



# **BUYING BEHAVIOUR OF SOUTH AFRICAN INTERNET USERS**

by

**PIETER GERHARDUS MOSTERT**

Submitted in fulfilment of the requirements for the degree of

**DOCTOR COMMERCII (MARKETING MANAGEMENT)**

in the

**DEPARTMENT OF MARKETING AND COMMUNICATION  
MANAGEMENT**

**FACULTY OF ECONOMIC AND BUSINESS SCIENCES**

at the

**UNIVERSITY OF PRETORIA**

**PROMOTER: PROFESSOR E J NORTH**

**CO-PROMOTER: PROFESSOR P J DU PLESSIS**

**PRETORIA**

**MAY 2002**



**This thesis is dedicated to my wife, Lauren.**

## ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to the following people:

- To my wife, Lauren, for your willingness to make sacrifices during the times that I could not be with you. Your love and support is a great encouragement;
- My parents, Gert and Annie Mostert, for your unconditional love and support. Thank you for always believing in me;
- My godparents, John and Rita Agenbag, and my grandfather, Pieter Slabbert, for your love, interest and support;
- Prof E J North and Prof P J Du Plessis, my promoters, for your time, patience and guidance. You ensured that this will be an unforgettable journey;
- Dr Mike van der Linde and Ms Nina Strydom for assisting me with the research results;

To the Creator of all things, for affording me the opportunity and giving me the ability to complete this study.

## SYNOPSIS

The consumer decision-making process is well documented in marketing theory, where it provides a framework for marketers to understand how consumers evaluate and select among different alternatives to ultimately purchase a specific product or service. Specific influences on the process have also been documented to sensitise marketers to consider individual differences and environmental influences that could impact on the decision-making process.

In South Africa, however, documented scientific research regarding consumer behaviour and decision-making when considering buying via the Internet is limited. Marketers who either sell their products or services via the Internet or provide Online product and service related information should be conversant with the various behavioural concepts and theories that form the basis for consumer behaviour and decision-making.

The primary objective of this study was to determine the buying behaviour of South African Internet users by using the Internet as an information source and buying channel.

Differences between Internet shoppers and non-shoppers, when viewing the factors they consider when deciding to purchase via the Net, were also established. The issue whether the period of Internet usage influenced the decision to buy via the Net was also addressed. Furthermore, the influence of the period of Internet usage on whether Internet users search Online for product and service information prior to purchasing from non-Internet based sellers was explored. Finally, the study showed the influence of different demographic variables on the decision to purchase via the Internet and considered the influence of demographic variables on product and services categories respondents purchased from and consider purchasing from in the future.

The data for the research was gathered through a structured, self-administered questionnaire that was completed by 1 005 respondents who logged onto a Website specially created for the purpose of the research project.

Results from the research indicated that as the period of Internet usage increases, the percentage of Internet shoppers increases and the percentage of non-shoppers decreases. It was also found that Internet shoppers and non-shoppers consider different factors when deciding to purchase Online. Another main finding from the study was that the majority of Internet shoppers and non-shoppers search for (or consider searching for) product and service information on the Internet prior to purchasing from non-Internet based sellers. One of the main conclusions is that not all product and service categories will be sold equally successful via the Internet. It could also be concluded that gender, household language, gross monthly household income, highest qualification and population group influence whether or not respondents have purchased via the Net before.

The applicability of traditional consumer decision-making models was subjected and compared to the findings of this study and the conclusion is that the Internet environment indicates differences, which must be considered in predicting future consumer buying behaviour.

Recommendations for future research include: the influence of brands on whether shoppers purchase Online; what the magnitude of the monetary value spent on products and services are in South Africa; and the development and testing of a consumer buying model for Internet shoppers.

## CONTENTS

	<b>Page</b>
SYNOPSIS	iii
LIST OF TABLES	xiv
LIST OF FIGURES	xxvi
<b>CHAPTER 1: INTRODUCTION</b>	
1.1 INTRODUCTION	1
1.2 DEFINING THE AREA OF RESEARCH	5
1.2.1 A South African perspective of Internet access and usage	6
1.2.2 Structure of South African Internet users by access method	8
1.2.3 Definitions of terminology	14
1.3 OBJECTIVES OF THE STUDY	18



1.4	CONTEXT OF THE STUDY	19
1.5	IMPORTANCE OF THE STUDY	20
1.6	DEMARCATIION OF THE STUDY	22
1.6.1	South African household Internet and World Wide Web users	23
1.6.2	South African Internet user buying patterns	27
1.7	OUTLINE OF THE STUDY	34
<b>CHAPTER 2: CONSUMER BEHAVIOUR THEORY</b>		
2.1	INTRODUCTION	36
2.2	AN OVERVIEW OF CONSUMER BEHAVIOUR	36
2.2.1	Defining consumer behaviour	37
2.2.2	The origin and importance of consumer behaviour	39
2.3	MODELS OF HUMAN BEHAVIOUR	41
2.3.1	The Marshallian economic model	42



2.3.2	The Veblenian social-psychological model	45
2.3.3	The Pavlovian learning model	46
2.3.4	The Freudian psychoanalytic model	49
2.3.5	Maslow's hierarchy of needs	52
2.4	MODELS OF CONSUMER BEHAVIOUR	56
2.4.1	Defining models of consumer behaviour	56
2.4.2	Purpose and advantages of models of consumer behaviour	57
2.4.3	Some models of consumer behaviour	60
2.5	SUMMARY	94
 <b>CHAPTER 3: THE CONSUMER DECISION-MAKING PROCESS</b>		
3.1	INTRODUCTION	96
3.2	TYPES OF DECISION-MAKING PROCESSES	97
3.2.1	Consumer decision-making continuum	98
3.2.2	Factors influencing the extent of decision-making	105





3.3	NEED RECOGNITION	108
	3.3.1 Environmental influences	112
	3.3.2 Individual differences	142
3.4	SEARCH	169
	3.4.1 Acquiring information	172
	3.4.2 Information processing	184
3.5	PRE-PURCHASE ALTERNATIVE EVALUATION	195
	3.5.1 Evaluation criteria	198
	3.5.2 Determining the choice alternatives	203
	3.5.3 Assessing the choice alternatives	205
	3.5.4 Selecting a decision rule	206
3.6	PURCHASE AND ITS OUTCOMES	213
	3.6.1 Consumption	220
	3.6.2 Post-purchase alternative evaluation	221
	3.6.3 Divestment	224
3.7	SUMMARY	226

**CHAPTER 4: THE INFLUENCE OF THE INTERNET ON CONSUMER  
DECISION-MAKING**

4.1	INTRODUCTION	227
4.2	CONSUMER DECISION-MAKING AND THE NATURE OF THE INTERNET	227
4.3	THE CONSUMER DECISION-MAKING PROCESS IN THE INTERNET CONTEXT	235
4.3.1	The Confidence Building phase	238
4.3.2	The Skirmish phase	249
4.3.3	War	262
4.4	COMPARISON OF CONSUMER DECISION-MAKING MODELS	264
4.5	SUMMARY	266

**CHAPTER 5: PROBLEM STATEMENT, RESEARCH OBJECTIVES  
AND HYPOTHESES**

5.1	INTRODUCTION	268
-----	--------------	-----

5.2	PROBLEM STATEMENT	268
5.3	RESEARCH HYPOTHESES	270
5.3.1	Hypotheses formulated for the study	271
5.3.2	Relation of objectives to hypotheses	276
5.4	SUMMARY	277
<b>CHAPTER 6: RESEARCH METHODOLOGY</b>		
6.1	INTRODUCTION	278
6.2	INFORMATION SOURCES	278
6.3	DATA COLLECTION METHODS	279
6.3.1	Pre-testing	280
6.3.2	Surveys	282
6.4	SAMPLING	286
6.4.1	Define the population	290
6.4.2	Determine the sampling frame	290

6.4.3	Selecting the sampling method and size of the sample	291
6.4.4	Selection of the sample units	294
6.5	MEASUREMENT AND MEASUREMENT SCALES	295
6.5.1	Measurement scale types	297
6.6	QUESTIONNAIRE AND WEB-SITE DESIGN	300
6.6.1	Questionnaire structure	300
6.6.2	Web-site design	308
6.7	INTERVIEW PROCEDURE	311
6.8	CODING, EDITING AND TRANSFERRING OF DATA	312
6.9	STATISTICAL PROCEDURES AND TECHNIQUES ADOPTED FOR THE STUDY	314
6.9.1	Missing responses	314
6.9.2	Descriptive statistics	315
6.9.3	Statistical techniques applicable to the study	317
6.10	SUMMARY	324

**CHAPTER 7: RESEARCH RESULTS AND INTERPRETATION**

7.1	INTRODUCTION	326
7.2	REALISATION RATE	326
7.3	EMPIRICAL RESEARCH RESULTS	331
7.3.1	Results from section A of the questionnaire	332
7.3.2	Results from sections B and C of the questionnaire	352
7.3.3	Results form section D of the questionnaire	423
7.3.4	Logit analysis	451
7.4	MAIN FINDINGS	455
7.5	ACCEPTANCE OR REJECTION OF HYPOTHESES FORMULATED FOR THE STUDY	473
7.6	SUMMARY	483

**CHAPTER 8: CONCLUSIONS, IMPLICATIONS AND  
RECOMMENDATIONS FOR FUTURE RESEARCH**

8.1	INTRODUCTION	485
-----	--------------	-----



8.2	MAJOR FINDINGS, CONCLUSIONS AND IMPLICATIONS BASED ON THE MAIN FINDINGS	485
8.3	LINKING OF QUESTIONS AND MAIN FINDINGS TO THE RESEARCH OBJECTIVES	499
8.4	LIMITATIONS	500
	8.4.1 Limitations based on the literature review	500
	8.4.2 Limitations of the empirical research phase of the study	501
8.5	RECOMMENDATIONS FOR FUTURE RESEARCH	502
8.6	SUMMARY	504
	BIBLIOGRAPHY	505
	LIST OF APPENDICES	517

## LIST OF TABLES

	<b>Page</b>
Table 1.1 Corporate Internet users	9
Table 1.2 Academic Internet users	11
Table 1.3 Dial-up Internet users	12
Table 1.4 South African Internet users by access method	13
Table 1.5 LSM categories and household income (2000)	23
Table 1.6 Number of households by LSM category	24
Table 1.7 South African household Internet and World Wide Web users and devices	26
Table 1.8 Web user time spent on different media	28
Table 2.1 Characteristics of the three stages of decision-making	70

Table 2.2	Comparison between the Engel, Blackwell, Miniard (1995 and 1986 versions) and the Engel, Kollat, Blackwell Model (1982 version)	92
Table 3.1	Some activities, interests and opinions that define lifestyle	167
Table 3.2	Sources and types of information	179
Table 3.3	Types of perceived risk and related uncertainty	183
Table 3.4	Hypothetical ratings for illustrating decision rules	208
Table 3.5	Dimensions and components of store image	218
Table 4.1	Tools that facilitate consumer search on the Internet	243
Table 4.2	Examples of shopping bots	247
Table 4.3	Cost variables and descriptions	253
Table 4.4	Product classifications	261
Table 4.5	Comparison between Web-based and “traditional” decision-making process	265



Table 5.1	Relation of objectives to hypotheses	276
Table 6.1	Survey data collection methods	282
Table 6.2	Considerations when choosing a survey method	284
Table 6.3	Probability sampling methods	292
Table 6.4	Details of strata for the sample used	295
Table 6.5	Characteristics of different measurement scales	298
Table 6.6	Questions applicable to section A	301
Table 6.7	Questions applicable to non-Internet shoppers (section B)	303
Table 6.8	Questions applicable to Internet shoppers (section C)	305
Table 6.9	Questions applicable to demographic information	306
Table 6.10	Research hypotheses and questionnaire matrix	307



Table 7.1	Realisation rate of respondents	327
Table 7.2	Demographic variables of respondents who participated in the study	328
Table 7.3	Places of Internet access	333
Table 7.4	Period of Internet usage	334
Table 7.5	Relationship between Internet shoppers, non-Internet shoppers and period of Internet usage	336
Table 7.6	Non-Internet shoppers: consideration to purchase via the Internet in the future	340
Table 7.7	Relationship between non-Internet shoppers considering to purchase via the Internet and period of Internet usage	340
Table 7.8	Non-Internet shoppers: consideration to purchase via the Internet in the future if more South African businesses sell on the Net	342
Table 7.9	Relationship between period of Internet usage and non-Internet shoppers considering to purchase via the Internet if more South African businesses sell on the Net	343

Table 7.10	Number of Internet service providers subscribed to in the past (Q4)	344
Table 7.11	Period subscribed to current ISP (Q5)	345
Table 7.12	Multiple subscriptions to Internet service providers (Q5a)	345
Table 7.13	Views regarding the Internet	346
Table 7.14	Usage of Internet banking services (Q7)	347
Table 7.15	Potential future Internet banking users (Q8)	348
Table 7.16	Period using Internet banking services (Q9)	348
Table 7.17	Frequency of use/consider to use Internet banking services (Q10)	348
Table 7.18	Relationship between Internet banking users and Internet shoppers	349
Table 7.19	Relationship between the decision to purchase via the Internet and period using Internet banking services	351
Table 7.20	Mean scores for statements considered when deciding whether or not to purchase Online	354

Table 7.21	Rotated factor matrix for non-Internet shoppers	359
Table 7.22	Factors applicable to non-Internet shoppers	363
Table 7.23	Rotated factor matrix for Internet shoppers	365
Table 7.24	Factors applicable to Internet shoppers	369
Table 7.25	Rotated factor matrix for Internet shoppers using the Net for less than two years	373
Table 7.26	Factors applicable to Internet shoppers using the Net for less than two years	377
Table 7.27	Rotated factor matrix for Internet shoppers using the Net for two years to less than three years	378
Table 7.28	Factors applicable to Internet shoppers using the Net for two years to less than three years	383
Table 7.29	Rotated factor matrix for Internet shoppers using the Net for three years to less than four years	385
Table 7.30	Factors applicable to Internet shoppers using the Net for three to less than four years	389

Table 7.31	Rotated factor matrix for Internet shoppers using the Net for four years or more	391
Table 7.32	Factors applicable to Internet shoppers using the Net for four years or more	395
Table 7.33	Product and service categories non-Internet shoppers seriously consider purchasing from via the Internet	398
Table 7.34	Product and service categories Internet shoppers have purchased from before and categories seriously being considered to purchase from in the future	401
Table 7.35	Product and service categories Internet shoppers have purchased from before	406
Table 7.36	Re-coding of product and service categories selected for further analyses	409
Table 7.37	Re-coding period of Internet usage for further analyses	410
Table 7.38	Relationship between period of Internet usage and categories purchased from	411
Table 7.39	Relationship between period of Internet usage and categories respondents consider purchasing from	412

Table 7.40	Online information search prior to purchasing offline	413
Table 7.41	Relationship between period of Internet usage and product and service information searched for Online prior to offline purchases (non-Internet shoppers)	414
Table 7.42	Relationship between period of Internet usage and product and service information searched for Online prior to offline purchases (Internet shoppers)	415
Table 7.43	Relationship between shopping Online and Online information search	417
Table 7.44	Relationship between considering to shop Online in the Future and Online information search	418
Table 7.45	Information on product and service categories searched for on the Internet prior to purchasing from non-Internet based sellers	420
Table 7.46	Relationship between gender and whether or not respondents have purchased via the Internet	425
Table 7.47	Relationship between gender and categories purchased from via the Internet	426

Table 7.48	Relationship between gender and product and service categories respondents consider purchasing from	427
Table 7.49	Age groups of respondents	428
Table 7.50	Re-coding of age groups for further analyses	428
Table 7.51	Relationship between age groups and whether or not respondents have purchased via the Internet	429
Table 7.52	Respondents' household language	430
Table 7.53	Relationship between household language and whether or not respondents have purchased via the Internet	431
Table 7.54	Relationship between household language and product and service categories purchased from	432
Table 7.55	Relationship between household language and product and service categories respondents consider purchasing from	433
Table 7.56	Respondents' gross monthly household income	434
Table 7.57	Re-coding of gross monthly household income groups for further analyses	435

Table 7.58	Relationship between gross monthly income and whether or not respondents have purchased Online	435
Table 7.59	Relationship between gross monthly household income and product and service categories purchased from via the Internet	436
Table 7.60	Relationship between gross monthly household income and product and service categories respondents consider purchasing from	437
Table 7.61	Respondents' highest qualifications	438
Table 7.62	Re-coding of highest qualification groups for further analyses	438
Table 7.63	Relationship between qualifications and whether or not respondents have purchased via the Internet	439
Table 7.64	Relationship between qualifications and product and service categories purchased from	440
Table 7.65	Relationship between qualifications and product and service categories respondents consider purchasing from	441
Table 7.66	Respondents' geographic location	441



Table 7.67	Relationship between geographic location and whether or not respondents have purchased on the Internet	443
Table 7.68	Respondents' population groups	444
Table 7.69	Relationship between population group and whether or not respondents have purchased via the Internet	445
Table 7.70	Relationship between population group and product and service categories purchased from	446
Table 7.71	Relationship between population group and product and service categories respondents consider purchasing from	446
Table 7.72	Respondents' marital status	447
Table 7.73	Re-coding of marital status groups for further analyses	448
Table 7.74	Relationship between marital status and whether or not respondents have purchased via the Internet	448
Table 7.75	Number of active Internet users per household	449
Table 7.76	Number of people per household	450



Table 7.77	Results from the logit analysis	452
Table 8.1	Factors identified for Internet shoppers and non-shoppers	495
Table 8.2	A suggested framework for an Internet-based consumer Decision-making process	496
Table 8.3	Linking of secondary research objectives, research questions and main findings	499

## LIST OF FIGURES

	<b>Page</b>
Figure 1.1 South African Internet users by access method	14
Figure 1.2 Percentage of households with Internet access (1999)	25
Figure 1.3 Frequency of Internet access at home	27
Figure 1.4 Hours spent per week on the Internet at home	28
Figure 1.5 Top 10 items being bought Online	30
Figure 1.6 Ranking of items that Online shoppers would never buy Online	32
Figure 1.7 Planning to shop Online in future	33
Figure 2.1 Maslow's hierarchy of needs	53
Figure 2.2 Bettman's information processing model	62



Figure 2.3	The Nicosia model of consumer decision-making	66
Figure 2.4	The Howard-Sheth model of buyer behaviour	69
Figure 2.5	Howard's general theory of consumer behaviour	74
Figure 2.6	The Engel, Blackwell & Miniard Model – 1995 version	80
Figure 3.1	Consumer decision-making process continuum	98
Figure 3.2	The consumer decision-making process	107
Figure 3.3	The need recognition process	109
Figure 3.4	Need recognition	111
Figure 3.5	The motivation process	148
Figure 3.6	The relationship among beliefs, feelings, attitudes, behavioural intention and behaviour	156
Figure 3.7	Search	170



Figure 3.8	The internal search process	173
Figure 3.9	Benefits and costs guide search effort	175
Figure 3.10	Alternative evaluation	196
Figure 3.11	The alternative evaluation process	197
Figure 3.12	Categories of decision alternatives	203
Figure 3.13	Purchase and its outcomes	214
Figure 4.1	From broadcast to dialogue	232
Figure 4.2	An Internet model for consumer decision-making	236
Figure 4.3	Methods of becoming aware of a seller's Website	239
Figure 4.4	Stages in product search using a shopping bot	248
Figure 4.5	The impact of incentives offered by Web sellers	250
Figure 6.1	Cross-tabulation example	320



Figure 7.1	Internet shoppers vs. non-shoppers	334
Figure 7.2	Gender of respondents	424
Figure 7.3	Respondents' household language	431