Sale and Size of Farm	44
5.5 Farmers' Relationship with Agent	53
5.5.1 Number of Agents Used	53
5.5.2 Length of Relationship with Agent	54
5.5.3 Farmers' Opinion of the Importance of Agent	55
5.5.4 Agent as a Source of Information	56
5.5.5 General Comments in Survey	57
Chapter Six: Conclusions	58
6.1 Discussion of Results	58
6.2 Results from Regression Analysis	59
6.3 Wider implications of the Study and Further Research	60

References	62
Appendix I: Regression Analysis	I
A1.1 Regression Variables	I
A1.2 The Data	III
A1.3 The Model and its Limitations	III
A1.4 Regression Results	V
Appendix II: Mail Survey and Letters	VI

LIST OF TABLES

Table 4.1	Survey Summary	30
Table 4.2	Farm Attributes	31
Table 5.1	Stock numbers and percentages, sold by agent or on contract to meat processing companies and other sales of sample farms in 1993/94	33
Table 5.2	Stock numbers and percentages sold by agent or on contract to meat processing company by sample farms in 1993/94.	33
Tables 5.3	Frequency of proportions of sheep sold through agent type	34
Tables 5.4	Stock sold by Farm Size and Method of Sale	44
Tables 5.5	Percentages of Stock Sold by Farm Size and Method of Sale	45
Tables 5.6	Method of Sale, Frequency of Use, Average Sale and Percent of Group's Total sold, by Farm Size Group	46
Table 5.7	Average Years with Agent and Number of Responses	54

LIST OF FIGURES

Figure 1	Diagrammatic Representation of Hypothesis	23
Figure 2	Distribution of the Number of Agents used in One Year	53
Figure 3	Distribution of Responses to Questions Five and Six: pertaining to the extent of agents knowledge of stock status and importance of agent in deciding the best time to sell	55
Figure 4	Distribution of Responses to Questions One and Two: pertaining to the importance of the agent as a source of short and long term information respectively	56

Chapter One: Introduction

Transaction cost economics has progressed considerably since Coase (1937) identified the distinction between the market and the firm: "the costs of using the price mechanism. It was the avoidance of the costs of carrying out the transactions through the market that could explain the existence of the firm" (1992, p.715). According to Williamson (1985 p.2) - "transaction cost analysis [now] supplants the usual preoccupation with technology and steady-state production (or distribution) with an examination of the comparative costs of planning, adapting and monitoring task completion under alternative governance structures".

The subject of this paper is the New Zealand meat industry. The study is, more accurately, focused on the present extent and form of vertical co-ordination within the meat industry. Recent developments in the relationship between the processor and meat producer have included the use of supply contracts. This is a likely response to the changing marketing effort of the industry which is aiming to differentiate meat products from commodity to specialist, value-added niche markets. However this requires that firms have a certainty of supply, a certainty of supply made more difficult by declining stock numbers and processing over-capacity.

This paper is thus organized as follows. A discussion of the transaction cost hypothesis is followed by a review of literature which empirically tests the transaction cost hypothesis. Secondly this paper presents the results of a survey of vertical co-ordination between a non-random sample of farms and meat processing companies. The surveyed farmers were asked to provide details of the past year's transactions. The transactions as organized by contract or agent are used as evidence of the co-ordination in the industry.

The results suggest that there is vertical co-ordination in various forms, namely the long-term trading relationship, or implicit contract and the formal contract. As there are many transaction-cost explanations of farmer and processor activity, this study while providing evidence of vertical co-ordination is limited by the size of the sample to a simple regression analysis of the determinants of the farmers' co-ordination activity.