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**THE IMPACT ON FARMERS OF
CHANGES IN RURAL SERVICING
INFRASTRUCTURE**

**A Thesis presented in
Partial fulfilment of the Requirements
for the
Degree of Master of Agricultural Economics
at Massey University**

Murray George Rabel

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TABLE OF CONTENTS

		<i>Page</i>
LIST OF TABLES		i
LIST OF FIGURES		iii
ACKNOWLEDGEMENTS		iv
ABSTRACT		v
CHAPTER 1	INTRODUCTION	1
1.1	Objectives	1
1.2	Outline of the Thesis	4
CHAPTER 2	REGULATORY REFORM IN RURAL SERVICES	6
2.1	Introduction	6
2.2	The Rationale for Government Involvement in the Provision of Rural Services	6
2.3	New Zealand Government Policy on Rural Services	8
2.4	Changes in Rural Services	9
2.5	Previous Studies on Changes in Rural Services and their Related Impacts	29
CHAPTER 3	THE VALUE OF UNPRICED GOODS AND SERVICES	35
3.1	Introduction	35
3.2	Market Failure and the need for Non-Market Evaluation	35
3.3	Selection of the contingent Valuation Method for the Study	39
3.3.1	The Development of Non-Market Valuation Techniques	39
3.3.2	Strengths and Weaknesses	41
3.3.3	The Accuracy of Contingent Valuation	47
3.3.4	Contingent Valuation Application ro Rural Services	49
3.4	Measuring Demand for Rural Services - Hedonic Pricing Method	49

CHAPTER 4	METHODOLOGY	56
4.1	Introduction	56
4.2	Rural Services Survey	57
4.2.1	The Rural Services Questionnaire	60
4.2.2	Non-Government Services Survey	61
4.2.3	The Mangamahu Survey	63
4.2.4	Personal Interviews	63
4.3	Survey Implementation	63
4.3.1	Response Rate to the Non-Government Services Survey	64
4.3.2	Response Rate to the Hill Country Farmers Survey	66
4.4	Techniques Used to Place a Monetary Value on Changes in Rural Services	66
CHAPTER 5	HOW NON-GOVERNMENT SERVICES RESPONDED	68
5.1	Introduction	68
5.2	Changes in Non-Government Rural Services and Employment	68
5.3	Impact on Raetihi and Ohakune	74
5.4	The Rural Services Survey and Comparable Studies	78
5.5	The Rural Services Survey, Results and Discussion	80
5.6	Summary	87
CHAPTER 6	RE-SURVEYING THE MANGAMAHU VALLEY AND THE APPLICATION OF CONTINGENT VALUATION	89
6.1	Introduction	89
6.2	The Results of the Survey	89
6.2.1	Farm Numbers and Farm Characteristics	89
6.2.2	Land Use Changes	94
6.2.3	Rural Services	95
6.2.4	Availability of Rural Services	100
6.3	Summary of Results	102
6.4	Contingent Valuation Survey Result	103
6.4.1	Empirical Results	103
6.4.2	Comments	104
6.4.3	Conclusion	105

CHAPTER	7	RESULTS OF THE SURVEY OF HILL COUNTRY FARMERS	107
	7.1	Introduction	107
	7.2	General Characteristics of Farms Surveyed	107
	7.2.1	Land Use	109
	7.2.2	Property Value	111
	7.2.3	Farm Population Changes	113
	7.3	Education	114
	7.4	Transport and Fuel	117
	7.5	Roading Services	119
	7.6	Catchment Services	120
	7.7	Advisory Services	123
	7.8	Communication Services	125
	7.9	Weed and Pest Control	126
	7.10	Loss of Services	127
	7.11	Changes in the on-farm cost of Rural Services	132
	7.12	Farm Expenditure	138

CHAPTER	8	DISCUSSION AND CONCLUSIONS	139
	8.1	Introduction	139
	8.2	Discussion of the Findings	139
	8.2.1	Previous Studies	139
	8.2.2	Off-Farm Impact	140
	8.2.3	On-Farm Impact	143
	8.2.4	The Attitude of the Farmers and Local Community to Changes in Rural Services	149
	8.3	Trends in the Changes in Rural Services and the Implications for Farmers and Local Community of a Continuation of these Trends	154
	8.4	Conclusion	156
	8.5	Recommendations	159

BIBLIOGRAPHY

APPENDIX

- (a) Rural Service Questionnaire
- (b) Non-Government Questionnaire
- (c) Personal Interview Questionnaire
- (d) Covering Letters
- (e) Reminder Letters
- (f) The Concepts of WTP and WTA

LIST OF TABLES

<i>Table No.</i>		<i>Page</i>
2.1	Central Government Expenditure on Weed and Pest Control	11
2.2	Possible Changes to Electricity Costs	15
2.3	Average Change in Monthly Telephone Costs	17
2.4	Number of Postal Facilities in New Zealand	19
2.5	School Rolls in Wanganui, King Country and Waitotara	25
2.6	Summary of Changes to Rural Services and Related Impacts	26
3.1	Alternative Reference Operating Conditions	48
3.2	Regression Results of the Housing Price Model Dependent Variable: Log of Price Sold+	52
4.1	Number of Significant Farms by County and Farm Type	58
4.2	Source of Incomplete Returns	65
4.3	Reason for Returns Incompleted	65
5.1	Changes in Rural Servicing Infrastructure in Raetihi	75
5.2	Changes in Rural Servicing Infrastructure in Ohakune	76
5.3	Businesses that Indicated They are no Longer Trading and Reasons Why	81
5.4	The Impact on the Profits of Rural Services Due to Economic Liberalisation	82
5.5	Important Strategies Adopted in Adjusting to Economic Liberalisation	84
5.6	Agricultural Services Gross Profits	86
5.7	Sales Attributable to Farmers	86
6.1	Age of Farmers Surveyed	91
6.2	Future Owner of Farm When Present Owner Retires	92
6.3	Number of Farm Workers Residing on the Property	93
6.4	Changes in Land Use 1978 - 1990	94
6.5	Reasons for Changed Investment in Erosion Control	96
6.6	Number of Trees Planted from 1985 to 1990	96
6.7	Farmers' Current Use of Advisory Services	98
6.8	Estimated Willingness to Pay for an Extra Ambulance Officer	104
6.9	Correlation Analysis of How Location Influences WTP	105
7.1	Summary of General Farm Characteristics	108
7.2	Average Number of Stock Units Wintered on Farms Surveyed	110
7.3	Changes in Property Value	112
7.4	Changes in Farm Population	113
7.5	CHaracteristics of Rural Schooling	114
7.6	Reasons Why Children Board	115
7.7	"Changes" In The Quality of Schooling Over the Last Five Years	116
7.8	Availability of Farm Transport Operators	117
7.9	Farm Transport Operators Current Performance as Compared with Five Years Ago	118

7.10	Reasons for Reduced/Changed On-farm Works Programme	120
7.11	Farmers Indicating They Had Changed Their On-farm Works Programme	120
7.12	Applications for Catchment Work	121
7.13	Changes in the Importance of sources of Advice over the Last Five Years	124
7.14	On-farm Impact of Changes Since the Introduction of Telecom in 1987	125
7.15	Change in the Location of Services and the Opportunity Cost	128
7.16	Location of Farmers Servicing Requirements Which Has Remained Unchanged Over the Period 1985 to 1990	131
7.17	Comparison of On-Farm Rural Service Costs	147
7.18	Summary of Net Changes in Farm Expenditure from 1984 to 1989	135
7.19	Changes in the Cost of Government Services from 1984 to 1989	136
7.20	Farm Income and Expenditure Per Farm (\$) For N.I. Hard Hill Country Farmers	137
7.21	Items Purchased Over the Last Five Years	138
8.1	Services Lost from Raetihi and Ohakune Since 1987	141
8.2	Farm Expenditure Changes per Farm from 1984/85 to 1988/89	146
8.3	Changes in the Location of Services	148

LIST OF FIGURES

<i>Figure No.</i>		<i>Page</i>
2.1	Possible Zones for Electricity Supply Charges	14
3.1	Demand Curve for a Public Good	38
3.2	Aggregate Bid Schedule	41
3.3	Marginal Cost of Rural Service	50
4.1	Map of the Study Area	59
5.1	Total Agricultural Services Available	70
5.2	Total Persons Employed By Agricultural Services	71
5.3	Changes in Firm Numbers and Persons Employed for Different Categories of Services	72
6.1	Map of the Mangamahu Valley	90
7.1	Application For Catchment Work	122
8.1	The New Environment for the Provision of Rural Services	158

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ABSTRACT

This study provides an overview of changes in rural servicing infrastructure over the period 1985 to 1990. The changes in infrastructure stem from 1984, when the then government changed economic policy to a dominant goal of economic efficiency. With this goal in mind government intervention in the provision and pricing of rural services has been rationalised with the transfer of many responsibilities to the private sector and the introduction of user-pays as a system of funding service provision. Concurrent with the changes in conduct and funding and in line with the goal of efficiency, government has endeavoured to minimise transaction costs, hence improving the environment in which rural services are traded.

This thesis identifies trends in the changes in rural services and studies the implications for farmers and local community of a continuation of these trends. The direct and indirect impacts of changes in rural services is assessed in both qualitative and quantitative terms where possible, at both the farmer and the community level. To this end measurement of qualitative impacts was attempted using the non-market valuation technique, contingent valuation. In addition to assessment of on-farm impacts, off-farm impacts are investigated using business directory data and by analysing changes in non-government services using a structure/conduct/performance framework.

To obtain the information required, three survey's were undertaken. One of a large group of hill country farmers in the Wanganui area, one of non-government services and a personal survey of farmers in the Mangamahu Valley. Business directory data which provides information on the number of servicing units and persons engaged in those services is used to assess the impact of changes in rural servicing infrastructure and government policy on the two communities of Raetihi and Ohakune.

The thesis concludes by showing that demand for rural services has declined, as has the supply of services. This decline was occurring prior to 1984 and has been accelerated by changes in rural service infrastructure since 1984. The decline in the demand for services and rationalisations has meant the loss of some services, but all are still available even if it means greater cost and travel. Most farmers have accepted changes as a gain in efficiency.

CHAPTER 1

INTRODUCTION

1.1 Objectives

Government assistance to the New Zealand agricultural sector has undergone major reform over the years 1984 to 1990. Historically government was involved in agriculture through assistance programmes designed to: promote the development of marginal lands, boost total agricultural output and hence increase foreign exchange earnings, to compensate agriculture for the adverse cost effects of protection offered to labour, manufacturing and financial industries, and to arrest deteriorating terms of trade. The result of these policies has been a steady deterioration of New Zealand's relative standard of living.

In 1984 the Labour Government accelerated programmes of economic liberalisation started in the mid 1970's. The objective of these programmes was to maximize economic growth through enhanced economic efficiency, thus improving New Zealand's standard of living. These policies have seen government assistance to agriculture removed or at least drastically reduced. Most of this assistance was in the form of direct transfers such as price, input and tax subsidies. However, more assistance has been provided in indirect forms through the subsidised pricing and provision of services. Although much has been documented on changes in direct price support to agriculture, the area of governments involvement in the indirect provision and pricing of rural services has not received much attention in literature.

One reason this area of research is neglected is because the impact of changes in rural services is difficult to quantify. Given that there is this difficulty in quantifying the impacts does not mean its force is less powerful in terms of its direct and indirect impacts on the individual farmer and at the local community level. Being a student of agricultural economics, this thesis takes a slightly

different approach to the approach taken by rural sociologists and geographers in assessing changes. To this end a major part of this thesis is devoted to trying to quantify the impacts of change in rural services as well as obtaining the traditional qualitative data.

Research is needed to assess the distributional impacts of this major change in government policy. By assessing changes in rural services, market failure due to the impacts and consequences of policy changes can be identified. This thesis provides a broad picture of changes in rural servicing infrastructure over the period 1985 to 1990. Changes in government involvement in the supply of rural services and the rationale behind the changes are documented. The impact of changes in public funding, and hence the demand for rural services is assessed at the farm and community levels. Finally investigated are the impacts of changes in government's role in setting the legal and regulatory frameworks and economic climate in which rural services are provided.

The overall objective of this thesis is to identify the impact on farmers and local communities of changes in rural servicing infrastructure and government policy. Specific objectives are:

1. Review the literature as to any previous similar studies undertaken.
2. Identify and determine the impact in dollar terms (where possible), at both the individual farmer and local community level, of the effects of the changes in the rural economy over the period 1985 to 1990, as it pertains to rural services (e.g. government charges, transport services, changes in services provided by Government and their cost, etc.), government agencies (e.g. Post Office, Telecom, Electricorp, etc.), and government departments (e.g. Ministry of Agriculture and Fisheries).
3. Determine the attitude of the farmers and local community to these impacts and changes.

4. Identify trends in the changes in these rural services and study implications for farmers and local community of a continuation of these trends.
5. Recommend to the Policy Unit any policy initiatives that could be considered in the national interest.

To achieve these objectives, hill country farmers in the Wanganui, Waitotara and Waimarino areas were surveyed in October 1990. The postal questionnaire was designed to assess the on-farm impact of changes in rural services, lost services and farmers' opinions on change. In addition to the farmer survey a separate survey dealt with non-government businesses actually involved in the provision of rural services. This data was complemented by business directory data obtained from the Department of Statistics, which provided information on business units and persons engaged in rural services from 1987 to 1990 in the area studied. The business data was modified to assess the impact of changes in rural servicing infrastructure and government policy on the two communities of Raetihi and Ohakune.

Besides identifying the changes that have occurred in rural servicing infrastructure, it was also considered important to measure, where possible, the impacts of these changes. In some situations this can be done by calculating the extra cost involved in obtaining the service. However in many cases the loss (or reductions) can only be expressed qualitatively in terms of reduction in choice, increased risk, loss of peace of mind etc. Hence qualitative changes can have important consequences for the welfare of those affected. To this end measurement of some of these qualitative impacts was attempted, using non-market valuation techniques, the contingent valuation approach and the hedonic pricing approach. The first approach was built into the personal interviews in the form of willingness to pay questions for services lost. The hypothesis underlying the second approach is that property values are affected by rural services.

In assessing the farm impact of changes in rural services no distinction is made between the family unit and the farm as a business. Recent investigations by Le Heron and Roche (pers. comm Le Heron, 1990) indicate the impact is different at the two levels. The social consequences of economic efficiency can cause conflict between the family and business sides of farming.

The impact of government reform in the provision of services was limited to reviewing education, weed and pest control, catchment services, transport, communications, road services, fuel and advisory services. The rationale behind the omission of irrigation is because the area studied did not have a government irrigation scheme. Reform in meat inspection was omitted because all farmers surveyed were unaware of the exact cost of user-pays for meat inspection, as it was deducted from the cheque for the meat slaughtered at the freezing works. While changes in financial services have had a major effect on farmers, much has already been documented on their impact and farmers' reactions to higher interest rates. Changes in research and development have a slow flow-on effect to farmers, hence the on-farm impact would not have been felt at the time of this study.

1.2 Outline of the Thesis

Chapter Two describes government involvement in the provision of rural services and identifies changes that have occurred over the period 1985 to 1990. The chapter concludes with a literature review of previous New Zealand studies on changes in rural services.

Chapter Three introduces the concept of non-market evaluation. The Contingent Valuation Method (CVM) is then described in detail with various sections covering the important properties and elements of the technique. A discussion on why the hedonic's application proved to be infeasible concludes the chapter.

Chapter Four presents the methodology used to quantify the loss of rural services, and to identify the impact on farmers and local community of changes in rural servicing infrastructure and government policy.

Chapter Five examines the impact of changes in rural servicing infrastructure at the community and business levels. Business directory data provides information on changes in the number of activity units and persons employed by rural services. The same data is then used to show the impact on the two rural communities of Raetihi and Ohakune. The results of a survey of non-government services are then presented to conclude the evaluation of the impact at community and business levels.

Chapter Six expands on the previous chapter in presenting the results of re-surveying the Mangamahu Valley and the application of Contingent Valuation. By comparing the results of this survey to a similar survey conducted in the valley in 1978 some interesting trends are identified.

Chapter Seven presents the result of the postal survey of hill country farmers. The attitudes of the farmers to changes in rural services is identified and where possible the data has been quantified to determine the dollar impact at the farm level.

Chapter Eight concludes the study with a discussion of the trends in changes in rural services and the implications for farmers and local community of a continuation of these trends. A discussion of the objectives set and how they have been met is presented. The chapter concludes by identifying areas in need of future research and recommending policy initiatives that could be considered in the national interest.