

**An Empirical Investigation on
Determinants and Motives of Household Saving in Sri Lanka**

by

Herath Dassanayakelage Kaushalya Dilrukshi Dassanayake

(GS/MS/MGT/3426/08)

**Thesis submitted to the University of Sri Jayewardenepura for the
award of the Degree of Master of Science in Management**

MSM 13 MSc Thesis on 25th of November 2011

DECLARATION BY THE CANDIDATE

The work described in this thesis was carried out by me under the supervision of Dr. P.J. Kumarasinghe and a report on this has not been submitted in whole or in part to any University or any other Institution for another Degree/Diploma.

K.D. Dassanayake

25/11/2011

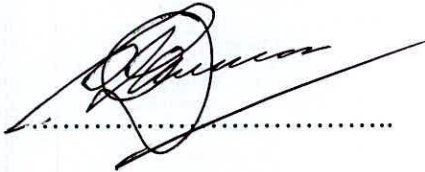
K.D.Dassanayake

Date

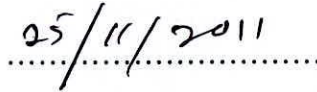
(GS/MSc/MGT/3426/08)

SUPERVISOR'S APPROVAL

I certify that the above statement made by the candidate is true and that this thesis is suitable for submission to the University for the purpose of evaluation.

A handwritten signature in black ink, appearing to read 'Dr. P. J. Kumarasinghe', is written over a horizontal dotted line. The signature is stylized and cursive.

Dr.P.J.Kumarasinghe

A handwritten date '25/11/2011' is written in black ink above a horizontal dotted line.

Date

TABLE OF CONTENTS

List of tables	ix
List of figures	xiii
List of abbreviations	xv
Acknowledgement	xvii
Abstract	xx
CHAPTER 01- INTRODUCTION	1
1.1 Background of the study	2
1.2 Statement of the problem	6
1.3 Rationale for the study	9
1.4 Purpose of the study	12
1.5 Objectives of the study	13
1.6 Significance of the study	13
1.7 Scope of the study	14
1.8 Preview of methodology	16
1.9 Definitions of terms	17
1.10 Organization of the study	26
Chapter summary	27
CHAPTER 02-REVIEW OF LITERATURE	29
2.1 Theoretical aspect of saving	29
2.1.1 Saving	29
2.1.2 Categories of saving	31
2.1.2.1 Domestic saving	32
2.1.2.2 National saving	32

2.1.2.3 Private saving	32
2.1.2.4 Government saving	32
2.1.2.5 Household saving	32
2.1.2.6 Corporate saving	33
2.2 Determinants of household saving	34
2.2.1 Theoretical aspect of determinants of household saving	34
2.2.1.1 What is meant by determinant and determinants of household saving?	34
2.2.1.2 General determinants of household saving	35
2.2.1.3 Theories relating to determinants of household saving	36
2.2.1.3 i Keynes' Absolute income hypothesis (AIH)	36
2.2.1.3 ii Modigliani's Life cycle hypothesis of saving behavior (LCH)	37
2.2.1.3 iii Friedman's Permanent income hypothesis (PIH)	39
2.2.2 Empirical aspect of determinants of household saving	40
2.2.2.1 Empirical studies on determinants of household saving in developing countries	41
2.2.2.1.i Individual country studies	41
2.2.2.1.ii Panel/ Cross country	70
2.2.2.2 Empirical studies on determinants of household saving in developed countries	73
2.2.2.2.i Individual country studies	74
2.2.2.2.ii Panel / Cross country	79

2.2.2.3 Comparison of determinants of household saving between developing & developed countries	86
2.3 Motives for household saving	87
2.3.1 Theoretical aspect of motives of household saving	87
2.3.1.1 What is meant by motive and motives of household saving?	87
2.3.1.2 General motives of household saving	88
2.3.1.2 i Life cycle motive	88
2.3.1.2 ii Precautionary motive	89
2.3.1.2 iii Bequest motive	89
2.3.1.2 Theory on motives of household saving	89
2.3.2 Empirical aspect of motives of household saving	92
2.3.2.1 Empirical studies on motives of household saving in developing countries	92
2.3.2.2 Empirical studies on motives of household saving in developed countries	93
2.3.2.3 Comparison of motives of household saving between developing & developed countries	96
Chapter summary	96
CHAPTER 03-RESEARCH FRAMEWORK & HYPOTHESES	98
3.1 Dependent & Independent variables of the study	98
3.2 Conceptualization of variables	99
3.2.1 Household saving	100
3.2.2 Household disposable income	102

3.2.3 Household wealth	104
3.2.4 Dependency ratio	105
3.2.5 Interest rate on deposits	108
3.2.6 Age of household head	109
3.2.7 Educational level of household head	110
3.2.8 Motives of household saving	111
3.3 Theoretical framework	112
3.3.1 Household disposable income	113
3.3.2 Household wealth	113
3.3.3 Dependency ratio	114
3.3.4 Interest rate on deposits	114
3.3.5 Age of household head	115
3.3.6 Educational level of household head	116
3.4 Conceptual framework	116
3.5 List of hypotheses	117
Chapter summary	122
CHAPTER 04-RESEARCH METHODOLOGY	124
4.1 Research design	124
4.1.1 Research purpose	125
4.1.2 Type of investigation	126
4.1.3 Extent of researcher inference	126
4.1.4 Research setting	127
4.1.5 Time horizon	127
4.1.6 Unit of analysis	128

4.2 Population & sample of the research	128
4.2.1 Population of the research	128
4.2.2 Sample of the research	129
4.2.2.1 Sample size	130
4.2.2.2 Sampling method	132
4.2.2.3 Sampling procedure	132
4.2.2.4 Distribution of the sample of the study	137
4.3 Measurement of variables	138
4.3.1 Dependent variable- Household saving	138
4.3.2 Independent variables	138
4.3.2.1 Household disposable income	138
4.3.2.2 Household wealth	139
4.3.2.3 Dependency ratio	139
4.3.2.4 Interest rate on deposits	139
4.3.2.5 Age of household head	140
4.3.2.6 Educational level of household head	140
4.3.2.7 Motives of household saving	140
4.4 Methods of data collection	140
4.4.1 Primary data collection methods	141
4.4.2 Secondary data collection methods	141
4.5 Research questionnaire & instruments	141
4.5.1 Parts of the questionnaire	142
4.5.2 Pilot test / Pre test of the questionnaire	143

4.6 Reliability & Validity of data	144
4.6.1 Reliability	145
4.6.2 Validity	146
4.7 Methods of data presentation & analysis	147
4.7.1 Data presentation	147
4.7.2 Data analysis	147
4.7.2.1 Descriptive analysis	148
4.7.2.2 Inferential analysis	148
Chapter summary	150
CHAPTER 05-DATA PRESENTATION, ANALYSIS & FINDINGS	152
5.1 Descriptive analysis	152
5.1.1 Presentation & analysis of demographic data	152
5.1.1.1 Gender	153
5.1.1.2 Residential province	154
5.1.1.3 Sector	155
5.1.1.4 Ethnicity	157
5.1.1.5 Educational attainment	158
5.1.1.6 Employment status	159
5.1.1.7 Age	160
5.1.1.8 Household size	162
5.1.1.9 Number of income earners in the household	163
5.1.2 Presentation & analysis of data relating to determinants of household Saving	165
5.1.2.1 Monthly household income	165

5.1.2.2 Monthly household expenditure	167
5.1.2.3 Dependency ratio	168
5.1.2.4 Monthly household saving	169
5.1.3 Presentation & analysis of data relating to motives of household	
Saving	171
5.1.3.1 Testing the most important motive of household saving in Sri Lanka	171
5.1.3.2 Testing the most important motive of household saving in each province	173
5.1.3.3 Testing the most important motive of household saving in each sector	178
5.2 Inferential analysis	182
5.2.1 Linearity, Normality and Multicorlinearity assumptions	182
5.2.1.1 Linearity assumption	183
5.2.1.2 Normality assumption	184
5.2.1.3 Multicorlinearity assumption	187
5.2.2 Analysis of first hypothesis	188
5.2.3 Analysis of second hypothesis	192
5.2.4 Analysis of third hypothesis	213
5.2.5 Analysis of fourth hypothesis	219
5.2.6 Analysis of fifth hypothesis	225
5.3 Findings and achievement of research objectives	227
5.3.1 Findings of the study	227
5.3.2 Achievement of research objectives	228

Chapter summary	230
CHAPTER 06-DISCUSSION OF THE FINDINGS	232
6.1 Discussion of the findings through the descriptive analysis	232
6.1.1 Discussion of the findings on the demographic variables	233
6.1.2 Discussion of the findings on the determinants of household saving	235
6.1.3 Discussion of the findings on the motives of household saving	234
6.2 Discussion of the findings through the inferential analysis	238
6.2.1 Discussion of the findings on first hypothesis	239
6.2.2 Discussion of the findings on second hypothesis	242
6.2.3 Discussion of the findings on third hypothesis	248
6.2.4 Discussion of the findings on fourth hypothesis	248
6.2.5 Discussion of the findings on fifth hypothesis	249
Chapter summary	250
CHAPTER 07- CONCLUSION, RECOMMENDATIONS & IMPLICATIONS	251
7.1 Conclusion	251
7.2 Recommendations	255
7.3 Further research	256
7.4 Implications of the study	257
Chapter summary	
REFERENCES	258
APPENDICES	
No: 1 Covering letter	1
No: 2 Research questionnaire	2
No: 3 Internal consistency reliability of instrument	6

LIST OF TABLES

Table: 1 Population of the study	129
Table: 2 Number of households taken to the sample from each district	133
Table: 3 Number of households taken to the sample from each sector	135
Table: 4 Areas selected as Urban, Rural and Estate sectors in each districts	136
Table: 5 Distribution of number of households in the sample	137
Table: 6 Gender (Sex) representation of the sample	153
Table: 7 Distribution of the households in the sample among provinces	154
Table: 8 Distribution of the households in the sample among sectors	156
Table: 9 Ethnicity of selected households in the sample	157
Table:10 Highest educational attainment of household heads in the sample	158
Table:11 Employment status of household heads in the sample	159
Table:12 Age of household heads in the sample	160
Table:13 Size of household	162
Table:14 Number of income earners in households	164
Table:15 Monthly household income	165
Table:16 Monthly household expenditure	167
Table:17 Mean dependency ratios by province	168
Table:18 Monthly household saving	170
Table:19 Most important motive of household saving in Sri Lanka	172
Table:20 Most important motive of household saving in the WP	173
Table:21 Most important motive of household saving in the CP	174
Table:22 Most important motive of household saving in the NWP	176
Table:23 Most important motive of household saving in the SP	177

Table: 24 Most important motive of household saving in the US	178
Table: 25 Most important motive of household saving in the RS	180
Table: 26 Most important motive of household saving in the ES	181
Table: 27 Multicorlinearity assumption of Independent variables	188
Table: 28 Aggregate impact of Independent variables on household saving in Sri Lanka	189
Table: 29 Overall significance of the model	190
Table: 30 Influence of Independent variables on household saving in Sri Lanka	191
Table:31 Aggregate impact of the Independent variables on household saving in WP	193
Table: 32 Overall significance of the model	193
Table: 33 Influence of Independent variables on household saving in WP	194
Table: 34 Aggregate impact of Independent variables on household saving in CP	196
Table: 35 Overall significance of the model	196
Table: 36 Influence of Independent variables on household saving in CP	197
Table: 37 Aggregate impact of Independent variables on household saving in NWP	199
Table: 38 Overall significance of the model	199
Table: 39 Influence of Independent variables on household saving in NWP	200
Table: 40 Aggregate impact of Independent variables on household saving in SP	202
Table: 41 Overall significance of the model	202

Table: 42 Influence of Independent variables on household saving in SP	203
Table: 43 Aggregate impact of Independent variables on household saving in US	205
Table: 44 Overall significance of the model	205
Table: 45 Influence of Independent variables on household saving in US	206
Table: 46 Aggregate impact of Independent variables on household saving in RS	208
Table: 47 Overall significance of the model	208
Table: 48 Influence of Independent variables on household saving in RS	209
Table: 49 Aggregate impact of Independent variables on household saving in ES	211
Table: 50 Overall significance of the model	211
Table: 51 Influence of Independent variables on household saving in ES	212
Table: 52 Relationship between Age of household head & Motives of household saving	214
Table: 53 Relationship between education level of household head & Motives of household saving	215
Table: 54 Relationship between Employment status of household head & Motives of household saving	216
Table: 55 Relationship between Gender of household head & Motives of household saving	217
Table: 56 Relationship between Residential sector & Motives of household saving	218
Table: 57 Mean difference in household saving according to age of household	

head	219
Table: 58 Mean difference in household saving according to Educational attainment of household head	220
Table: 59 Multiple comparison among groups under Educational attainment	221
Table: 60 Mean difference in household saving according to Employment status of household head	223
Table: 61 Mean difference in household saving according to Gender of household head	224
Table: 62 Mean difference in household saving according to Residential sector	225
Table: 63 Mean difference in household saving according to motives of household saving in Sri Lanka	226

LIST OF FIGURES

Figure: 1 Saving structure of a country	31
Figure: 2 Income, saving, consumption and wealth the over the life cycle	38
Figure: 3 Conceptual framework of the study	117
Figure: 4 Gender (Sex) representation of the sample	154
Figure: 5 Distribution of the households in the sample among provinces	155
Figure: 6 Distribution of the households in the sample among sectors	156
Figure: 7 Ethnicity of selected households in the sample	157
Figure: 8 Highest Educational attainment of household heads in the sample	158
Figure: 9 Employment status of household heads in the sample	160
Figure: 10 Age of household heads in the sample	161
Figure: 11 Size of households	163
Figure: 12 Number of income earners in households	164
Figure: 13 Monthly household income	166
Figure: 14 Monthly household expenditure	167
Figure: 15 Mean dependency ratios by province	169
Figure: 16 Monthly household saving	170
Figure: 17 Most important motive of household saving in Sri Lanka	172
Figure: 18 Most important motive of household saving in WP	173
Figure: 19 Most important motive of household saving in CP	175
Figure: 20 Most important motive of household saving in NWP	176
Figure: 21 Most important motive of household saving in SP	177
Figure: 22 Most important motive of household saving in US	179
Figure: 23 Most important motive of household saving in RS	180

Figure: 24 Most important motive of household saving in ES	181
Figure: 25 Linearity between variables	183
Figure: 26 Normality assumption of Age of household head variable	184
Figure: 27 Normality assumption of Educational attainment of household head variable	184
Figure: 28 Normality assumption of Wealth variable	185
Figure: 29 Normality assumption of Dependency ratio variable	185
Figure: 30 Normality assumption of Interest rate on deposits variable	186
Figure: 31 Normality assumption of household disposable income variable	186
Figure: 32 Normality assumption of monthly household saving variable	187

LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
WP	Western province
CP	Central province
NWP	North Western province
SP	Southern province
US	Urban sector
RS	Rural sector
ES	Estate sector
HIES	Household Income Expenditure Survey
SPSS	Statistical Package for Social Sciences
ANOVA	Analysis of variance
GNP	Gross National Product
AIH	Absolute Income hypothesis
LCH	Life Cycle Hypothesis
PIH	Permanent Income Hypothesis
KShs	Kenyan Shillings
CBMS	Community Based Monitoring System
EHBS	Estonian Household Budget Survey
PIHS	Pakistan Integrated Household Survey
OLS	Ordinary Least Squares Method
ACPC	Agricultural Credit Policy Council
FIES	Family Income and Expenditure Survey
GLS	Generalized Least Squares method

ADF	Augmented Dicky-Fuller
KPSS	Kwiatkowski-Phillips-Schmidt-Shin
GMM	Generalized-Method-of-Moments
UN	United Nations
NIEA	National Income & Expenditure Accounts
USA	United States of America
OECD	Organization for Economic Cooperation & Development
VIF	Variance Inflation Factor
H_1	Alternative hypothesis
H_0	Null hypothesis
O/L	G.C.E Ordinary level
A/L	G.C.E Advanced level

ACKNOWLEDGEMENT

Conducting a master thesis is not an easy task. Thus I wish to express my deepest gratitude to everyone who contributed to make my master thesis a reality.

First and foremost I am obliged to forward my sincere thanks to the Dean, Faculty of Graduate Studies, of the University of Sri Jayewardenepura, for selecting me as a student of M.Sc. (Management) Degree program 2008.

I would like to express my kind gratitude to Dr. P.D. Nimal, Coordinator, M.Sc. (Management) Degree program, of the University of Sri Jayewardenepura, for supporting and encouraging me to complete the research and report as quickly as possible.

Especially I would like to express my heartiest gratitude to my supervisor Dr.P.J.Kumarasinghe, Senior Lecturer, Department of Business Economics, Faculty of Management Studies & Commerce, of the University of Sri Jayewardenepura, for his immense of morale support, invaluable technical support, guidance, continuous encouragement, patience in reading my earlier drafts, timely returning them with thorough and insightful comments and the devotion of his own time in going through the drafts from the initial to the final level which enabled me to made this thesis possible. Without his invaluable insights on the field under researched, creative comments, great encouragement and constant guidance, I wouldn't have to made this thesis a reality.

I am grateful to Research Methodology lecturers Prof. R.S.Gunatunga and Prof. H.H.D.N.P.Opatha, Senior Lecturers of Faculty of Management Studies & Commerce, of the University of Sri Jayewardenepura for sharpening my knowledge in Research Methodology and encouraging me to do a valuable research for myself as well as to my country.

I am also thankful to Prof.K.D.Gunawardana, Senior Lecturer, Department of Accounting, Faculty of Management Studies & Commerce, of the University of Sri Jayewardenepura for publishing a book on Quantitative Research Methodology which helped me lot in the process of writing the thesis.

I would like to offer my sincere thanks to Dr.S.W. Hirantha, Senior Lecturer, Department of Commerce, Faculty of Management Studies & Commerce, of the University of Sri Jayewardenepura for his valuable assistance and encouragement to find relevant literature.

I am grateful to Mr.D.S.P.Jayasuriya, Senior Lecturer, Department of Decision Sciences, Faculty of Management Studies & Commerce, of the University of Sri Jayewardenepura, for sharpening my knowledge regarding Statistical tests during data analysis.

I would like to offer my sincere thanks to Mr. Sarath Ananda, Senior Instructor in English, English Language Teaching Unit, of the University of Sri Jayewardenepura, for editing English of my study.

I would like to give my sincere thanks to Ms. Nilanga and Mr. Tarindu Instructors, of the Information Technology Resource Center (ITRC), Faculty Management Studies & Commerce, of the University of Sri Jayewardenepura, for the assistance given to me in understanding SPSS software.

It's my duty to extend my deepest gratitude to all households in Western, Central, North Western and Southern provinces, who helped me by spending their valuable time to fill questionnaires and giving data on their confidential things to make data collection process of my study a reality.

Further I am grateful to all District Youth Service Officers and Gramasewaka officers in Colombo, Gampaha, Kalutara, Kandy, Matale, Nuwaraeliya, Kurunegala, Puttlam, Galle, Matara and Hambantota districts for the assistance given me on the field study.

Last but not least I wish to convey my deepest gratitude and appreciation to my beloved parents for being incredibly understanding, supporting and most of all for being patient. Both of you have made tremendous sacrifices to give good education to me. Their sacrifices enabled me to fulfill my dream to complete masters. I am also thankful to my sister for her encouraging words throughout my study. Especially I would like to give my heartiest thanks to my mother and father who were beside me during field work.

Lastly, I offer my regards and blessings to all of those who supported me in respect during the completion of this thesis.

An Empirical Investigation on Determinants and Motives of Household Saving in Sri Lanka

Herath Dassanayakelage Kaushalya Dilrukshi Dassanayake

ABSTRACT

Saving is important since it is directly related to the investment rate of a country which provides resources for capital formulation. Higher saving rate is key requirement for higher Economic growth as well as Economic development of any country. At the country level, domestic saving plays a dominant role in the Economic growth and stability. Domestic saving in a country originates from three main sectors of the Economy namely government, corporate and household. Among them saving by household sector in both developed and developing countries captures the highest attention in determining the level of domestic saving in a country. In this context, investigating the determinants and motives of household saving in developed and developing countries become naturally important. This study investigates the most important determinant and motive of household saving in Sri Lanka.

Main objective of this study is to find out the most important determinant and motive of household saving in Sri Lanka and specific objectives of the study are to find out the most important determinant and motive of household saving in Western province (WP), Central province (CP), North Western province (NWP), Southern province (SP) and Urban sector (US), Rural sector (RS) and Estate sector (ES) in Sri Lanka, to identify whether there is relationship between motives of household saving and demographic factors in Sri Lanka, to find out whether there is a significant mean difference in household saving with regard to demographic factors in Sri Lanka and to find out

whether there is a significant mean difference in household saving with regard to the motives of household saving in Sri Lanka.

Sample of the study consists of 520 household heads who were selected from households in WP, CP, NWP and SP. Single stage Cluster sampling method was used to select the sample since the population is geographically dispersed. A structured questionnaire was used to collect primary data for the study and Central Bank Annual Reports, statistics of the Department Census and Statistics and internet were used as secondary data sources. Data analysis was done by using SPSS 16.0 package. Descriptive analysis was done by using methods such as mean, percentages, charts and tables. Inferential analysis which includes testing hypotheses was done by using methods such as Multiple regression analysis, Chi square test, Independent sample t test and One way ANOVA test.

Results of the study indicated that household disposable income was the most important determinant of household saving in Sri Lanka and it had a positive influence on household saving while Precautionary motive was the most important motive of household saving in Sri Lanka.

Based on the findings, some recommendations were given to increase the income earned by households in Sri Lanka. Findings of this study help the government and policy makers to better understand the determinants and motives of household saving in Sri Lanka in order to formulate policies and programs to enhance the domestic saving level in Sri Lanka.