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AN ANALYSIS OF SOME COMPUTER
ASSISTED VALUATION PROCEDURES

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ABSTRACT

The objective of the thesis is to examine computer applications to the sales, income, and cost approaches to valuation. The author describes and evaluates computer programs suitable for the storage and retrieval of sales data, the analysis of 'net rate' information for houses, and the adjustment of land sales for size variations.

The use of multiple regression analysis in the sales approach to valuation is reviewed, and this methodology is then applied to the valuation of a group of home units and single family homes. Variables were selected from the Valuation Department sales data base and multiple listing information. The inclusion of the existing rating valuation significantly improved the predictive ability of the regression equations.

Several microcomputer applications to the income approach to valuation are discussed in the context of discounted cash flow. These include programs that compute residual land value for hypothetical developments and the optimum building for a site. A case study approach is used to demonstrate the application of net present value, internal rate of return, and financial management rate of return approaches to valuation.

Two computer programs designed to estimate the replacement cost of buildings utilise costing information based on the New Zealand Institute of Valuers modal house. One of these programs calculates the replacement cost of a variety of farm sheds, and the other program calculates the replacement cost of houses.

The author concludes that computer assistance offers considerable potential benefits to valuers for the storage and retrieval of sales information and for automating many aspects of the valuation process.

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TABLE OF CONTENTS

	<i>Page</i>
<u>Acknowledgements</u>	ii
<u>Table of Contents</u>	iii
<u>List of Tables</u>	iv
<u>List of Figures</u>	vi
<u>Chapter 1</u> Introduction	1
2 The Sales Approach	8
3 Multiple Regression Analysis	45
4 The Income Approach	72
5 The Cost Approach	122
6 Summary and Conclusions	143
<u>Appendix 1</u> SREA Sales Data	154
2 Operating Procedures for Net Rate Program	155
3 Detailed Questions from Modal House Program	161
4 Summary of Computer Programs Discussed in Text	167
<u>Bibliography</u>	169

LIST OF TABLES

<u>Table</u>	<i>Page</i>	
2.1	Sample Microfiche Frame	11
2.2	Demonstration Famulus Search	27
2.3	Residential Sales From the Central Districts Area	32
2.4	Sales Analysis: Step 1	34
2.5	Time Adjustment Regression Equation: Step 2	35
2.6	Time Adjusted Sales Data	36
2.7	Output Showing Analysis Using Valuer's Estimates for Land and Other Improvements	38
2.8	Sales Data Vacant Rural Lots	43
3.1	Variables Included on NZIV Microfiche	52
3.2	Valuation Department Mass Appraisal Data (29 Variables)	53
3.3	List of Home Unit Variables	60
3.4	Regression Equation for Predicting Home Unit Sale Prices South of Main Street	61
3.5	Regression Equation for Predicting Home Unit Sales Prices South of Main Street (Includes Capital Value)	62
3.6	List of Medium Cost Housing Variables	64
3.7	Regression Equation for Single Family Homes	65
3.8	Regression Equation for Single Family Homes (Includes Capital Value)	65
3.9	List of Data Obtained From Multiple Listing Bureau	67
3.10	List of Variables Analysed in Multiple Listing Study	68
4.1	Computer Output From Lessee's Interest Program	78
4.2	Output for Development Project	83
4.3	Sensitivity Analysis for Changes in Interest Rate and Holding Period	84
4.4	Computer Output Showing Raw Data Inputs	85
4.5	Computer Output Showing Block Subdivision Statement	86
4.6	Computer Output Showing Discounted Cash Flow Method	87
4.7	Input of Data for Mortgage Equity Calculation	94
4.8	Output Data From Mortgage Equity Calculation	94
4.9	Income and Expenditure Projections for Income Flats	100
4.10	Income and Expenditure Projections Including Debt Servicing	102

Table

4.11	Internal Rate of Return	103
4.12	Solving for Internal Rate of Return From Net Present Value Program	103
4.13	Computer Print Out Showing FMRR Method	106
4.14	Visicalc Real Estate Template	110
4.15	Computer Output From Maximum Loan Program	117
4.16	Alternative Building Costs and Returns	118
4.17	Marginal Analysis of Development Alternatives	119
4.18	Marginal Analysis Tables	121
5.1	Output From Farm Shed Program	131
5.2	Questions From the Modal House Program	138
5.3	Computer Output From Modal House Program	139
5.4	Output From Area Measurement Program	142

LIST OF FIGURES

<u>Figure</u>		<i>Page</i>
2.1	Flow of Sales Information - Old NZIV Model	9
2.2	Flow of Sales Information - Current NZIV Model	12
2.3	The Valuation Process	18
2.4	Proposed Land Information Systems - Data Contributors	19
2.5	Proposed Land Information Systems - Data Users	20
2.6	Proposed Land Information Systems - National Data Base	21
2.7	Simplified Diagram Showing 'Visi Dex' Template Screens	24
2.8	Steps in the Net Rate Program	31
2.9	Generalised Size Adjustment Curve	40
3.1	Location of Roll Plan Boundaries	54
3.2	Time Adjustment Dummy Variables	57
3.3	Scattergram of Gross Sale Price With Listing Price	69
4.1	Interest Rate Linkage Between Present and Future Values	72
4.2	Cross Sectional Changes Over Time due to Capital Appreciation and Mortgage Reduction	88
4.3	Diagram Showing Orchard Income Stream Over Time	96
4.4	Cross Sectional Analysis of Income Property Over Time	97
5.1	Sketch Plan of Implement Shed	129
5.2	Comparison of Roof Only Multiples for Standard Gable Hayshed	132
5.3	National Modal House - Plan	134
5.4	Cost per m ² Variation With Different House Sizes	135
5.5	Outline Plan of Hypothetical Building	141
A2.1	Program 'Menu'	155
A2.2	Details of Input Data	156
A2.3	Load Previous Data Set	157
A2.4	Displaying Current Data Base	157
A2.5	Changing a Data Set	159
A2.6	Removing a Data Set	160