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.
ETHICS AND ECONOMICS: THE ROLE OF INFORMATION IN THE EGG MARKET IN PALMERSTON NORTH

A thesis presented in partial fulfilment of the requirements for the degree of

MASTERS OF PHILOSOPHY (BUSINESS STUDIES)
at Massey University, Palmerston North

MIRIAM ANNE JANETT

1993
ABSTRACT

This research examines the relation of ethics to the economic model, focusing on how producers with ethical standards above those stipulated by law will need to use information markets to communicate their product's existence to consumers. Taking the pro-competitive view of advertising, Davis, Kay and Star (1991) hypothesise that there are four types of goods, each of which falls into a certain advertising/sales (AS) ratio and corresponds to a certain level of verifiable information. The goods are: search goods (with low AS ratios, and immediately verifiable information); short-term experience goods (with a higher AS ratio than search goods, and short-term verifiability); long-term experience goods (with the highest AS ratio of all categories and long-term verifiability); and finally credence goods (with the lowest AS ratio of all goods and difficulty in any verifiability). Ethical goods fall into the credence category unless their information can be verified in some way.

A case study of the egg market in Palmerston North was used to examine research questions based on these hypotheses since deregulation of the egg industry during 1986 to 1988 had led to the cessation of generic marketing and the introduction of new egg types. In particular, free-range eggs and battery eggs became differentiated, with free-range eggs perceived by some consumers as ethical, and battery eggs as unethical.

This research estimated the AS ratios for these two types of eggs in Palmerston North, using two different estimates of advertising expenditure by egg sellers in the Manawatu (producers, wholesalers, and producer cooperatives) and Palmerston North (retailers). The research also examined the verifiability of the information presented to consumers when they purchased eggs.

Although the research was a case study and was therefore limited in terms of generalisability and statistical testing, the findings were consistent with the hypotheses put forward by Davis et al (1991). The study recommends that research on a wider range of goods be undertaken to test the hypotheses of Davis et al (1991) statistically. The study also recommends that the industry improves information markets and hence product differentiation, by improving the verifiability of information on free-range eggs.
ACKNOWLEDGEMENTS

The author wishes to acknowledge with great appreciation the following people:

Dr C William Maughan, for his time, patience, editing skill and helpful advice in the development of this thesis.

Dr Rudy M Nayga, Jr. for his comments and suggestions.

Mr Ross King, Department of Animal Science, Massey University, for his time, help, and interest during the research.

Assoc. Prof. R J Brook, Department of Statistics, Massey University, Palmerston North, for his time and help in the sampling methodology.

Dr R A Flett, Lecturer, Department of Psychology, Massey University, for his suggestions during the analysis process.

Ms G Wallbutton and Dr E A Drawneek of the Massey University Computer Services for their assistance with the computer application of the questionnaires.

The other members of the Department of Agricultural Economics and Business Department, both 1992 and 1993 staff (especially Julia Fisher and Diane Braden) and post-graduate students.

Finally, I wish to thank my family and friends in various parts of the world for letting me talk and write to them about eggs during the course of the thesis.

This final form of the thesis was the result of critiques and input from the above mentioned people. However, the author is solely responsible for any errors found in this study.
Title of thesis: Ethics and Economics: The Role of Information in the Egg Market in Palmerston North

1) (a) I give permission for my thesis to be made available to readers in Massey University Library under conditions determined by the Librarian.

(b) I do not wish my thesis to be made available to readers without my written consent for twelve months.

2) (a) I agree that my thesis, or a copy, may be sent to another institution under conditions determined by the Librarian.

(b) I do not wish my thesis, or a copy, to be sent to another institution without my written consent for twelve months.

3) (a) I agree that my thesis may be copied for Library use.

(b) I do not wish my thesis to be copied for Library use for three months.

Signed

Date

The copyright of this thesis belongs to the author. Readers must sign their name in the space below to show that they recognise this. They are asked to add their permanent address.

NAME AND ADDRESS

DATE
Title of thesis: Ethics and Economics: The Role of Information in the Egg Market in Palmerston North

1)  (a) I give permission for my thesis to be made available to readers in Massey University Library under conditions determined by the Librarian.

(b) I do not wish my thesis to be made available to readers without my written consent for twelve months.

2)  (a) I agree that my thesis, or a copy, may be sent to another institution under conditions determined by the Librarian.

(b) I do not wish my thesis, or a copy, to be sent to another institution without my written consent for twelve months.

3)  (a) I agree that my thesis may be copied for Library use.

(b) I do not wish my thesis to be copied for Library use for three months.

Signed

Date 26/4/93

The copyright of this thesis belongs to the author. Readers must sign their name in the space below to show that they recognise this. They are asked to add their permanent address.

NAME AND ADDRESS

DATE
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>i</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>COPYRIGHT</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF APPENDICES</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xi</td>
</tr>
<tr>
<td>LIST OF ILLUSTRATIONS</td>
<td>xii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xiii</td>
</tr>
</tbody>
</table>

## CHAPTER:

### ONE INTRODUCTION

1.0 Statement of the Problem 1  
1.1 Objectives of the Study 2  
1.2 Scope and Limitations 2  
1.3 Organisation of the Study 2

### TWO LITERATURE REVIEW

2.0 Introduction 3  
2.1 Ethics and the Economic Model 3  
2.1.1 The Ethical Environment and the Economic Model 4  
2.1.1.1 Internal Checks 5  
2.1.1.2 External Checks 5  
2.1.2 The Legal Structure and Ethics 7  
2.1.3 Utility Functions and Ethics 7  
2.1.4 Producer and Consumer Ethics 9  
2.2 Business Ethics 10
2.3 Consumer Demand
  2.3.1 The Standard Consumer Model
  2.3.2 Ethics and the Consumer
  2.3.3 Consumer Choice
  2.3.4 Quality
  2.3.5 Conclusion

2.4 Advertising
  2.4.1 Introduction
  2.4.2 Types of Goods
  2.4.3 A Competitive View of Advertising
  2.4.4 An Anti-Competitive View of Advertising

2.5 Summary
  2.5.1 Advertising
  2.5.2 Advertising and Ethics
  2.5.3 Hypotheses on Advertising and Ethics Based on Davis et al (1991)
  2.5.4 Hypothesis Testing and Case Studies

2.6 Final Hypotheses/Research Questions
  2.6.1 Hypothesis One/Research Question One
  2.6.2 Hypothesis Two/Research Question Two

THREE THE EGG AND ADVERTISING INDUSTRIES IN NEW ZEALAND
3.1 The Egg Industry in New Zealand
  3.1.1 Introduction
  3.1.2 Background
  3.1.3 The New Zealand Poultry Board 1976-1986
  3.1.4 Deregulation
  3.1.5 Post-1986
3.2 The Advertising Industry
3.2.1 Background
3.2.2 The Legislated Environment
3.2.3 The Self-Regulated Environment
3.2.3.1 The Advertising Standards Authority Inc
3.2.3.1 The Advertising Standards Complaints Board

FOUR METHODOLOGY
4.0 Introduction - Method of Research
4.1 Populations
4.1.1 The Producer Population
4.1.2 The Wholesaler/Producer Cooperative Population
4.1.3 The Retailer Population
4.2 Structured Interview Formats
4.2.1 The Producer Questionnaire
4.2.2 The Retailer Questionnaire

4.3 Direct Estimate of Advertising Expenditure
4.3.1 Advertising and Information: Point of Sale and Packaging
4.3.1.1 Egg Displays
4.3.1.2 Egg Signs
4.3.1.3 Egg Packaging
4.3.2 Advertising and the Media 1986-1992
4.3.2.1 The Manawatu Evening Standard
4.3.2.2 The Guardian
4.3.2.3 The Tribune
4.3.2.4 More Magazine and North & South Magazine
4.3.2.5 The Listener and the New Zealand Woman's Weekly
4.3.3 Radio
### 4.4 Consumer Perceptions of the Differences Between Battery and Free-Range Eggs

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESULTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>Introduction</td>
<td>66</td>
</tr>
<tr>
<td>5.1</td>
<td>Producers, Retailers, Wholesalers and Producer Cooperatives: Production and Sales Information, and Definitions of Free-range Eggs</td>
<td>67</td>
</tr>
<tr>
<td>5.1.1</td>
<td>Producers</td>
<td>67</td>
</tr>
<tr>
<td>5.1.1.1</td>
<td>Production</td>
<td>68</td>
</tr>
<tr>
<td>5.1.1.2</td>
<td>Sales Outlets</td>
<td>69</td>
</tr>
<tr>
<td>5.1.1.3</td>
<td>Free-range Eggs: Production Methods and Definitions</td>
<td>72</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Wholesalers/Producer Cooperatives</td>
<td>76</td>
</tr>
<tr>
<td>5.1.3</td>
<td>Retailers</td>
<td>76</td>
</tr>
<tr>
<td>5.1.3.1</td>
<td>Supermarkets/Grocers</td>
<td>76</td>
</tr>
<tr>
<td>5.1.3.2</td>
<td>Dairies</td>
<td>78</td>
</tr>
<tr>
<td>5.1.3.3</td>
<td>Service Stations</td>
<td>80</td>
</tr>
<tr>
<td>5.1.3.4</td>
<td>Butchers</td>
<td>81</td>
</tr>
<tr>
<td>5.1.3.5</td>
<td>Fruiterers</td>
<td>82</td>
</tr>
<tr>
<td>5.2</td>
<td>Producer, Wholesaler, Producer Cooperative and Retailer Estimates of Advertising Expenditure (Excluding Advertising on Packaging)</td>
<td>83</td>
</tr>
<tr>
<td>5.2.1</td>
<td>Producers</td>
<td>83</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Wholesaler/Producer Cooperative</td>
<td>87</td>
</tr>
<tr>
<td>5.2.3</td>
<td>Retailers</td>
<td>87</td>
</tr>
<tr>
<td>5.2.3.1</td>
<td>Supermarkets/Grocers</td>
<td>87</td>
</tr>
<tr>
<td>5.2.3.2</td>
<td>Dairies</td>
<td>87</td>
</tr>
<tr>
<td>5.2.3.3</td>
<td>Service Stations</td>
<td>88</td>
</tr>
<tr>
<td>5.2.3.4</td>
<td>Butchers</td>
<td>88</td>
</tr>
<tr>
<td>5.2.3.5</td>
<td>Fruiterers</td>
<td>88</td>
</tr>
<tr>
<td>5.2.4</td>
<td>Summary</td>
<td>89</td>
</tr>
</tbody>
</table>
5.3 Direct Estimate of Advertising Expenditure (Excluding Packaging): Information Content of Advertising

5.3.1 Producers

5.3.2 Wholesalers/Producer Cooperatives

5.3.3 Retailers

5.3.3.1 Supermarkets/Grocers

5.3.3.2 Dairies

5.3.3.3 Service Stations

5.3.3.4 Butchers

5.3.3.5 Fruiterers

5.3.4 Sign Summary

5.3.5 The Media in Palmerston North

5.3.5.1 The Print Media

5.3.5.2 Radio

5.3.6 Reconciliation

5.3.7 Summary

SIX SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary of Thesis

6.1.1 Ethics and the Economic Model

6.1.2 Information and Advertising

6.1.3 Ethical Goods and the Egg Industry

6.1.4 Estimates of Advertising

6.2 Results and Limitations of the Study

6.2.1 Limitations

6.2.2 Results and Conclusions

6.3 Recommendations

REFERENCES
<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 1</td>
<td>The Advertising Standards Complaints Board Ruling</td>
<td>120</td>
</tr>
<tr>
<td>Appendix 2</td>
<td>The Producer Structured Interview Format</td>
<td>124</td>
</tr>
<tr>
<td>Appendix 3</td>
<td>The Retailer Structured Interview Format</td>
<td>133</td>
</tr>
<tr>
<td>Appendix 4</td>
<td>Point of Sale Information</td>
<td>141</td>
</tr>
<tr>
<td>Appendix 5</td>
<td>In-Store Sign Analysis</td>
<td>145</td>
</tr>
<tr>
<td>Appendix 6</td>
<td>Print Media Advertising Examples</td>
<td>154</td>
</tr>
<tr>
<td>FIGURE 2.1</td>
<td>The Development of Ethical Standards</td>
<td>4</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>FIGURE 2.2</td>
<td>Model of Production and Legally Imposed Ethical Standards</td>
<td>7</td>
</tr>
<tr>
<td>FIGURE 2.3</td>
<td>Factors Influencing Economic Agents Utility Functions and the Profit Function</td>
<td>8</td>
</tr>
<tr>
<td>FIGURE 2.4</td>
<td>Producers' Usage of Information Markets</td>
<td>14</td>
</tr>
<tr>
<td>FIGURE 2.5</td>
<td>Duopoly Advertising Decision Tree for Two Firms</td>
<td>30</td>
</tr>
<tr>
<td>Illustration</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Illustration 1</td>
<td>Turks Poultry Farm Packet</td>
<td>92</td>
</tr>
<tr>
<td>Illustration 2</td>
<td>Thurston's Poultry Farm Packet</td>
<td>92</td>
</tr>
<tr>
<td>Illustration 3</td>
<td>Hessels Poultry Farm Packet</td>
<td>92</td>
</tr>
<tr>
<td>Illustration 4</td>
<td>Little Red Hen Packet</td>
<td>93</td>
</tr>
<tr>
<td>Illustration 5</td>
<td>Golden Lay Packet</td>
<td>93</td>
</tr>
<tr>
<td>Illustration 6</td>
<td>Little Red Hen Packet (Free-Range)</td>
<td>93</td>
</tr>
<tr>
<td>Illustration 7</td>
<td>Frenz Label (Free-Range)</td>
<td>94</td>
</tr>
<tr>
<td>Illustration 8</td>
<td>Little Red Hen lid (Grain-fed)</td>
<td>95</td>
</tr>
</tbody>
</table>
TABLES

Table 4.1  The Manawatu Evening Standard  61
Table 4.2  The Guardian  62
Table 4.3  The Tribune  62
Table 4.4  More Magazine and North and South Magazine  63
Table 4.5  The Listener and New Zealand Woman's Weekly Magazines  64

Table 5.1  Flock Sizes for Interviewed Producers 1986-1992  68
Table 5.2  Total Egg Output in Dozens for Battery and Free-Range Producers surveyed in the Manawatu  69
Table 5.3  Amount of Battery Eggs sold at the gate or direct to Retailers by surveyed Producers in the Manawatu  70
Table 5.4  Amount of Free-Range Eggs sold at the gate or direct to Retailers by surveyed Producers in the Manawatu 1986-1992  71
Table 5.5  Amount of Battery Eggs sold to Wholesalers or Producer Cooperatives by surveyed Producers in the Manawatu 1986-1992  72
Table 5.6  Where surveyed Supermarkets/Grocers in Palmerston North bought their eggs 1986-1992  77
Table 5.7  Where surveyed Dairies in Palmerston North bought their eggs 1986-1992  79
Table 5.8  Total Advertising Expenditure by surveyed Producers 1986-1992  84
Table 5.9  Advertising/Sales Ratios for all eggs (free-range and battery) for the surveyed producers  84
Table 5.10  Advertising/Sales Ratios for Battery eggs 1986-1992 (all surveyed producers)  85
Table 5.11  What surveyed Producers, Wholesalers and Producer Cooperative in the Manawatu and Retailers in Palmerston North reported that they spent on advertising  89
Table 5.12  Egg Advertising Expenditure in Palmerston North from the sample only 1986-1992  102
Table 5.13  Scaled up External Advertising Expenditure for Palmerston North 1986-1992  103
Table 5.14  Advertising Expenditure Reconciliation (for all types of eggs) 1986-1992  106