“Is there a relationship between Aaker's Brand Equity Management model and repurchasing of commercial grade exercise equipment in the Australian fitness industry?”

Doctor of Business Administration

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Statement of Original Authorship

I hereby certify that the work embodied in this dissertation project is the result of original research and has not been submitted for a higher degree to any other University or Institution.

Signed:

Date:
Acknowledgments

Completion of this thesis would not have been possible without the support of a number of people close to me. To those people that have sacrificed their own time and effort to help my cause, I am eternally grateful. I would like to take this opportunity to acknowledge those people and pay public gratitude for their assistance.

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Dr Andrew Noone
## Contents

Statement of original authorship 1
Acknowledgments 2
Table of Contents 3
List of Tables 7
List of Figures 8
Abstract 11

## Table of Contents

1.0 CHAPTER ONE-INTRODUCTION 12-26

1.1 Background 12
1.2 Research Objectives, Problem and Questions 13
1.3 Practical Contribution 15
1.4 Justification, Importance and Contributions 17
  1.4.1 Importance 17
  1.4.2 Practical Contributions 18
  1.4.3 Strategic Contributions 19
  1.4.4 Theoretical Contributions 20
1.5 Research Design and Methods 21
1.6 Thesis Outline 21
1.7 Definitions 24
1.8 Delimitations of Scope and Key Assumptions 25
1.9 Chapter Summary 26

2.0 CHAPTER TWO-LITERATURE REVIEW 27-58

2.1 Introduction 27
2.2 Brand Equity 28
2.3 Brand Awareness 33
  2.3.1 Product Knowledge 36
  2.3.2 Brand Recognition 36
2.4 Brand Quality 39
  2.4.1 Product Quality 40
  2.4.2 Warranty & Service 41
2.5 Brand Loyalty 42
  2.5.1 Personal Service 44
2.5.2 Pricing 45
2.5.3 Value Added Services 46
2.5.4 Finance 47
2.5.5 Trust 48
2.6 Customer Retention 50
2.7 Competitive Advantage 51
  2.7.1 Defining Competitive Advantage 52
  2.7.2 SWOT Analysis 53
  2.7.3 A Combined Perspective 54
  2.7.4 “Generic Positioning” for Competitive Advantage 56
  2.7.5 The Resourced View of Competitive Advantage 56
2.8 Conclusion 58

3.0 CHAPTER THREE- CONCEPTUAL MODEL 59-68
3.1 Introduction 59
3.2 Hypothesis 61
  3.2.1 Hypothesis 1 – Brand Awareness 62
  3.2.2 Hypothesis 2 – Brand Recognition 62
  3.2.3 Hypothesis 3 – Product Knowledge 63
  3.2.4 Hypothesis 4 – Brand Quality 63
  3.2.5 Hypothesis 5 – Product Quality 64
  3.2.6 Hypothesis 6 – Service and Warranty 64
  3.2.7 Hypothesis 7 – Brand Loyalty 65
  3.2.8 Hypothesis 8 – Personal Service 65
  3.2.9 Hypothesis 9 – Pricing 66
  3.2.10 Hypothesis 10 – Value Added Service 66
  3.2.11 Hypothesis 11 – Finance 67
  3.2.12 Hypothesis 12 – Trust 67
3.3 Conclusions 68

4.0 CHAPTER FOUR-METHODOLOGY 69-109
4.1 Introduction 69
4.2 Research Paradigm 70
4.3 Phase One: Preliminary Planning Phase 74
4.4 Phase Two: Research Design 75
  4.4.1 Research Approach 75
List of Tables

Chapter Two: Literature Review
Table 2.1 Considerations for Defining Brand Equity  31
Table 2.2 Brand Dimension Table  37

Chapter Three: Conceptual Model and Hypothesis
Table 3.1 Constructs Used for Hypothesis Testing  59
Table 3.2 Summary Table of Hypothesis  61

Chapter Four: Methodology
Table 4.1 Dominant Paradigms in Social Science Research  71
Table 4.2 Research in Paradigm  72
Table 4.3 The Difference between Exploratory and Conclusive Research  77
Table 4.4 Advantages and Disadvantages of Survey Types  78
Table 4.5 Measures and Items Used  84
Table 4.6 Literature Review of Past Studies  92
Table 4.7 First and Second Generation Statistical Techniques  101
Table 4.8 Comparison between PLS and Covariance-based Approach  104
Table 4.9 Inducements for Increasing Response Rates  107

Chapter Five: Results
Table 5.1 Summary of Profile of Respondents  117
Table 5.2 Differences between PLS and LISREL Analysis  121
Table 5.3 Hypothesis Outcomes  129

Chapter Six: Conclusions
Table 6.1 Brand Awareness and the Decision to Repurchase  133
Table 6.2 Brand Quality and Repurchase Decision  134
Table 6.3 Brand Quality and the Customer’s Decision to Repurchase  135
List of Figures

Chapter One: Introduction

Figure 1.1 Broad Conceptual Model 15
Figure 1.2 Importance, Justifications and Contributions of this Research 17
Figure 1.3 Overview Structure of this Study 23

Chapter Two: Literature Review

Figure 2.1 Overview of Literature Review 27
Figure 2.2 Brand Equity Management Model 32
Figure 2.3 Brand Awareness Pyramid 34
Figure 2.4 Brand Awareness 34
Figure 2.5 A Model of Individual Choice 35
Figure 2.6 Brand Quality 39
Figure 2.7 Brand Loyalty 43
Figure 2.8 A Service Encounter Model 44
Figure 2.9 Three Methods for Setting Price 45
Figure 2.10 Value Added Services 46
Figure 2.11 Relationships between Finance and Customer Loyalty 47
Figure 2.12 Trust Dimensions 49
Figure 2.13 Two Perspectives of Competitive Awareness 54
Figure 2.14 Forces Driving Industry Competition 55
Figure 2.15 Generic Positioning Strategy 56
Figure 2.16 Sustainable Competitive Advantage 57

Chapter Three: Conceptual Model and Hypothesis

Figure 3.1 The Proposed Conceptual Model 60
Figure 3.2 Hypothesis 1 – Brand Awareness 62
Figure 3.3  Hypothesis 2 – Brand Recognition  62
Figure 3.4  Hypothesis 3 – Product Knowledge  63
Figure 3.5  Hypothesis 4 – Brand Quality  63
Figure 3.6  Hypothesis 5 – Product Quality  64
Figure 3.7  Hypothesis 6 – Service and Warranty  64
Figure 3.8  Hypothesis 7 – Brand Loyalty  65
Figure 3.9  Hypothesis 8 – Personal Service  65
Figure 3.10 Hypothesis 9 – Pricing  66
Figure 3.11 Hypothesis 10 – Value Added Service  66
Figure 3.12 Hypothesis 11 – Finance  67
Figure 3.13 Hypothesis 12 – Trust  67

Chapter Four: Methodology

Figure 4.1  The Research Process  74
Figure 4.2  Classification of Self Administered Questionnaires  79
Figure 4.3  Survey Development Process Overview  81
Figure 4.4  Selection and Usage of Scales  82
Figure 4.5  BE Constructs in Relationship to Repurchasing  83
Figure 4.6  The Sampling Plan  96
Figure 4.7  Classification of Sampling Techniques  98

Chapter Five: Results

Figure 5.1  Brand Awareness  122
Figure 5.2  Brand Recognition  122
Figure 5.3  Product Knowledge  123
Figure 5.4  Brand Quality  123
Figure 5.5  Product Quality  124
<table>
<thead>
<tr>
<th>Figure 5.6</th>
<th>Warranty and Service</th>
<th>124</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 5.7</td>
<td>Brand Loyalty</td>
<td>125</td>
</tr>
<tr>
<td>Figure 5.8</td>
<td>Personal Service</td>
<td>125</td>
</tr>
<tr>
<td>Figure 5.9</td>
<td>Pricing</td>
<td>126</td>
</tr>
<tr>
<td>Figure 5.10</td>
<td>Value</td>
<td>126</td>
</tr>
<tr>
<td>Figure 5.11</td>
<td>Finance</td>
<td>126</td>
</tr>
<tr>
<td>Figure 5.12</td>
<td>Trust</td>
<td>127</td>
</tr>
<tr>
<td>Figure 5.13</td>
<td>Conceptual Models and Structural Equation Modelling Results</td>
<td>128</td>
</tr>
</tbody>
</table>
Abstract

Brand equity is an important strategy-based concept that serves to improve marketing productivity. Brand equity has a number of important implications related to competitive advantage and profits but a number of gaps remain in the literature. Brand equity struggles to achieve credibility in the absence of a consistent definition and measurements. Current research into brand equity remains conceptual with the need to establish strong relationships between brand equity and profits.

This thesis modifies Aaker’s model of brand equity management (BEM) to include three inner constructs of brand awareness (BA); brand quality (BQ); brand loyalty (BL). There are nine outer constructs that are related to the three inner constructs that include: BA= Product knowledge & brand knowledge; BQ= product quality + warranty and service; BL= personal service + pricing + value adds + finance + trust. This model is used to investigate the relationship between brand equity and a customer’s decision to repurchase. Measuring the relationship between repurchasing and the three inner and nine outer constructs of brand equity has both theoretical and practical implications. A “repeat customer” bases their decision on a number of considerations which include the quality of the product (product quality); their knowledge of the brand and the product (brand awareness) and their relationship and trust in the supplier (brand loyalty).

To test the relationship between brand equity and the decision to repurchase, data was collected from 177 owners and managers of Australian fitness clubs. To qualify, respondents were required to be involved in the decision making process for the selection of exercise equipment for their facility. Each of the twelve constructs of the brand equity model were tested independently and then together in a structured equation modelling technique using partial least square analysis. The findings supported the model and found strong relationships between all constructs, both independently and collectively. These findings have strong implications for marketing managers seeking to establish an operational plan to increase customer retention and repurchases. The limitations of the thesis and future research directions are also discussed.
CHAPTER ONE: INTRODUCTION

1.1 Background

This thesis examines the relationship between brand equity and the decision to re-purchase exercise equipment in the Australian fitness club industry. The fitness club industry in Australia is a rapidly expanding market with over 1500 centres providing exercise programs for 1,600,000 members (IHRSA Industry Report 2006). This thesis investigates the relationship between brand equity and a customer’s decision to repurchase. If this hypothesis can be proved then we can consider brand equity as a competitive advantage to maintain and gain market share and deliver long term profits to the firm.

One of the primary aims of a firm is to develop a set of advantages against the competition that are distinctive, not easily copied and difficult to acquire. These unique competencies will contribute to long term success through the provision of a unique service or asset that is not otherwise obtainable in the market. The search for competitive advantages has become increasingly difficult due to the rapidly changing market place where traditional models are becoming outdated. The traditional asset based advantages are giving way to emerging advantages such as employees, marketing strategy, intellectual property, that are in greater accord a dynamic market. This turbulent environment has shifted the focus from traditional competitive advantages such as assets and products to new areas such as knowledge, people, finance, human resource management and customer relationships. Within this framework brand equity is rarely described as a competitive advantage (Kellar, 1993) although conceptually it meets the criteria advocated by strategic planning literature (Porter, 2000).

The principal aim of marketing strategy is to successfully position an enterprise or its products within its markets so as to develop a competitive advantage (Aaker, 2000). This thesis uses a modified version of Aaker’s brand equity model (BEM, 1991) to measure the relationship between twelve elements of brand equity and the decision to repurchase. Researchers have found that brand equity positively affects future profits, long-term cash flow, a consumer’s willingness to pay premium prices (Kellar, 1993) and marketing success (Ambler 2003). Almost every marketing activity works, successfully or unsuccessfully, to build, manage and exploit brand equity (Aaker 1991; Kellar 1993; Yoo, and Donthu 2000).

This thesis aims to explore the relationship the relationship between brand equity and the decision to repurchase exercise equipment in the Australian commercial fitness equipment market. If this relationship is supported, there will be significant implications for marketing
management, general management and the current body of knowledge around brand equity and competitive advantage. Marketing as a discipline has struggled to justify its relevance at the senior level within the firm (Ambler, 2003). This is due, in part, to the lack of evidence supporting the relationship between brand equity and profits. This thesis also aims to show that brand equity can be enhanced, generated and managed through the application of a framework creating a competitive advantage. Evidence of this kind would provide strong support for marketing to be part of strategic planning and ongoing strategic management for firms across all industries.

For the purpose of this thesis, brand equity is defined by Aaker’s BEM model (1991) using three of the original constructs; awareness, loyalty and quality, omitting brand associations and propriety assets. The nine outer constructs related to the three inner constructs as presented in Aaker’s model were deemed appropriate for this study.

Previous studies in the service industry have shown that customer retention is affected by many factors such as customer loyalty (Kim et al., 2004) and satisfaction (Mittal and Kamakura, 2001; Bolton and Lemon, 1999), and this linkage is moderated by switching barriers (Jones et al., 2002 Lee and Cunningham, 2001). Recent research has suggested that the processes leading to customer loyalty and retention are complex and dynamic (Johnson et al., 2006).

The context of this study is the Australian fitness centre market that includes around 1500 centres with an estimated annual spend of $90 million dollars on exercise equipment. In recent times this market has become increasingly competitive with eight equipment suppliers competing for a piece of the $90 million pie. Equipment suppliers provide little point of difference within their respective equipment ranges and more than ever brand equity provides a potential competitive advantage needed for sustainable long term profits. In the absence of this competitive advantage suppliers will continue to reduce prices eroding abnormal profits. If this study can show brand equity to be a competitive advantage and relate positively to a fitness centre’s decision to re-purchase exercise equipment the implications for the relevant supplier might be significant.

1.2 Research Objectives, Research Problem and Research Questions

The prior section highlighted the challenges that confront suppliers of commercial exercise equipment in the Australian market. Owners of fitness clubs often see little difference in the range of equipment available to them which shifts the buying criteria from product-related to
factors such as finance, warranty, after sales service etc. Unfortunately there is little research or supporting empirical evidence which will provide suppliers or marketers with an understanding of the exact nature of these buying criteria. Consequently much of the strategy and marketing initiatives are based on supplier intuition and anecdotal experience rather than academic research or theory.

The purpose of this thesis is to investigate a set of industry specific factors relating to brand equity and the relationship these constructs will have on the customer’s decision to repurchase. Specifically, this thesis investigates the relationship between brand equity and the decision to re-purchase commercial grade exercise equipment for their fitness facility. This thesis investigates the proposition that brand equity can create a sustainable competitive advantage by increasing customer retention through increased decisions to repurchase. Furthermore, the brand equity model (Aaker, 1991) is used as the framework for this thesis and it is thought that certain constructs within this model may have a stronger relationship with the decision to repurchase. It is anticipated that these findings may serve to direct future resources in an effort to increase market share and maximise profits.

Essentially, it is proposed in this dissertation that brand equity can provide an important competitive advantage that will increase and maintain market share in the commercial exercise equipment market. Brand equity, represented by the brand equity model (BEM, 1991) provides a framework that can be made relevant for management as both an operational and strategic planning model. Although previous research (e.g. Kim et al., 2004; Kim and Yoon, 2004) has contributed to knowledge in the field of customer loyalty and retention, there has been little written about brand equity as a competitive advantage.

The following three objectives have been developed to answer the stated research question: **Research Question:** Is there a relationship between Aaker’s Brand Equity Management model and repurchasing of commercial grade exercise equipment in the Australian fitness industry?”

**Objectives:**

1. To examine the relationship between brand awareness and the decision to re-purchase.

2. To examine the relationship between brand quality and the decision to re-purchase.

3. To examine the relationship between brand loyalty and the decision to re-purchase.
To investigate these objectives, a literature review of brand equity and the various constructs involved is presented in chapter two. This literature review will investigate the relationship between brand equity and the customer’s decision to re-purchase providing an important link that will be depicted in the theoretical model. The research hypotheses are discussed in chapter three which will further expand on the concept of brand equity and the relationship with the decision to repurchase. This dissertation proposes that there is a positive relationship between the three inner constructs and nine outer constructs of brand equity, as presented in the conceptual model used for this thesis and the decision to repurchase. It is suggested that these factors can be presented as a guideline for suppliers to replicate and implement strategically which will result in increased market share, customer retention and profits.

Figure 1.1 Broad Conceptual Models

Managers are constantly under pressure to deliver short term results which creates an unhealthy focus on short term financial measures. This pressure is largely driven by the need to meet shareholder's objectives which are often short term (Ambler 2000). Strategies that enhance long-term competitiveness of the firm can diminish current-term earnings. As a result, managers may be reluctant to undertake strategies necessary for long-term competitive success making it difficult to justify investments in intangible assets such as brand equity (Aaker & Jacobsen, 1994).

Measuring brand equity is of critical interest to senior executives because it relates to the responsible management of corporate assets and long-term survival of a company (Baldinger, A. 1991). Dialogue on or around brand equity is fragmented due to inconsistent definitions or
financial measurements. A clearer definition of brand equity as a construct, rather than a concept, will enable the evolution of a measurement model.

A brand equity measurement system requires a number of characteristics including financial measurements that are applicable in both the finance and marketing community. Incorporate both sales data and customer attitudinal measures to help predict the future value of the brand along with the historical financial performance that is reflected in profit and loss statements. There are two types of equity in a brand: current and future. Current brand equity can be calculated by the number of current customer times the average value of a customer. The average value of a customer can be calculated by estimating the amount invested with each purchase and the total number of purchases in a life cycle of that customer. This concept can be further explored by dividing the customers into two groups: high-margin and low-margin customers. High-margin customers are loyal to the brand, while low-margin customers buy on price alone. For this brand equity calculation to make sense to the financial community, the value of the customer cannot be simply based on gross sales and needs to identify gross profits.

A major challenge for suppliers of commercial exercise equipment to the Australian fitness club market is to create points of difference in what might be considered a commoditised market place. Buyers have difficulty identifying differences between the suite of commercial products that currently exist which is driving down price and profits for suppliers. In this environment, it is imperative suppliers develop a set of differences that will separate their service from the competition to ensure long term revenues and profits. These differences or competitive advantages will enable suppliers to secure a portion of the market that cannot otherwise be obtained.

Until suppliers can establish a set of competitive advantages in this market both prices and profits will continue to decline. Brand equity could provide a framework to establish a competitive advantage across a number of industries.
1.4 Justification, Importance and Contributions of the Study

The previous section describes the research objectives and questions. In this section, the importance of the study is discussed within a practical and theoretical context.

1.4.1 Importance

Figure 1.2: Importance, Justification and Contributions of this Research

Adapted from Brown (2003)

**Global:**
Repurchasing a product from their current supplier could equate to billions of dollars across all industries.

**Australian Context**
The Australian commercial exercise equipment market is estimated at $90 million dollars.

**Brand Equity** contributes to a firm’s:
- Ability to generate sales.
- Create a competitive advantage.
- Increase market share
- Customer satisfaction
- Customer loyalty
- Personal relationships

**Research Gap**
Brand equity is a popular concept for marketers worldwide. Previous studies in this area have failed to show a direct link between brand equity and a consumer’s decision to repurchase.

**Theoretical**
This thesis will contribute to the elements of brand equity and their relationship to repurchasing commercial exercise equipment. Investigating the inter-relationship between twelve elements of brand equity will set an important platform for future research in this field.

**Practical:**
This thesis will provide a framework upon which managers can understand the relationship between certain constructs of brand equity and the decision to repurchase. This could play an important role in strategic planning and the allocation of resources within the firm.

Adapted from Brown (2003)
1.4.2 Practical Contributions

Practical Context. Managers are constantly under pressure to deliver short term results which creates an unhealthy focus on short term financial measures. This pressure is largely driven by the need to meet shareholder’s objectives which are more often based on short term objectives (Ambler 2000). Strategies that enhance long-term competitiveness of the firm can diminish current-term earnings. As a result, managers may be reluctant to undertake strategies necessary for long-term competitive success making it difficult to justify investments in intangible assets such as brand equity (Aaker & Jacobsen, 1994).

Measuring brand equity is of critical interest to senior executives because it relates to the responsible management of corporate assets and long-term survival of a company (Baldinger, A. 1991). If brand equity is established as a competitive advantage, management will be provided with a framework that is replicable and applicable within the service industry.

The current range of products offered by commercial equipment suppliers is very similar in both appearance and functionality. The consolidation of the industry and increased buying power of the multi chain fitness clubs has created additional price pressures. There have been a number of factors that have emerged as a point of difference, yet these have all been easy to replicate and in time, have been copied by the competition. These factors have included the provision of finance; free installation; extended warranties and extended trading terms.

For these reasons, Australian suppliers of commercial exercise equipment are seeking ways to better retain their valuable customers while trying to increase their market share. This thesis proposes a new customer retention strategy through the implementation of a brand equity model that will provide a set of elements, which together, will create a unique competitive advantage. Up to date the academic research in this area has been limited and there has been no specific research conducted on the notion of brand equity as a competitive advantage for providers of commercial exercise equipment. This paper attempts to fill this knowledge gap.
1.4.3 Strategic Contribution

This study proposes to create a brand equity management model for suppliers of commercial exercise equipment in the Australian fitness centre industry. While there are a number of definitions of brand equity and measurement models, the model proposed in this study collects and analyses data from a specific industry. It is anticipated these findings will support a model of brand equity that can service as the basis of a strategic planning model for firms supplying fitness equipment to health and fitness clubs. The general ability of the model will be a future research question. In the strategic planning phase, firms are searching for factors that will create a competitive advantage for their service or product. Strategic planning rarely makes reference to any brand equity models as competitive advantage (Ambler, 2003) although there are references from a marketing perspective (Aaker, 2000). This thesis will attempt to show the merits and relevance of brand equity from a strategic planning perspective and for the development of competitive advantages. Aaker’s brand equity model (BEM, 1991) will be the centre point of this investigation. If this thesis can demonstrate that brand equity increases customer retention through repeat buying, there will be significant implications for strategic management in all industries. More specifically, this thesis will provide a set of marketing guidelines for suppliers of commercial exercise equipment for the application of their marketing plan which could ultimately create a competitive advantage and increase profits.
1.4.4 Theoretical Contributions

**Theoretical Context.** There has been a myriad of work completed on the topic of brand equity since it was first popularised by Aaker’s brand equity management model (BEM) in 1991. The research into brand equity faces a number of challenges within a theoretical context. This study aims to identify these challenges and provide further discussion to contribute possible answers and alternatives. Most of the previous work completed on brand equity has been of a conceptual nature (Aaker 2000, Kellar, 2002, Ambler 2003).

This thesis suggests that there are two major challenges surrounding the theoretical progress of brand equity. These relate to definition and measurement. Further to this, defining and establishing a measurement model for brand equity needs to be industry specific. Generalising a definition or a measurement model without robust analysis is dangerous.

There is little theoretical work on the relationship between brand equity and the decision to repurchase. Investigating the interrelationship between a set of constructs defining brand equity and the decision to repurchase provides a valuable contribution to the theory of brand equity. This study will contribute to the economic value of brand equity by attempting to identify the constructs that will relate positively to the customer’s decision to re-purchase. This is an important step in establishing brand equity as a creditable construct for the field of marketing management. The next stage of scholarly work surrounding the topic of brand equity will hopefully continue to focus on providing a narrower definition and measurement models that are industry specific and related to outcomes of profit. This thesis will investigate this relationship within the context of the Australian commercial exercise equipment market.
1.5 Research Design and Methods

Research design is a key part of the initial formulation phase of the basic business research process. It outlines the basic directions for carrying out a research study project (Hair et al., 2003). A descriptive business research design is deployed in this thesis using secondary data provided by fitness club owners in the Australian fitness club market. Descriptive statistics and quantitative methods are used to determine the relationship between the twelve constructs of the brand equity model and the decision to repurchase via hypothesis testing.

The initial stage of the research involves exploratory interviews with twenty fitness club owners to determine common factors they consider when buying commercial exercise equipment for their clubs. Subsequent interviews have been conducted with managers in the product management and sales areas to strengthen the researcher’s understanding of the business issues and priorities. Hypotheses are formulated and refined in this initial research stage.

Following the initial exploratory phase, an electronic questionnaire was formulated and sent to 1347 fitness club owners. These 1347 fitness club owners formed the sample group for this thesis. The database from another industry supplier was used according to ethics recommendations. Hypotheses testing using SPSS and PLS software is carried out to determine the relationship between brand equity constructs and the decision to repurchase. Details of the research design and methodology are further discussed in Chapter 4.

1.6 Thesis Outline - Organization of the Dissertation

This research study consists of six chapters, following a commonly accepted framework of presenting doctoral dissertation work as suggested by Perry (2002). A graphical representation of the dissertation structure is shown in Figure 1.5. This chapter of introduction presents the background of the research study and introduces the research topic and questions. The rationale for conducting this research study is justified and the research methodology is introduced.

Chapter Two provides a review of relevant literatures in the areas of brand equity and repurchasing. The three inner constructs brand awareness (BA); brand loyalty (BL) and brand quality (BQ) are all reviewed along with their sub-elements. The relationship between the nine outer constructs and the decision to repurchase are also discussed.
Chapter Three describes the proposed conceptual model and develops the research hypotheses that are used for statistical testing to address the various research issues and objectives.

Chapter Four justifies and explains the research methods and design used in this study. First of all, the scientific paradigm is introduced and the quantitative research method is justified. The data sampling, collection, and preparation procedures are also discussed. The statistical tools and techniques that are deployed for data analysis are then explained and validity issues are also addressed.

Chapter Five presents and analyses the data through the questionnaire that was distributed to 1347 fitness centres. The data is presented using three formats. Firstly a descriptive analysis of the first nine questions; secondly, each of the twelve hypothesis were tested using path coefficients to show the relationship between exogenous and endogenous constructs. Thirdly, a structured equation model using partial least square analysis was used to determine the relationships between the constructs and the decision to repurchase.

Finally, Chapter Six discusses the results and findings and the theoretical and managerial implications. Strategies to help commercial exercise suppliers to both increase and maintain their current market share. This chapter concludes with a discussion of the research limitations and suggestions for future research in the field of brand equity and the decision to repurchase.
### Chapter 1: Introduction
1.1 Introduction
1.2 Research Objectives & Questions
1.3 Practical Contribution
1.4 Justification, Importance, Contributions
1.5 Research Design and Methods
1.6 Thesis Outline
1.7 Definitions
1.8 Delimitations of Scope & Assumptions
1.9 Chapter Summary

### Chapter 2: Literature Review
2.1 Introduction
2.2 Overview of brand equity.
2.3 Brand awareness
2.4 Brand Quality
2.5 Brand Loyalty
2.6 Customer Retention
2.7 Competitive Advantage
2.8 Conclusion

### Chapter 3: Conceptual Model
3.1 Introduction
3.2 Hypothesis
3.3 Conclusions

### Chapter 4: Methodology
4.1 Introduction
4.2 Research Paradigm
4.3 Preliminary Planning Phase
4.4 Research Design
4.5 Measuring Brand Awareness
4.6 Measuring Brand Loyalty
4.7 Measuring Brand Quality
4.8 Items Generated from Lit Review
4.9 Implementation
4.10 Data Collection
4.11 Ethics Consideration
4.12 Conclusion

### Chapter 5: Results
5.1 Introduction
5.2 Responses
5.3 Initial Method of Analysis
5.4 Common Method Variance
5.5 Discriminate Validity
5.6 Statistical methods for testing
5.7 Individual X & Y relationships
5.8 Summary
5.9 Conclusion

### Chapter 6: Conclusions & Implications
6.1 Introduction
6.2 Summary of Previous Chapters
6.3 Overall Results
6.4 Theoretical Contribution
6.5 Future Implications
6.6 Limitations of the Study
6.7 Suggestions for Future Research
6.8 Conclusions
1.6 Definitions

This section introduces important definitions used in this research study. As Perry (2002) has pointed out, researchers often have different definitions of key terms so it is important to properly define them in the study. The following definitions, as shown in alphabetical order, are further discussed and explained in depth in the literature review as presented in Chapter Two.

**Brand Equity:** is the “added value with which a given brand endows a product” (p24) Farquhar (1989)

**Repurchasing:** the customer’s decision to repurchase a similar suit of products from the original supplier while other alternatives of the same products from different suppliers exist.

**Brand Loyalty** is generally understood as customer’s behaviour of making repeat purchases from the same company as a result of his or her favourable attitude towards that company (Kim et al., 2004).

**Brand Awareness:** Brand name awareness relates to the probability of a brand name coming to mind with little effort or consideration (Kellar 2003).

**Brand Recognition:** Brand recognition is defined as the consumer’s ability to confirm prior exposure to the brand when prompted with a cue. Brand recall is the consumer’s ability to retrieve the brand when provided with the product category (Aaker 2000).

**Product Knowledge:** Product knowledge refers to the amount of knowledge a consumer has stored in their memory about particular product classes, product forms, brands, models and the ways to purchase them (Aaker 1991).

**Brand Quality:** Perceived quality can be defined as the customer’s perception of the overall quality or superiority of a product or service with respect to its intended purchase (Zeithaml, 1988).

**Product Quality:** The ultimate objective of marketing is to meet the needs of the consumer time and time again with the product or service you are providing. This objective is not possible if there are inconsistencies in the quality of the product or service (Rix, 2007).
Warranty and Service: The aim of a warranty is to provide a level of assurance to a customer that they will be compensated if the product fails to perform the activity it was intended to do (Rix 2005).

Personal Service: Personal service is an integral part of creating positive connections with a brand. Customers often equate the quality of the personal service they receive from staff to the overall brand (Gummesson, E., 2008).

Value Adds: Value adds are additional services or products the supplier provides that adds value to the product or service purchased (Aaker 1991).

Finance: Providing the money required for the purchase of a product at the point of sale helps to overcome a major sales objection and build brand equity (Aaker 1991).

Trust: Is the willingness of a consumer to rely on the capability of the brand to act on the promises it has claimed to fulfil (Chaudhuri and Holbrook, 2001).

1.8 Delimitations of Scope and Key Assumptions

The scope of this study is limited for a number of reasons that are discussed at length in chapter six. The data is collected from 150 respondents that receive exercise equipment from five suppliers. The total responses served as the sample group which creates a number of limitations. Firstly, grouping the data may have hidden different findings that may have been relevant for different suppliers. Grouping the responses into one data set assumes that the responses and relationships are consistent from supplier to supplier when in fact the findings may have varied significantly. Secondly, responses were supplier centric and were not separated by product class. In the fitness club industry customers often purchase equipment from a number of suppliers based on the premise that certain suppliers have superiority with different products. For example some customers are loyal to a total brand which is the supplier. Other customers deal with more than one supplier depending on the loyalty they have to a product. Loyalty can occur at the supplier or brand level or the product level. Thirdly, the findings of this research is industry specific and are unable to be generalised to other industries without further research replicating the same model of brand equity using the same scales.
The methodology is based on a positivist approach using quantitative statistical analysis to test a predetermined set of hypothesis. While this methodology is scientifically accepted and robust, the inclusion of qualitative method could have provided a more rounded approach. Qualitative methods such as interviews can provide good support to quantitative analysis and may provide insights that are not elucidated by the data.

1.8 Chapter Summary

Chapter one begins with the introduction of the research topic identifying the research objectives and questions providing background information and structure to the thesis. The importance of this research was divided into three perspectives:

1. Importance
2. Practical Importance
3. Theoretical Importance
4. Strategic importance

The rationale of the study is explained and the significance of this research project is outlined. An overview of the research methodology is presented with a discussion on delimitations of scope and assumptions. Definitions are provided for key terms to avoid confusion.

Chapter one provides the foundation for the thesis and chapter two will provide a literature review on the past findings and academic discussion surrounding the twelve constructs that have been elected for the brand equity model (BEM) that is used. These constructs are the primary focus of this research and the following five chapters will complete the following steps:

Chapter 2: Review the literature and develop the hypothesis
Chapter 3: Provide the conceptual model to be investigated
Chapter 4: Explain the methodology that will be used to conduct the investigation.
Chapter 5: Report the findings
Chapter 6: Discuss the findings and further implications
CHAPTER 2: LITERATURE REVIEW & HYPOTHESIS

2.1 Introduction

Brand Equity is a broad marketing concept that supposedly provides a firm with important advantages leading to increased profits and long term success. This thesis explores the Brand Equity Management model (BEM; Aaker 1991) and its ability to generate a competitive advantage by increasing the customer’s decision to repurchase. The three inner constructs of BEM (Aaker 1991); brand awareness (BA); brand quality (BQ) and brand loyalty (BL) each have outer constructs that together and independently influence a customer’s decision to repurchase. Figure 2.1 below shows an overview.

Figure 2.1: Overview Of Literature Review
2.2 Brand Equity

The challenge facing researchers in the field of marketing research and the subject of brand equity is that there is no uniformly accepted definition of brand equity. Once this definition is established, firms might understand how to develop brand equity and leverage the benefits. Three popular definitions of brand equity are the platform for much of the work that has been done in this field of research. Yoo & Donthu (2000) define brand equity as “the difference in consumer choice between the focal branded product and an unbranded product given the same level of product features.” (p196) Aaker (1991, 1996) supports the notion that brand equity is a multidimensional concept. It consists of brand loyalty, brand awareness, brand quality, associations and proprietary brand assets. Other researchers have identified similar dimensions. Kellar (1993) suggests brand knowledge is made up of brand awareness and brand image. In summary, brand equity is the result of the positive perceptions and associations customers have with the brand and its products (Yoo & Donthu 2000).

Brand equity is a broad marketing concept including economic, relationship, and resource based elements which creates significant value to the firm. Brand equity, defined by Farquhar (1989) is the “added value with which a given brand endows a product” (p24). According to Lassar, Mittal and Sharma (1995), brand equity has been examined from a both a financial (Simon and Sullivan 1993) and a customer based perspective (Kellar 1993; Chen 2001). There are two important perspectives of the value the brand can bring to the firm, the financial viewpoint and the customer- based meaning (Kim, Kim and An 2003). It is widely agreed upon that brand equity resides with the consumer who has a very specific understanding and association with the brand (Kellar 1993; Rust, Zeithaml and Lemon 2004 a, b).

Brand equity has also been described as “the enhancement in the perceived utility and desirability a brand name confers on a product” (Lassar, Mittal and Sharma 1995 p13). Increased brand equity is considered to be a competitive advantage based on the following seven factors: 1) firms can charge a premium; 2) there is an increase in customer demand; 3) brand extension is easier; 4) communication campaigns are more effective; 5) there is better trade leverage; 6) margins can be greater; 7) the company becomes less vulnerable to competition (Bendixen, Bukasa and Abratt 2003). Increased brand equity generates a “differential effect”, higher “brand knowledge”, and a larger “consumer response” (Kellar 1999) which translates to better brand performance, both from a financial and customer perspective. This concept is further supported by Chiranjeev and Leuthesser (2001) defining brand equity as the differential effect of brand knowledge on customer response describing
three elements. Firstly differentiation is the most important and without it there is no brand equity as the consumer finds it difficult to separate a number of brands in a category. The second element is “Brand Knowledge” where the customer should know about the differentiation and understand the implications and how it affects them. The third element is customer response, which should be favourable to the product or brand and therefore demonstrate some level of loyalty.

According to Lassar, Mittal and Sharma (1995) there are five dimensions to brand equity; performance, value, social image, trustworthiness and commitment. Aaker and Joachimsthaler (2000) define brand equity as brand assets linked to a brand’s name and symbol that add to, or subtract from, a product or service. These assets can be grouped into five dimensions; brand awareness, perceived quality, brand associations, brand loyalty and other proprietary assets. These dimensions have been commonly accepted and used by a number of researchers in the field of brand equity (Kellar 1993; Montameni and Shahrokhi 1998; Yoo and Donthu 2001; Bendixen, Bukasa and Abratt 2003; Kim, Kim and An 2003).

Brand Equity is made important though a number of added-value qualities and is explained this way in popular models such as Aaker’s BEM (1991). Marketing research to date has not been very articulate in identifying brand equity as a construct and most of the literature around this topic is criticised for being conceptual and lacking practical applications (Ambler 2000).

Brand equity is often used interchangeably with Brand Value and it is argued that while they may be related they are different constructs (Kellar and Lehman 2002 p.1). Ailawadi, Lehman and Neslin (2003) argue that brand equity is when more people line up to pay more for a branded versus non-branded offering. While it is accepted that goods and services provide the consumer with a set of benefits (Kotler 1977), consumer perceptions determine whether a brand’s promise is relevant to their set of needs and overall requirements. Based on this notion, brand equity can be defined as the desire for a brand to meet a set of promises defined by the consumer. Based on this definition, brand equity would result in the biased processing of information, the persistent attitudes or beliefs that are resistant to change and the subsequent behaviours that are a result of those beliefs (Petty and Krosnick 1995). In situations where consumers reconstruct the consideration sets and reassess the options available (Wood and Lynch 2002), brand equity may play an important role in differentiating the predominant brand within the choice set options. While brand equity is not required to maintain consistent choice, consistent performance by a brand may contribute to its brand equity. Keller (2003a, p. 597) suggests “Any potential encounter with a brand – marketing
initiated or not- has the opportunity to change the mental representation of the brand and the kinds of information than can appear in consumer memory.” These encounters might include where a consumer generates perceptions of a brand after viewing the logo, or packaging. These perceptions are a result of previous experience with the brand and the extent to which these experiences have been positive.

According to Beaty (1994), a brand is a tax paid by the consumer. The amount of the tax varies from product to product. Beaty uses a number of retail product examples to elucidate his proposition. For example, in April 1992, a case of 24 Coca-Colas retailed in Toronto for a regular price of C$6.99 (Canadian) to C$7.99. Enter the Loblaw Cos.’ President's Choice Cola which retailed at C$3.99 a case. Simple arithmetic shows the average price difference between the products is a whopping C$3.50 per case, equivalent to a brand tax of 90 percent.

A brand is the net present value of the goodwill consumers feel toward a product. Ambler (2002) supports the notion that there is a continued emphasis on customer-focused marketing approaches in the marketing mix supporting the idea that brand equity rests in the mind of the consumer. The customer asset can be a company’s most valuable asset and that firms should do everything in their power to create and sustain customer-based equity. Furthermore, “the brand is the thing” and that firms must properly build and leverage their brand equity. There remains much confusion within the marketing literature on the definitions of brand equity (Aaker 1991, Keller 1999, Ambler 2000). During the past two decades, the global economy has transitioned from being a product-based manufacturing economy to a service-based economy (Shugan 1993). The development of a super competitive manufacturing landscape with global access to labor and inputs has increased the importance of non-product attributes when building a brand. The initial notion of brand equity may have been based on product attributes but this has since evolved to a new focus on a number of non-product attributes such as personal service, price and trust (Urban and Hauser 1993). Firms began to recognize that developing relationships with current customers was more valuable than pursuing acquisitions. Segmenting existing customers by their profitability could be a major source of differentiation and, subsequently, customer retention (Reichheld 1996). An increased focus on customer retention, in addition to customer acquisition, eventually evolved into the customer equity perspective, which was promoted as taking more of a customer, rather than a brand (production) point of view (Rust, Zeithaml, and Lemon 2000). Ambler (2000) put it succinctly by suggesting that brand equity is “what we carry around in our heads about the brand.” In contrast, customer equity has been defined as the total of the discounted lifetime values of the firm’s current and potential customers (Rust, Zeithaml, and Lemon 2000). These definitions suggest that brand equity focuses on how the
customer sees the characteristics of the firm’s offering, recognizing that these characteristics assume meaning when the brand interacts with the consumer. This customer-based definition of brand equity has been defined as the differential effect of brand knowledge on consumer response to the marketing of the brand. Brand equity is defined from the perspective of the consumer and customer-based brand equity occurs when the consumer has had positive experiences with the brand.

Lassar, Mittal and Sharma (1995) suggested five important considerations to defining brand equity listed below.

*Table 2.1: Considerations for Defining Brand Equity*

1. Brand equity is based on consumer perceptions and not any objective indicators.
2. Brand equity refers to a global value associated with a brand.
3. The global value stems from the brand name, not only from physical aspects of the brand.
4. Brand equity is not absolute but relative to competition.

With these five characteristics in mind, Brand Equity is operational as “the enhancement in the perceived utility and desirability a brand name confers on a product. It is the consumer’s perception of the overall superiority of a product carrying that brand name when compared to other brands.” (Lassar, Mittal and Sharma, p15, 1995) Figure 2.2 on the following page shows Aaker’s Brand Equity Management model (BEM 1991) which was an early attempt to define and construct a conceptual model of elements and attributed of brand equity.
Figure 2.2 Brand Equity Management Model (BEM, Aaker 1991)

- Reduced Marketing costs
- Trade Leverage
- Attract new customers
- Create awareness
- Reassurance
- Time to respond to competitive threats

Provides value to the customer by enhancing the Customer’s:
- Interpretation/Processing of information
- Confidence in the purchase decision
- User Satisfaction

- Anchor to which other associations can be attached
- Familiarity-Liking
- Signal of substance/commitment
- Brand to be considered

Provides value to the firm by enhancing:
- Efficiency and effectiveness of marketing programs.
- Brand Loyalty
- Prices/Margins
- Brand Extensions
- Trade Leverage
- Competitive Advantage

- Reason to Buy
- Differentiate/Position
- Price
- Channel member interest
- Extensions

- Help process
- Retrieve information
- Differentiate/Position
- Reason to Buy
- Create positive attitude/feelings
- Extensions

Other proprietary assets

Competitive advantage

Brand Loyalty

Brand Awareness

Perceived Quality

Brand Equity

Brand Associations
2.3 Brand Awareness

Brand awareness (BEM element 1) is an initial pre-requisite of the buying process. A consumer needs to be aware of a brand or product before a purchase can be made. If consumers are unable to place a brand in its appropriate purchasing context then the advantages of recognition and recall are greatly reduced. It is related to the strength of the brand mode or trace in memory, as reflected by the consumer’s ability to identify the brand under different conditions (Rossiter and Percy 1987). Brand name awareness relates to the probability of a brand name coming to mind with little effort or consideration. Brand awareness is made up of brand recognition and brand recall performance. Brand recognition is defined as the consumer’s ability to confirm prior exposure to the brand when prompted with a cue. Brand recall is the consumer’s ability to retrieve the brand when provided with the product category. Brand awareness plays an important role in consumer decision making for three major reasons.

Firstly, it is important that the consumer thinks of the brand when they consider a product category. Increasing brand awareness will increase the probability that the brand will be a member of the consideration set (Nedungadi, 1990). Secondly, consumers may base decisions on brand awareness considerations when they have a low involvement as explained in the “Elaboration Likelihood Model”. Thirdly, brand awareness affects consumer decision making by influencing the formation and strength of brand associations in the brand image (Kellar, 1993).

Brand awareness may not be as important as brand loyalty because to be loyal one has to experience positive associations. Simply put, people will often buy a familiar brand in the absence of brand loyalty or knowledge of an alternative (Aaker 1991). Familiarity may engender the perception of reliability and quality over an unknown alternative. Brand awareness provides the opportunity for the brand to be considered and evaluated while unknown brands will usually have little chance. Brand awareness is the ability to recognize or recall a brand as a certain product category. Brand awareness connects a brand to its product category. If consumers are unable to place a brand in its appropriate purchasing context, then the advantages of recognition and recall are greatly diminished (Kholi & Leuthesser 2001).

At the basic level, brand awareness is a consumer’s ability to identify a brand as part of a product category in what is known as aided recall (Kellar 2003). While this may be a basic level of brand awareness it can influence a consumer’s decision to purchase (Kholi &
A stronger brand awareness measurement is called “top of mind” status, where a brand is recalled in an unaided recall test (Kellar 1999). Having a dominant brand provides the strongest possible competitive advantage because in many purchase situations, no other brand will even be considered (Aaker 1991).

The Brand Awareness Pyramid (Figure 2.3) describes four brand awareness levels with the firm striving to achieve the “top” level where the consumer automatically associates the brand with a product. At this level, a distinct competitive advantage is created and alternatives are not part of the consumer’s buying consideration. This level of awareness may occur through product superiority or brand associations, but will normally include powerful emotional forces. Brand awareness is more than consumer awareness it is the ability to recall important aspects about the brand.

\[\text{Figure 2.3: Brand Awareness Pyramid.}\]

According to Kellar (2000) brand awareness consists of brand recognition, “the consumer’s ability to confirm prior exposure to the brand when given the brand as a cue” (p67) and brand recall, the “consumer’s ability to retrieve the brand from a memory when given the product category, the needs fulfilled by the category, or a purchase or usage situation as cue” (p67).

\[\text{Figure 2.4: Brand Awareness}\]
Shocker, Ben-Akiva, Boccara and Nedungadi discuss brand awareness as a consumer’s choice from a “consideration set” of alternatives and the decision-making is based upon a set of hierarchical or nested alternatives which are processed prior to making a decision. (Nedungadi 1987). The total number of options available in a given market is described as the “universal set” and from within these options the consumer selects from an “awareness” set that includes the brands they are familiar with. According to this model a brand or product cannot be selected unless it is at least included in the “consideration set”.

Figure 2.5: A Model of Individual Choice

According to the model above, a brand needs to be part of the consideration set if it is going to be included into the choice set. The consideration set may be seen as another descriptor for the “awareness” set. The “choice set” is defined as the final consideration set or the set of alternatives considered immediately prior to choice (Hauser and Wernerfelt 1990). The consumer filters the choices available and then undertakes a detailed analysis of this reduced set (Gensch 1987).

If buyers readily identify one particular brand over others, then this advantage will translate to significant sales. Brand awareness affects perceptions and taste: “people like the familiar and
are prepared to ascribe all sorts of good attitudes to items that they are familiar with” (Aaker and Joachimsthaler 2000 p.17).

Simply put, if the consumer is able to recognize the brand and understand the service and products involved a platform for other emotional attachments is laid. Brand awareness is an important consideration in the re-purchasing process because the incumbent supplier or brand may have been able to establish strong emotional connections and an increased awareness of the products and brand involved. This connection is an important competitive advantage because it can act as a barrier to entry for potential competition. A new competitor entering into the market place will have to first establish brand awareness before market share can be achieved.

2.3.1 Product Knowledge

Product knowledge refers to the amount of knowledge a consumer has stored in his/her memory about particular product classes, product forms, brands, models and the ways to purchase them. For example, a consumer may know a lot about exercise equipment (product class), the type of equipment (product form) and the name of the product (brand) (Peter and Donnelly, 2004). The ability to recall information or knowledge about a product is sufficient detail to influence a purchasing decision. Product knowledge can be detrimental for a supplier if alternatives in a category have superior features and benefits.

2.3.2 Brand Recognition

Consumer brand recognition can be defined as the representation of a brand in the mind of the consumer (Peter and Olsen 2001). The sum of the information stored in the consumer’s mind is described as brand knowledge which is fundamental to brand recognition. Marketers place great importance on the means and processes involved with consumer brand recognition and knowledge. This curiosity has lead to the emergence of different areas within this field of research. Most of the early research concentrated on product-related research with a recent shift to understanding the more abstract aspects of brand knowledge (Kellar 2003). Aaker (1999) classified the perceptual space of brands into five basic dimensions. The Zaltman Metaphor Elicitation Technique (ZMET) utilises a set of techniques to measure consumer’s visual and other sensory images for brands (Zaltman and Higie Coulter 1995). Fournier (1998) draws upon the analogy of interpersonal relationships to compare the connection between the consumer and the brands to which they relate.
According to Muniz and O’Guinn (2000) brand communities classify brands based on common social relationships of the users. This idea is based on commonalities that are identifiable in a set of brands that the consumer identifies with. These types of studies show that there is a world of intangible attributes, issues and factors involved beneath the standard attributes of a brand that can make them more recognisable in the mind of the consumer (McAlexander, Schouten & Koenig 2002). Kellar (2003) describes a “Brand Dimension” table to further explain the various types of information that are linked to a brand. These key dimensions of brand knowledge differ on many levels in the mind of the consumer which further complicates the idea of a consistent perception given they vary considerably based on personal experience. Brand knowledge is closely related to brand equity because it creates a strong link to the brand (Kellar 2003). The brand dimension table defines ten factors that are linked to the brand and increase product recognition.

Table 2.2: Brand Dimension Table (Kellar 2003)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>Category identification and needs satisfied by the brand</td>
</tr>
<tr>
<td>Attributes</td>
<td>Descriptive features that characterise the brand name product either intrinsically (e.g., related to product performance) or extrinsically (e.g., related to brand personality or heritage)</td>
</tr>
<tr>
<td>Benefits</td>
<td>Personal value and meaning that consumers attach to the brand’s product attributes (e.g., functional, symbolic or experiential consequences from the brand’s purchase or consumption)</td>
</tr>
<tr>
<td>Images</td>
<td>Visual information, either concrete or abstract in nature</td>
</tr>
<tr>
<td>Thoughts</td>
<td>Personal cognitive responses to any brand related information</td>
</tr>
<tr>
<td>Feelings</td>
<td>Personal affective responses to any brand related information</td>
</tr>
<tr>
<td>Attitudes</td>
<td>Summary judgements and overall evaluations to any brand-related information</td>
</tr>
<tr>
<td>Experiences</td>
<td>Purchase and consumption behaviours and any other brand related episodes.</td>
</tr>
</tbody>
</table>
Brand Salience is defined as the probability that a customer will think of the brand at some point in time. (Sutherland 1993). The “Salience” of a brand measures the prominence the brand holds in “top of mind” awareness measures (Alba & Chattopadhyay 1986). The term salience is used in the context of this thesis as a measurement of “Brand Recognition”. The likelihood of a brand being retrieved from memory over a number of alternative choices depends on the strength and breadth of connections to stimuli being used. Previous findings suggest that consumers access brands for consideration and evaluation through a range of single cues (Nedungadi 1990; Holden and Lutz 1992) and multiple cues simultaneously (Biehal & Chakravarti 1986). Romaniu and Sharp (2003) make the case that brand awareness is increased according to the number of attributes the consumer associates with the brand.
2.4 Brand Quality

Perceived quality (BEM element 3) is defined as the customer’s perception of the overall quality or superiority of a product or service with respect to its intended purchase. It is the most important element of buyer consideration when making a purchase (Aaker, 1991). Consumers tend to buy brands with low perceived quality at a price discount when compared to brands with higher perceived quality that can command a price premium (Pope, 1993). Perceived quality is closely interrelated to brand loyalty especially in instances where the buyer is not able to conduct a detailed analysis of the prospective service or product. A brand with a perception of quality will increase loyalty and future sales (Kellar, 1993). Once a brand has achieved perceived quality the chances of future earnings will increase dramatically. Perceived quality is similar to Porter’s differentiation model of product placement.

Figure 2.6: Brand Quality

The firm needs to position its product according to price or quality, with quality being the preferred strategy due to price premiums that can be achieved. According to BEM, quality rests in the mind of the consumer, so it can exist on many levels. Perceived quality results in a number of benefits that create a unique competitive advantage for the firm. Initially quality provides a reason to buy against alternatives. Quality creates a point of difference that results in a price premium providing a strong reason to buy.
2.4.1 Product Quality

Product quality is fundamental to brand equity and a major contributor to the consumer’s feelings towards a brand. The ultimate objective of marketing is to consistently meet the needs of the consumer with the product or the service you are providing. This objective is not possible if there are inconsistencies in the quality of the product or the service (Rix, 2007). The difficult practical task is to decide the level of quality required by a customer. While the natural perception is that customer’s seek “perfection” with each product or service interaction, this is not always the case. A customer’s expectation of quality is related to the price they have paid (Rix 2007).

Two important aspects of quality include consistency and individual expectations. Consistency of quality is an important consideration. Customers feel comfortable with consistency of a service or a product. This is evidenced in large chains such as McDonald’s or Boost juice who attempt to replicate their product throughout a national distribution chain regardless of the store you have purchased it from. They follow a service script that ensures the customer is treated the same way in any of their stores and the experience is replicated to deliver a level of consistency that meets the expectations of the customer. These could be described as “supplier set expectations” compared to “customer set expectations”. Individual expectations create a perceived level of product quality. Consumers bring their own set of expectations to the purchase and although they may be for the same product, these vary from consumer to consumer. Product quality is rated according to the expectations of the consumer.

The construct of customer satisfaction is related to quality of product and service (Kotler, Kellar, Burton; 136). Increased levels of quality result in higher levels of customer satisfaction. Studies have shown a high correlation between relative product quality and company profitability (Buzzell, 1987). Suppliers that have lowered costs to cut corners pay the price when the quality of the customer experience suffers (Hindo, 2006). The former CEO of General Electric highlighted the importance of quality when he said “Quality is our best assurance of customer allegiance, our strongest defence against foreign competition and the only path to sustained growth and earnings” (Roland, Zahra, Keiningham 1995).
2.4.2 Warranty & Service

The aim of a warranty is to provide a level of assurance to a customer that they will be compensated if the product fails to perform its intended activity. Warranties can be a considerable cost for suppliers and are often factored into the price. They can also be a point of difference and even act as a competitive advantage when the differentiation is significant (Rix 2005). A warranty can be used as a marketing tool that will build customer confidence and increase sales (Dalrymple and Parsons, 2000). It can also be a valuable tool in customer retention if it has a significant difference from other competing products. Warranties can create a huge financial cost to a company if the product or service fails to deliver what has been warranted. Another important factor is the resources a company has to deliver on the conditions of the warranty. Factors include the ability to provide quick response times in service and the ability to provide parts when required. The strength of a warranty is dependent upon the service strategies that support it (Dalrymple and Parsons 2000).

After sales service which provides the support for warranty claims are an essential part of customer satisfaction and the creation of brand equity. This is made more important when suppliers are providing large ticket items with long buying cycles. In these circumstances contact between normal avenues such as sales people and account managers can be minimal with the contact through the after sales service centre being the primary source of communication between the supplier and the customer.
2.5 Brand Loyalty

Brand loyalty is at the heart of brand’s value. “The concept is to strengthen the size and intensity of each loyalty segment” (Aaker, 2000: p17). Brand loyalty is a measure of how often a customer is inclined to select the same brand when buying from a particular product class. If a customer is indifferent to a brand name and purchase on the basis of features, price and convenience, then it could be said that little brand equity exists. On the other hand, if they continue to purchase in the face of competitive brands and other alternatives with similar features and benefits, it could be said that there is strong brand equity. Brand loyalty is not a binary concept; it is present in varying strengths. Most customers, regardless of their level of loyalty, have an inclination to compare other brands and product alternatives with each purchase. It is common for loyal customers to switch brands if their expectations are not met. Customer loyalty is also related to brand switching. It is important to note that there are other factors involved in the facilitation or prevention of brand switching including time, money, risk, that are not part of brand loyalty. Having acknowledged these factors, it is commonly accepted that brand switching can be a strong measurement of customer loyalty (Chiranjeev and Leuthesser, 2001).

Brand loyalty is the most important indicator of brand equity (Aaker 1991; Kellar 2001; Chiranjeev and Leuthesser 2001). Brands that are market leaders almost always have the highest brand loyalty that is developed through positive experiences the consumer has had with the brand.

Brand loyalty to existing customers represents a strategic asset that has the potential to provide value in several ways. (Figure 8) Brand loyalty is often the core of a brand’s equity (Aaker, 1991). If customers are indifferent to a brand and buy because of features with little concern to the brand name, there is likely little equity in the brand. As brand loyalty increases, the vulnerability of the customer base to competitive action is reduced. Brand loyalty is demonstrably linked to future profits since it translates into future sales (Aaker, 1991).
Brand loyalty is commonly considered to be desirable from a strategic marketing perspective (Gwinner et al, 1998; Mittal and Lassar, 1998; Chaudhuri, 1999; Kumar, 1999; Strauss and Friege, 1999; Reichfeld and Schefter, 2000; Bennett and Rundle-Teiele, 2002). The effect of brands and their ability to capture longer-term consumer business is made more important where there is little product differentiation (Berry, 2000). Loyal customers refer new customers (Aaker 1991) which can enlarge a customer base at reduced marketing costs. Loyalty is claimed to be a deeply held commitment that mitigates switching behaviours (Curasi and Kennedy, 2002). A loyal customer is willing to pay a price premium for a product or a service to which they feel emotionally attached, (Zeithaml et. al., 1996) and contributes to the overall success of the organization (Curasi and Kennedy, 2002).

According to Neal and Strauss (2008) Customer Loyalty is:

“the proportion of times a purchaser chooses products/services from the same producer, manufacturer, and/or provider in a specific category compared to the total number of purchases made in that category from all producers, manufacturers and/or providers, over a given time frame, under the condition that other acceptable products/services are equally available. (p149).
2.5.1 Personal Service

Personal service is an integral part of creating positive connections with a brand. Customers often equate the quality of the personal service they receive from staff to the overall brand (Gummesson, E., 2008). Both before and after the product is purchased, the customer interacts with a wide range of levels within the company that supplied the product including finance; sales; warranty and service; freight and logistics. The sum of these interactions combine to influence the perception the consumer has on the product and ultimately the brand. The “service encounter” is characterised by interaction between the company’s service providers and the customer.

Figure 2.8: A service encounter model (Gummesson 2002)

The management of these relationships is one of the key strategies for improving the effectiveness and performance of the business (Hosford 2006). Closer relationships with customers can help mitigate potential risks that can occur as a result of underperformance. Cultivating a positive relationship with a customer is paramount for any holistic marketing program (Kotler, Kellar, Burton 2009:211). There are a number of factors that influence the relationship between business factors, by affecting partner interdependence and environmental uncertainty (Kotler, Kellar, Burton: 212).

On a broader scale, as corporate brands start to become an increasingly important feature on a brand scale, the means of communicating brands' attitudes and behaviours will shift back to people themselves. The employees of a corporate brand represent both a means of communicating the brand's attitudes and an integral part of the brand. So, the wheel will have turned full-circle; what started as an analogy for person-to-person relationships will return to its source.
2.5.2 Pricing

Pricing products is a crucial and often mismanaged process for suppliers. It is suggested that pricing is the most crucial element of the marketing mix after the product itself. Marketing focuses on creating value for a customer through the development of a product or a service to meet a need (Cram, 2008). The correct price ensures that this is achieved and is a key contributor to customer satisfaction. A McKinsey survey in 1992 calculated that a 1 per cent increase in prices improved operating profit by 11.1 per cent.

The objective of pricing is to optimise the company’s economic value by capturing the value the customer sees in the proposition. Price setting begins with the establishment of customer perception for the brand or product in question (Monroe and Cox 2001).

Figure 2.9: Three Methods for Setting Price

This pricing model includes three implications for the market, the competition and the costs; brand equity is affected by the consumer perspective. There is an intersection point on a pricing scale where half the potential consumers think it is too expensive and the other half think it is too cheap. According to Van Westendorp (1970), this is the most appropriate method for establishing the price. Many consumers use price as a measure of quality which further complicates the issue. Setting a price that is below other alternatives directly affects perceptions of quality (Kellar & Kotler 2006).

Pricing is a sensitive topic at the best of times and due to the impact that can occur customers are rarely willing to offer up feedback that may lead to an increase in the price they are paying for a product or a service (Aaker 2000). It is difficult for a supplier if a price is too low based solely on anecdotal customer feedback.
2.5.3 Value Added Services

Value added services can increase customer loyalty and reduce the threat of customer attrition (Aaker 1991 p32). These are additional services or products the supplier provides that adds value to the product or service purchased. These can vary according to the industry, the product or service supplied or the needs of the customer. Within the Australian health and fitness club industry, there are a number of popular value adds that have been highlighted in the figure below. These value adds are provided in addition to the exercise equipment with the aim of increasing business performance and profitability. If the supplier can establish the relationship between the equipment, the value adds and increased profits then the chance of repurchasing is increased.

1. **Training**: Suppliers often provide a set of training programs with the sale of equipment. These programs vary in length and intensity from basic product knowledge to advanced strength and conditioning courses.

2. **Sales initiatives**: include programs that promote the new equipment to past members in an attempt to attract additional revenue for the purchaser.

3. **Promotional Items**: include drink bottles, t-shirts, banners, work-out bags, etc.

4. **Trade Shows**: includes the provision of airfares, accommodation and entry into local and international trade shows. The aim is to provide the purchaser access to industry seminars and ideas that will hopefully improve business performance.

*Figure 2.10: Value Added Services in the Australian Health & Fitness club industry.*

![Diagram of Value Added Services](image-url)
2.5.4 Finance

Finance is an important factor in the purchase of “high ticket” items as it removes a common objection and provides the customer with a clear pathway to purchase. Providing the money required for the purchase of a product at the point of sale is commonplace in a number of popular industries such as: real estate; car sales; life insurance; health insurance and education. Providing finance increases customer loyalty and brand equity (Aaker 1991).

In recent times the provision of vendor finance has taken a number of forms and has evolved from the lump sum loan to a more discrete monthly payment where the purchaser may not fully understand the implications of the interest on the sum that has been factored into the monthly payment. For example car sales often advertise “0 interest” finance for specific promotions. The cost of this interest has already been factored into the price of the car which has been adjusted accordingly.

Figure 2.11: The relationship between finance and Customer Loyalty for suppliers of exercise equipment in the Australian health and fitness club industry.

1. **Increased Sales**: The amount of money required to make a purchase can act as a natural deterrent to a sale. Providing the purchaser with a loan to make the sale can have a positive impact on both the number of sales and the decision to re-purchase.

2. **Long-term clients**: Providing a customer with the financial support to allow them to make a purchase can increase customer loyalty and repeat buying behaviours. The emotion created by providing finance for a buyer that may not have otherwise been able to make the purchase can promote customer loyalty.
2.5.5 Trust

Trust originally developed as a construct in the field of social psychology and personal relationships (Rempel et al., 1985) and has since developed a number of meanings in a variety of fields including sociology (Lewis and Weigert, 1985), economics (Dasgupta, 1988) and management (Darney and Hansen, 1994). More recently, trust is being used as an element of brand equity (Aaker, 1991) in the field of marketing research (Morgan and Hunt, 1994; Dwyer et al., 1987; Ganesan, 1994; Geyskens et al, 1996). Expressing brand equity in relational terms opens a new line of research which may provide better performance prediction and assessment. Trust is the most popular measure for relationship assessment and may similarly prove to be the leading indicator for brand equity. (Ambler 1997).

Lewis and Weigert, (1985) describe trust as a three tiered construct having a cognitive process - logical rational reasoning; an emotional - positive influence for the trustee; and behavioural dimension. There are different dimensions of trust including cognitive and emotional aspects, and the concept of unaware and aware trust (Komiak and Benbasat, 2004). An example of unaware trust may be a customer accepting the recommendation of a new product even though little is known about it (Simmel, 1964). Trust plays a significant role in business relations and is a key component of quality service (Clout, 2001; Coulter and Coulter, 2002).

From a consumer-brand perspective, trust is described as the willingness of the consumers to rely on the capability of the brand to act on the promises it has claimed to fulfil (Chaudhuri and Holbrook, 2001). A common theme in defining trust is that it provides a feeling of security based on the belief that the individual’s behaviour will result in favourable outcomes for the person involved (Delgado-Ballester, 2004).

This feeling about trust is built on the two dimensions of brand reliability (Hess, 1995) and brand intention (Delgado-Ballester and Munuera-Aleman, 2002). ‘Brand reliability’ assumes that the brand is able to respond to customers’ needs by offering new products or services and a consistent level of quality. It is also argued that trust in the brand is part of an active relationship between the customer and the brand (Delgado-Ballester, 2004). This dimension implies that the brand is a promise of future performance (Deighton, 1992) that will relate positively to a customer’s intention to repurchase.

Trust in marketing studies is a ‘multidimensional’ construct (Raimondo, 2000) developing through past experience over time (Rempel et al, 1985; Curran et al., 1998; Grönroos, 1996). Trust can provide a unique point of difference for a prospective consumer that may otherwise be experiencing uncertainty (Delgado-Ballester and Munuera-Aleman, 2001).
Trust is inter-related with other constructs within brand equity and customer satisfaction is an example of a construct that generates trust (Singh and Sirdeshmukh, 2000). Trust is an antecedent to commitment (Moorman, Zaltman, and Deshpande 1992; Morgan and Hunt 1994) and customer loyalty (Ambler, 1999). Trust is also claimed to have a mediating role in the satisfaction-loyalty relationship (Hart and Johnson, 1999). Strong customer loyalty is driven by a strong, trusting relationship between the customer and the business (Bhatty, Skinkle and Spalding, 2001).

Trust is an important element in the establishment of brand equity (Aaker 1991). Corporate credibility (Violin 2002) creates trust and can translate to sustainable sales for the firm even in times of poor performance and economic downturn. Violin describes corporate credibility as “the extent to which customers believe a company can design and deliver products and services that satisfy their needs and wants. It reflects the supplier’s reputation in the marketplace and is the foundation for a strong relationship.” (p213, Kotler, Kellar, Burton 2009). Trust is also defined as the willingness of a company to rely on a partner. It depends on a number of interpersonal and inter-organisational factors, such as the company’s perceived competence, integrity, honesty and benevolence (Plank, Reid, Pullins 1999). A supplier establishes trust over a long period of time but unfortunately it can dissolve very quickly if a customer feels that they have been mislead or ill informed. Urban (2007) describes eight important dimensions of trust and the implications on the performance and delivery of these attributes.

**Figure 2.12: Trust Dimensions (Urban)**

<table>
<thead>
<tr>
<th>Low</th>
<th>Transparent</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distorted, hidden information</td>
<td>Transparent</td>
<td>Full, honest information</td>
</tr>
<tr>
<td>Low product service quality</td>
<td><strong>Product/Service Quality</strong></td>
<td>Best product and service to fulfil expectations</td>
</tr>
<tr>
<td>Failing to meet promises</td>
<td>Incentive</td>
<td>Incentives aligned so employees trust and meet customer needs</td>
</tr>
<tr>
<td>Incentives aligned for company not customer gains</td>
<td>Partnering</td>
<td>Help customer to learn and build</td>
</tr>
<tr>
<td>Leave customers to work out their own problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer is sold company Solutions</td>
<td>Co-operation in design</td>
<td>Customers help design products</td>
</tr>
<tr>
<td>Biased comparison</td>
<td>Product advice</td>
<td>Compare to competitive product</td>
</tr>
<tr>
<td>Customer trust conflict in channel</td>
<td>Supply Chain</td>
<td>All partners are aligned to build trust</td>
</tr>
<tr>
<td>Marketing pushes services And products</td>
<td>Pervasive Advocacy</td>
<td>All functions work to build trust</td>
</tr>
</tbody>
</table>
2.6 Customer Retention

Customer retention is defined as a consumer’s decision to remain with a supplier and has been conceptualized as a dimension of customer loyalty (Zeithamel et al., 1996). The terms ‘customer retention’ and ‘customer loyalty’ are often used interchangeably in marketing research literature. Customer retention and customer loyalty are two terms that refer to different things and need to be treated as different constructs.

Customer retention is concerned with repeated patronage which is closely related to repeat-purchasing behaviour and brand loyalty (Jacoby and Chestnut, 1978). Brand loyalty contains attitudinal aspects whereas customer loyalty contains both behavioural and attitudinal aspects (Kellar 2003). Customer retention is a result of customer satisfaction. Customer satisfaction occurs after the customer has perceived their needs have been fulfilled in a specific transaction based on expectations.

Too many companies suffer from high customer churn or defection and the cost of attracting new customers is often wasted due to a higher departure rate (Jagdish 1974). Unfortunately much marketing theory and practice centres on the art of attracting new customers rather than on retaining and cultivating existing ones (Kotler, Kellar, Burton p144).
2.7 Competitive Advantage

One of the primary aims of a firm is to develop a set of advantages against the competition that are distinctive, not easily copied and difficult to acquire. These unique competencies will contribute to long term success through the provision of a unique service or asset that is not otherwise obtainable in the market. Strategic planning strives to establish competitive advantages through a set of models that facilitate the planning process.

The search for competitive advantages has become increasingly difficult in a rapidly changing market place where traditional views are becoming outdated. The traditional asset based advantages are giving way to emerging advantages that are more relevant in a dynamic market place. This turbulent environment has shifted the focus from traditional competitive advantages, such as assets, and products, to new areas, such as knowledge, people, finance, human resource management, customer relationships and emotional connection. There has been sporadic mention of brand equity in relation to competitive advantage and mostly from marketers themselves (Dyson, 1996, Aaker, 1991). Traditional strategy research (Mintzberg 1990, Porter 1990) makes little reference to brand equity as a sustainable competitive advantage and even fewer include this concept as part of their strategic planning process (Ambler; 2000).

The principal aim of marketing strategy is to successfully position an enterprise or its products within its markets so as to develop a competitive advantage. This section suggests that BEM will establish a holistic set of competitive advantages that, when combined, are extremely difficult to imitate. The definition of brand equity is varied in the literature which makes it difficult to build on cumulative findings. Researchers have found that brand equity positively affects future profits and long-term cash flow (Srivastava and Shocker, 1991), a consumer’s willingness to pay premium prices (Kellar, 1993) and marketing success. Almost every marketing activity works, successfully or unsuccessfully, to build, manage and exploit brand equity (Aaker 1991; Kellar 1993; Yoo, Donthu and Lee 2000). If we acknowledge that brand equity can create a sustainable competitive advantage (Bharadwaj et al, 1993), then it would follow that establishing, increasing and managing brand equity would be a major priority in strategic planning and management.

This section begins with a review of the literature including the historical progression of competitive advantage from the early notion of comparative advantage (Ricardo, 1817; Heckscher, 1919; Ohlin, 1933) to a combined perspective (Porter, 2000); then the introduction of the resource based view (Snow 1992) followed by a review of brand equity with a focus on
the brand equity management model (Aaker, 1991). Most firms overlook the sustainable competitive advantage that can be created through long-term relationships (Ganesan, 1994).

Brand equity is rarely discussed as a competitive advantage from the viewpoint of strategic management. Why has brand equity failed to make this transition from marketing to strategic management? For this transition to be made, brand equity models need to be part of the strategic planning process.

2.7.1 Defining Competitive Advantage?

The notion of competitive advantage (Chamberlin 1933) developed out of the original economic theory of comparative advantage. Comparative advantage was based on a nation’s ability to access different assets to establish international dominance in a market. This is based on the assumption that a country’s international competitiveness is a result of its control over factor inputs such as labour and capital (Ricardo, 1817; Heckscher, 1919; Ohlin, 1933). The theory of comparative advantage has since given way to the concept of competitive advantage.

Research into the field of competitive advantage has focused on the need to develop strategies that will enable an enterprise to achieve a superior market position. Firms that achieve such an advantage may later experience an erosion of their position as competitors or market conditions change (McKee and Varadarajan, 1995). The volatility of markets has created a need for competitive advantages that will adapt to environmental changes in the market. A “sustainable competitive advantage” has been defined as “the unique position that an organization develops in relation to its competitors that allows it to outperform them consistently (Hofer and Schendel, 1978). According to Barney (1999:102), “an enterprise is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other enterprises are unable to duplicate the benefits of this strategy”. The critical component of sustainable competitive advantage is the ability of the firm’s strategies to resist duplication by competitors (Porter, 1990).

For a competitive advantage to be sustainable it needs to be tangible, measurable and capable of preservation over time (South, 1981). Barney (1991: 105-106) emphasizes the importance of four conditions that a firm’s strategies must possess before a sustainable competitive advantage can be achieved. First, the strategy must be valuable, or capable of either exploiting opportunities or neutralizing threats. Second it must be rare among its current and potential
competitors. Third, it must be inimitable, or unable to be copied or duplicated. Finally, it should have no strategically equivalent substitutes.

According to Coyne, (1985) the usefulness of a strategy in delivering a sustainable competitive advantage is its ability to offer value to the customer. A firm’s strategies need to be both unique and capable of offering “product/delivery attributes that are key buying criteria” (Bharadwaj, Varadarajan and Fahy, 1993:84). These criteria will differ in varying industries and markets but it is essential that the firm is able to adapt to changing conditions to these buying criteria.

Many of the traditional models used in strategic planning (SWOT, Five Forces, Generic Positioning,) are based on neo-economic theory. The modern world has changed and so has the way business is done. More than ever the relationships involved in the business process are just as important as the goods and services themselves. The classical view of strategic management pays little attention or acknowledgement to the emotional importance of relationships and the competitive advantage they can provide.

Aaker’s model of brand equity management (BEM) consists of five elements that include economic strategic theory as well as a resource based view of strategy with a strong emotional understanding that provides a unique alternative for strategic planners.

2.7.2 SWOT Analysis

Sustainable competitive advantage has been the subject of two competing schools of thought (Ladao, Boyd and Wright 1992). The determinism perspective is an economic view considering the environmental influences likely to impact on the firm. It is an external assessment of the environment that gives consideration to potential opportunities and threats.

The second, strategic selection is based on a resource view of the firm which sees competitive advantage emerging from unique assets or skills developed from within the enterprise. It is assumed that this will be achieved through an analysis of internal strengths and weaknesses (Aaker, 1996). The SWOT analysis is widely used in strategic planning although little reference is paid to the importance of relationships and emotional connection with customers. It is an attempt to match the internal capabilities of the firm with the external environment.
2.7.3 A Combined Perspective

Porter (1980; 1990) has had significant influence on the environmental determinist thinking. Mintzberg (1990) classifies this perspective of strategic thinking as the “positioning school”, which he identifies as one of ten separate “schools of thought” on corporate strategy. According to Mintzberg, the “Positioning School” is limited by a narrow focus and fails to understand the depth and breadth of strategy. Porter (1980) identifies five key influences within an enterprise’s external environment.

The ability of an industry to generate long term sustainable profits will depend on the five factors (Peters, 1993) described in the five forces model (figure 2.14). Bargaining power is determined by such factors as the volume of an enterprise’s product purchased by the buyer, the level of product differentiation and price sensitivity within the market, the presence of switching costs and the degree of backward integration of the buyer (Porter, 1980:24-25). Supplier bargaining power can be influenced by the amount of concentration within the industry, presence of substitutes, degree of product differentiation, switching costs and degrees of forward integration of supplies (Porter, 1980: 27-28).

Porter makes little reference to the importance of relationships and emotional connections within his five forces model. This oversight is somewhat representative of the determinist school of strategy, lacking an important humanistic dimension. Each of the five forces described by Porter could be mitigated or moderated through emotion and relationships. To what extent supplier and buyer power impacts on a firm would depend on a number of other variables including the relationships and emotions of those involved. Emotion is one of the most powerful tools in marketing yet it is surprisingly how often this potential is overlooked in favour of “the facts”. (Storm & Storm 1987). Relationship-based marketing acknowledges...
the importance of establishing and managing relationships at every step of the business process from suppliers to buyers.

*Figure 2.14: Forces driving industry competition*
2.7.4 “Generic Positioning” for Competitive Advantage

It is imperative that an enterprise is able to position itself successfully within its industry and Mintzberg (1990) described the environmental determinists as the “positioning school”. Porter (1980:35-41) suggests that the firm can consider three “generic” positioning strategies: cost leadership; differentiation, cost focus and focus differentiation (figure 2.15). According to Porter, (1990) there is no single, best strategy for any particular industry although it is important to commit to one of the three strategies.

*Figure 2.15: Generic Positioning Strategy*

<table>
<thead>
<tr>
<th>Broad Target</th>
<th>Lower Cost</th>
<th>Differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Leadership</td>
<td>Differentiation</td>
<td></td>
</tr>
<tr>
<td>Cost Focus</td>
<td>Focused Differentiation</td>
<td></td>
</tr>
</tbody>
</table>

2.7.5 The Resourced View of Competitive Advantage

Aaker (1996) identifies three elements of a sustainable competitive strategy. The first of these relates to the way in which an enterprise competes. It considers those marketing, financial and manufacturing strategies that comprise the activities of a firm. The second element is where an enterprise chooses to compete. This considers the markets and market segments into which the enterprise conducts its business. The third element is the “basic competition”, or the assets and skills that the enterprise possesses. It is these internal resources (skills and assets) that are considered to be the foundation of sustainable competitive advantage. This resource view of competitive advantage has become an important paradigm for understanding competitive strategy (Collis and Montgomery, 1995). Central to the resource based view of competitive advantage is the notion of *distinctive competencies* (Lado, Boyd and Wright, 1992). This term, initially referring to managerial qualities now commonly refers to competencies that are internally related. These competencies, which may be inherent in any number of companies within the same industry, need to be synthesized to produce a unique output for the firm.
Lado, Boyd and Wright (1992) have proposed a “competency-based model” of sustainable competitive advantage that identifies four areas of competency (Figure 2.16). Resource based competencies include both tangible and intangible resources such as financial, human, equipment or reputation that offer a firm an advantage over its competition (Wenefelt, 1984). These resources are generally identified as “core competencies”, which are “a function of the tacit understanding, skills and resources that an enterprise accumulates over time” (Mahoney, 1995). These intangible resources may be of more importance to achieve competitive advantage than the tangible ones (Hall, 1992; 1993). The comparative theory of competition (Hunt and Morgan 1995) suggests that the firm will gain a competitive advantage by first gaining a successful comparative advantage over its rival through the development of unique and valuable distinctive competencies. Many managers acknowledge the role that intangible assets play in establishing sustainable competitive advantage (Aaker 1989; Hall 1992).
2.8. Conclusion

BEM meets a number of the criteria for a sustainable competitive advantage. BEM creates “the unique position that an organization develops in relation to its competitors that allows it to outperform them consistently” (Hofer and Schendel, 1978). According to Barney, (1999:102) “an enterprise is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other enterprises are unable to duplicate the benefits of this strategy”. The complex nature of the model and the difficulty to integrate it as an operational framework makes it difficult to duplicate (Porter, 1990).

For a competitive advantage to be sustainable, it needs to be tangible, measurable and capable of preservation over time (South, 1981). BEM provides a set of measurements that is easily applied for each of the five elements. According to Coyne (1985) the usefulness of a strategy in delivering a sustainable competitive advantage is its ability to offer value to the customer. A firm’s strategies need to be both unique and capable of offering “product/delivery attributes that are key buying criteria” (Bharadwaj, Varadarajan and Fahy, 1993:84). BEM and marketing in general are based on the consumer’s buying habits, behaviours and tastes.
3.0 CHAPTER 3 - CONCEPTUAL MODEL

3.1 Introduction

Chapter three of this thesis outlines the conceptual model and the development of the three research questions and twelve hypotheses being tested. The structure of the conceptual model is based on Aaker’s Brand Equity Management Model (BEM) which has been modified for this thesis. Aaker’s model (1991) includes five primary constructs of brand equity: awareness; quality; loyalty; associations and propriety assets. For the purpose of this thesis the original model has been modified to include three primary constructs; brand awareness (BA); brand quality (BQ) and brand loyalty (BL) which form the basis of the three research questions:

Research Question 1: Is there a positive relationship between brand awareness and the customer’s decision to repurchase exercise equipment for their health and fitness centre.

Research Question 2: Is there a positive relationship between brand quality and the customer’s decision to repurchase exercise equipment for their health and fitness centre.

Research Question 3: Is there a positive relationship between brand loyalty and the customer’s decision to repurchase exercise equipment for their health and fitness centre.

These three research questions have nine related elements which together form the conceptual model described in the table below. Primary constructs are also described as “inner constructs” and secondary constructs are also described as “outer constructs”

Table 3.1: Constructs used for hypothesis testing.

<table>
<thead>
<tr>
<th>Inner Construct (Primary Construct)</th>
<th>Outer Construct (Secondary construct)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Awareness:</td>
<td>Product Knowledge, Brand recognition.</td>
</tr>
<tr>
<td>Brand Quality:</td>
<td>Product quality, Warranty and service.</td>
</tr>
<tr>
<td>Brand Loyalty:</td>
<td>Personal service, Pricing, Finance, Value added services, Trust</td>
</tr>
</tbody>
</table>
3.2 Hypothesis

The conceptual model in Figure 3.1 identifies the various factors that are expected to have a positive relationship with brand equity and the decision to repurchase commercial exercise equipment in the Australian fitness club market. Specifically, this thesis proposes that brand equity establishes a competitive advantage that will ultimately increase profits for the firm. This thesis will investigate twelve constructs (nine outer and three inner) and their relationship with the decision to repurchase.

Each of the constructs of the brand equity model will be analysed to determine the strength of their relationships with the other constructs and the dependent variable of repurchasing. Table 3.2 outlines the 12 hypotheses that are going to analysed in chapter five and six.

Table 3.2: Summary Table of Hypothesis

<table>
<thead>
<tr>
<th></th>
<th>Brand Awareness relates positively to the decision to re-purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Brand awareness relates positively to brand awareness</td>
</tr>
<tr>
<td>H2</td>
<td>Brand recognition relates positively to brand awareness</td>
</tr>
<tr>
<td>H3</td>
<td>Product knowledge relates positively to brand awareness</td>
</tr>
<tr>
<td>H4</td>
<td>Brand quality relates positively to the decision to re-purchase</td>
</tr>
<tr>
<td>H5</td>
<td>Product quality relates positively to brand quality.</td>
</tr>
<tr>
<td>H6</td>
<td>Warranty and service relates positively to brand quality.</td>
</tr>
<tr>
<td>H7</td>
<td>Brand loyalty relates positively to the decision to re-purchase</td>
</tr>
<tr>
<td>H8</td>
<td>Personal service relates positively to brand loyalty.</td>
</tr>
<tr>
<td>H9</td>
<td>Pricing relates positively to brand loyalty.</td>
</tr>
<tr>
<td>H10</td>
<td>Value added services relate positively to brand loyalty.</td>
</tr>
<tr>
<td>H11</td>
<td>Finance knowledge relates positively to brand loyalty.</td>
</tr>
<tr>
<td>H12</td>
<td>Trust relates positively to brand loyalty.</td>
</tr>
</tbody>
</table>
3.2.1 Hypothesis 1: Brand Awareness

Brand awareness is positively related to the decision to repurchase.

*Figure 3.2: Hypothesis 1-Brand Awareness*

Brand awareness is the ability to recognize or recall a brand as a certain product category. According to Kellar (2000) brand awareness consists of brand recognition, “the consumer’s ability to confirm prior exposure to the brand when given the brand as a cue” (p67) and brand recall, the “consumer’s ability to retrieve the brand from a memory when given the product category, the needs fulfilled by the category, or a purchase or usage situation as cue” (p67).

If consumers are unable to place a brand in its appropriate purchasing context, then the advantages of recognition and recall are greatly reduced. It is related to the strength of the brand mode or trace in memory, as reflected by the consumer’s ability to identify the brand under different conditions. Brand name awareness relates to the probability of a brand name coming to mind with little effort or consideration. Brand awareness is made up of brand recognition and brand recall performance (Kellar 2003).

Hypothesis one is attempting to measure the relationship between brand awareness and the customer’s decision to repurchase. It is expected that there will be a strong relationship between brand awareness and the decision to re-purchase which is supported in the literature review discussed in chapter two.

3.2.2 Hypothesis 2: Brand Recognition

Brand recognition is positively related to brand awareness.

*Figure 3.3 – Hypothesis 2 – Brand Recognition*
Brand recognition is a sub-element of brand awareness. This hypothesis is suggesting a positive relationship between brand recognition and brand awareness as supported by the literature review in chapter two and the summary of that review provided below. Brand recognition creates a competitive advantage over other alternatives in a market. If buyers readily identify one particular brand over others then this advantage will translate to significant sales. Brand awareness affects perceptions and taste: “people like the familiar and are prepared to ascribe all sorts of good attitudes to items that they are familiar with” (Aaker and Joachimsthaler 2000 p.17). Brand recognition is a construct of brand awareness.

Increasing brand awareness will increase the probability that the brand will be a member of the consideration set (Nedungadi, 1990). Finally, brand awareness affects consumer decision making by influencing the formation and strength of brand associations in the brand image (Kellar, 1993).

### 3.2.3 Hypothesis 3: Product Knowledge

*Figure 3.4: Hypothesis 3 – Product Knowledge*

This hypothesis contends that brand knowledge is positively related to brand awareness. If the consumer is able to recall the products and services that are represented by a brand the platform is laid for other emotional attachments to be made. A new competitor entering into the market place will have to first establish brand awareness before market share can be achieved. It is contended in this thesis that product knowledge is positively related to brand awareness as described in Aaker’s original BEM model (1991).

### 3.2.4 Hypothesis 4: Brand Quality

Increased brand quality is related positively to the decision to repurchase.

*Figure 3.5 – Hypothesis 4 – Brand Quality*
Perceived quality can be defined as the customer’s perception of the overall quality or superiority of a product or a service with respect to its intended purchase. It is the most important element of buyer consideration when making a purchase (Aaker, 1991). Consumers tend to buy brands with low perceived quality at a price discount when compared to brands with higher perceived quality that can command a price premium (Pope, 1993). Perceived quality is closely interrelated to brand loyalty especially in instances where the buyer is not able to conduct a detailed analysis of the prospective service or product. A brand with a perception of quality will increase loyalty and future sales (Kellar, 1993). Once a brand has achieved perceived quality, the chances of future earnings can increase dramatically. This study is predicting a strong relationship between brand quality and the decision to repurchase.

### 3.2.5 Hypothesis 5: Product Quality

Product quality is positively related to brand quality.

*Figure 3.6: Hypothesis 5 – Product Quality*

Product quality is strongly related to brand quality. Customers that have previously purchased products from the supplier and experienced superior performance will have a positive perception of brand quality and buy again (Aaker, 1991). This study is predicting a positive relationship between product quality and brand quality.

### 3.2.6 Hypothesis 6: Service and Warranty

Service and warranty are positively related to Brand Quality.

*Figure 3.7: Hypothesis 6 – Service and Warranty*

A comprehensive after sales service program can create the perception of quality in the mind of the consumer. Regardless of the quality of the product or its ability to perform at
an expected level, a prompt responsive service department with the demonstrated ability
to fix problems may provide the client with the perception of quality (Aaker 1991). This
study is predicting a positive relationship between service and warranty and product
quality.

3.2.7 Hypothesis 7: Brand Loyalty

Brand loyalty is positively related to the decision to repurchase.

Figure 3.8: Hypothesis 7 – Brand Loyalty

Brand loyalty is often the core of a brand’s equity (Aaker, 1991). If customers are
indifferent to a brand and buy because of features with little concern to the brand name,
there is likely little equity in the brand. As brand loyalty increases, the vulnerability of
the customer base to competitive action is reduced. Brand loyalty is demonstrably linked
to future profits since it translates into future sales (Ambler, 2003). This study is
predicting a strong relationship between brand loyalty and the decision to repurchase.
This expectation is based on the historical research that shows loyalty to be closely
linked to customer satisfaction (Lee 2001) and customer satisfaction relating to the
decision to repurchase or switch to another supplier (Soderland, 1998). This study is
predicting a positive relationship between brand loyalty and the decision to repurchase.

3.2.8 Hypothesis 8: Personal Service

Personal service is related positively to brand loyalty.

Figure 3.9: Hypothesis 8 – Personal Service

Personal service is an integral part of creating positive connections with a brand.
Customers often equate the quality of the personal service they receive from staff to the
overall brand (Gummesson, E., 2008). Both before and after the product is purchased,
the customer interacts with a wide range of levels within the company that supplied the product including finance; sales; warranty and service; freight and logistics. Personal service can act as an important moderator of customer loyalty by dealing with and preventing instances of customer dissatisfaction. This study is proposing that there is a positive relationship between personal service and brand loyalty

4.2.9 **Hypothesis 9: Pricing**

Pricing is related positively to brand loyalty.

*Figure 3.10: Hypothesis 9 - Pricing*

Pricing products is a crucial and often mismanaged process for suppliers. Marketing focuses on creating value for a customer through the development of a product or a service to meet a need (Cram, 2008). The objective of pricing is to optimise the company’s economic value by capturing the value the customer sees in the proposition. Price setting begins with the establishment of customer perception for the brand or product in question (Monroe and Cox 2001). From a customer’s perspective, it may be difficult to obtain accurate responses due to the perceived implications these responses may bring. A customer may be forgiven for thinking that suggesting a price is too low could result in a price increase of the product or the service. Although this study is predicting a positive relationship between pricing and brand loyalty, a weak relationship would not be unexpected.

4.2.10 **Hypothesis 10: Value Added Service**

Value added services relate positively to brand loyalty.

*Figure 3.11: Hypothesis 10 – Value Added Service*

Value added services can increase customer loyalty and reduce the threat of customer attrition (Aaker 1991 p32). Value adds are additional services or products the supplier
provides that adds value to the product or service purchased. These can vary according to the industry, the product or service supplied or the needs of the customer. Within the Australian health and fitness club industry, there are a number of popular value adds suppliers provide with the sale of exercise equipment including: training; promotional products; trade shows, and sales initiatives. If the supplier can establish the relationship between the equipment, the value adds and increased profits, then the chance of repurchasing is increased. This study is predicting a positive relationship between value adds and brand loyalty.

4.2.11 Hypothesis 11: Finance

Finance relates positively to brand loyalty.

Figure 3.12: Hypothesis 11 - Finance

Finance is an important factor in the purchase of “high ticket” items as it removes a common objection and provides the customer with a clear pathway to purchase. Providing the money required for the purchase of a product at the point of sale is commonplace in a number of popular industries such as: real estate; car sales; life insurance; health insurance and education. Providing finance increases customer loyalty and brand equity (Aaker 1991). This study is predicting a positive relationship between finance and brand loyalty.

4.2.12 Hypothesis 12: Trust

Trust relates positively to brand loyalty.

Figure 3.13: Hypothesis 12 – Trust

Trust is an important element of customer retention and loyalty (Kellar 2003). Trust in the brand will help mitigate poor performance and endure difficult times. Trust has
recently been identified as one of the key contributing factors of customer loyalty (Morgan and Hunt, 1994). ‘The construct of trust contains belief in the brand, which provides positive outcomes not only in the present but also in the future’ (Aydin et al., 2005, p99). Trust in a supplier can create a strong valence and translate to strong consistent sales. This study is predicting a positive relationship between the construct of trust and brand loyalty.

3.3 Conclusion

The conceptual framework provided in this paper aims to investigate the relationship between brand equity and the decision to repurchase. For the purpose of this investigation, brand equity is defined by an adapted version of the Brand Equity Model (Aaker, 1991). This model contains three inner constructs and nine outer constructs. It is hypothesised that the three inner constructs are all related positively to the decision to repurchase. Furthermore, it is hypothesised that the nine outer constructs are all related positively to the three inner constructs to which they are adjacently aligned.

This thesis will endeavour to measure the relationship of twelve constructs with the decision to repurchase exercise equipment in a commercial health and fitness club. The twelve variables will be measured individually as X and Y variables and then together in a structured equations model using partial least square analysis. The next chapter will discuss the methodology that is being used to conduct this investigation.

The aim of the first three chapters was to introduce the research question and then provide a summary of the literature concerning the topic and hypothesis being investigated. The conceptual model is made up of 12 constructs, three primary, 9 sub-constructs and one independent variable being the decision to repurchase.

Chapter four will discuss the reason behind the selection of the methodology being used to measure these 12 hypotheses. Chapter five will then present the statistical results of the analysis conducted and chapter six will discuss these findings in detail and suggest the implications and topics of future research.
4.0 CHAPTER FOUR-METHODOLOGY

4.1 Introduction

The previous chapters identified the research problems and undertook a review of the relevant theoretical frameworks for this thesis. This chapter will discuss the methodology used to test the hypotheses proposed in Chapter Three. The structure of this thesis is based on the “research process” suggested by Kumar et al (1999) in his model the “Systematic Approach” to writing a thesis (Figure 4.1). This structure includes three phases.

The first phase “preliminary planning” is covered in chapter one, two and three of this thesis. The second phase of Kumar’s model recommends a detailed discussion of the research approach and tactics which have been included in chapter four of this thesis. Key topics in this phase include the measures used to test the hypothetical model, the sampling plan and the subsequent statistical analysis. The third phase examines the implementation of the research including ethics and data collection strategies.

Prior to discussing these three phases of the research process, Perry (1997) suggests a philosophical discussion of the methodological options available. This philosophical discussion will explain the methodological principals that were deemed appropriate for this thesis. Marketing research has a myriad of definitions (e.g., Aaker, Kumar & Day 2001; Zikmum 2003) and includes all aspects of the marketing process (Malhotra et al. 2002).

Hunt (1991) claims an important difference between “marketing research:” and “market research”. Marketing research, according to Hunt (1991), increases the knowledge base in marketing and provides the firm answers to the many marketing questions that exist.
4.2 Research Paradigm

Marketing research has been traditionally conducted through a scientific paradigm (Perry, Riege and Brown 1999). The notion of scientific paradigms of research was made prominent by Thomas Kuhn (1962) who described paradigms as the engine of scientific development. Preston (2004) describes a research paradigm as a theoretical framework with which scientists attempt to interpret the world. Babbie (2004, p. 33) describes a paradigm as “…a model or framework for observation and understanding, which shapes both what we see and how we understand it”. In the scientific area, paradigm reflects the whole system of thinking (Neuman 2006). In the context of conducting research, a paradigm provides a framework which consists of a set of theories and methods to define data (Collis & Hussey 2003).

Marketing research incorporates a variety of paradigms. Perry et al. (1999) classifies these paradigms as: positivism, critical theory, constructivism and realism. Neuman (2006) identifies three paradigms (positivist social science, interpretive social science and critical social science), while Barker et al. (2001) and Collis and Hussey (2003) identify two paradigms (positivist and phenomenological/interpretivist). Paradigms reflect a different school of thought and subsequent framework that translates to a methodological preference and related research techniques (Voola 2005).

Table 4.1 summarises the key features of four paradigms (Positivism, Realism, Critical Theory, Constructivism) from an ontological, epistemological and methodological perspective. Ontology refers to the “reality” that is being investigated; epistemology refers to the relationship between the reality and the researcher. Methodology is the technique used by the researcher to understand and interpret that reality. Marketing research has traditionally been conducted through a positivist and interpretivist paradigm (Hussey and Hussey 1997).
Table 4.1: Dominant Paradigms in Social Science Research

<table>
<thead>
<tr>
<th>Item</th>
<th>Positivism</th>
<th>Realism</th>
<th>Critical Theory</th>
<th>Constructivism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oncology</strong></td>
<td>Reality is real and apprehensible.</td>
<td>Reality is real but only imperfectly apprehensible. Triangulation from many sources is required.</td>
<td>Virtual reality shaped by social economic, ethnic, political, cultural, and gender values developed over time.</td>
<td>Multiple local and specific constructed realities.</td>
</tr>
<tr>
<td><strong>Epistemology</strong></td>
<td>Objectivist findings true.</td>
<td>Modified objectivism. Findings probably true.</td>
<td>Value mediated findings.</td>
<td>Created findings.</td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>Experiment/survey. Verification of hypothesis: Quantitative method.</td>
<td>Case studies, convergent interviewing.</td>
<td>Dialogic/dialectical Researcher is a transformative intellectual who changes the social world within which participants live.</td>
<td>Hermeneutical Dialectical. Researcher is a passionate participant within the world being investigated.</td>
</tr>
</tbody>
</table>

Positivism (quantitative research) assumes that the scientific world (natural and social) is best interpreted through quantitative research. This approach measures independent aspects of a single reality which is comprised of both tangible and intangible elements.
whose nature can be identified and understood (Barker, Nancarrow and Spackman 2001). The positivist methodology includes experiments and sample surveys.

Perry et al. (1999) argue that critical theory and constructivism are not suitable as a foundation to conduct research in the marketing area. The Critical theory is inappropriate in business/marketing studies since it is not a common conduct to ask respondents to release information regarding “historical, mental, emotional and social structures” (Guba & Lincoln 1994 p. 112). Constructivism may not be appropriate because it does not consider real economic and technological dimensions of business (Hunt 1991 in Voola 2005). Table 4.2 provides definitions of the four common paradigms used in marketing research.

Table 4.2 Research Paradigm

<table>
<thead>
<tr>
<th>Research Paradigm</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positivism</td>
<td>An approach which emphasizes causal laws, careful empirical observations and value-free research.</td>
</tr>
<tr>
<td>Critical theory</td>
<td>An approach which emphasizes meaningful social action, socially constructed meaning and value relativism. It incorporates historically situated structures and ethnographic.</td>
</tr>
<tr>
<td>Interpretivism (phenomenological)</td>
<td>An approach which allows for a more intensive and flexible relationship with the respondents. It provides a more in-depth understanding of the phenomenon of interest and also known as qualitative research.</td>
</tr>
<tr>
<td>Constructivism</td>
<td>An approach which suggests that truth is based on a particular belief system in a specific context. Realities are various and are socially based. It attempts to understand the values that underlie a research finding.</td>
</tr>
</tbody>
</table>

Source: Neuman (2006), Perry et al. (1999), and Voola (2005)

In marketing research, two main research paradigms have been identified and thought to have a significant impact (Collis & Hussey 2003). Those two paradigms are the positivist paradigm and the interpretivist paradigm. These two paradigms have been described
under a variety of different names: Positivist is commonly named as quantitative, objectivist, scientific, experimentalist and traditionalist, (Neuman 2006) while interpretivist is called as qualitative, subjectivist and humanistic (Perry 1999).

Interpretivism, which is also described as qualitative research, involves a more intensive approach than the standardised approach usually applied in positivism. In so doing, the interpretivism requires a more in-depth technique to understand the phenomenon of interest. The inductive approach is usually preferable to understand social phenomenon (Blaikie 1993). The methodologies used include observations, field study, in-depth interviews, focus group and case studies.

Positivism is the most popular research paradigm in marketing research (Neuman 2006). The positivist approach is often associated with science and widely accepted as the approach of natural science (Neuman 2006). However, it is not specific to science with many social theories being associated with positivism. Positivist researchers commonly prefer to gather quantitative data using experiments and survey to gather statistics. Positivist research involves ‘objective’ research where the hypotheses are measured by analysing the raw data from the measures (Neuman 2006). This thesis applies an objective approach to answer the research questions. A survey is used to collect quantitative data which is then analysed by a number of statistical methods.

A quantitative method is designed to identify and confirm research hypotheses which are formed on the basis of existing theory (Cavana et al 2001). A required sample size of the survey is required for the statistical analysis to be able to be applied to analyse any hypotheses proposed (Malhotra et al. 2004). According to Burns and Bush (2000), a structured questionnaire is the appropriate method to ascertain predetermined responses in quantitative research. This form of quantitative research usually involves a large number of surveys using questionnaires, statistical analysis or experimental testing of hypotheses using categorical or numerical data (Malhotra et al. 2004; Neuman 2006; Punch 2005).
4.3 Phase One: Preliminary Planning Phase

*Figure 4.1: The Research Process*

Source: Adapted from Kumar et al. (1999, p. 72)
According to Kumar et al (1999) the preliminary planning phase includes three main stages:
1. Identification of the research problem;
2. Specification of appropriate conceptual and analytical models based on theory, and
3. Stating the broad and the specific components of the problem, hypothesis and justification for the research.

The research problem has been identified in Chapter One:
“Is there a relationship between brand equity and the decision to repurchase exercise equipment in the Australian fitness market?”

Chapter two discussed the relevant theoretical frameworks Aaker’s (1991). Brand Equity Management model (BEM) was discussed in reference to the relationship between brand equity and the decision to repurchase. The theoretical framework constructed in Chapter two (brand equity and repurchasing) provided the foundation for the research objectives and hypothesis.

4.4 Phase Two: Research Design

A research design is the framework of a study, and is used as a guide for data collection and analyses (Churchill & Iacobucci 2005). It has also been likened to a blueprint for a study that provides important guidance and pathways toward the final conclusion. The research design ensures the examination of the research objectives (Churchill & Iacobucci 2005; Malhotra et al. 2004). Chisnal (1997) argues that developing an effective research design is a fundamental part of any research activities. A clear understanding of the research design will make the study relevant to the research problem and help the research procedures to be parsimonious and economical (Churchill 1991). The next section discusses the research approach and research tactics.

4.4.1 Research Approach

The research approach will determine how the data is obtained which is an important consideration in the research process (Kumar et al. 1999). Ultimately, the research design will depend on the nature of the research question and the environment in which the research is conducted. There is no single best research design (Zikmund 2003) and the researcher has a number of options available. Phase Two of the research planning process (table 3.1) illustrates three approaches available for the researcher: exploratory; causal and descriptive (Burns and Bush 2000; Kumar et al. 1999).
**Exploratory research** explores the real nature of research problems and traditionally incorporates a broad investigative approach (Chisnall 1997). This type of research identifies the problem and develops alternative courses of actions (Burns and Bush 2000). Furthermore, exploratory research attempts to formulate or define the problems, identify alternatives, develop hypotheses, gain insight for developing an approach to the problem and establish priorities for future research (Malhotra et al. 2004, p. 64). Boyce (2003) suggests that exploratory research is appropriate when researchers have insufficient information to formulate a plan for a research project. Exploratory research is unstructured by nature due to the lack of information available and allows the researcher to pursue interesting issues and ideas (Parasuraman 1986).

**Conclusive research** seeks reliable information that is used as a basis of decision-making (Boyce 2003). Conclusive research consists of: (1) descriptive research which provides an in depth description of the phenomena of an existing situation. This is done by offering a profile to the factors (Cavana et al. 2001); (2) causal research, which aims to explore the cause or the reason a phenomenon occurs, and thus it goes further than description (Neuman 2006; Punch 2005). Causal research is applicable to understanding the phenomenon in terms of the validity of causality such as ‘X causes Y’ (Churchill & Iacobucci 2005). Kumar et al. (1999 p. 75) suggests causal research should be used when “it is necessary to show that one variable causes or determines the values of the other variables”.

**Descriptive research**, unlike exploratory research, requires a set of directional assumptions (Malhotra et al. 2004) and “a clear statement of the problem, specific hypothesis and detailed information” (Malhotra et al. 2004, p. 66). Descriptive research investigates phenomena such as aspects of market environment, while the objective of causal research is more on obtaining some evidences concerning the cause and effect relationships (Malhotra et al. 2004).

**Conclusive research** is said to be more quantitative in nature compared to exploratory research. While exploratory research is seen to increase the understanding of people’s behaviour, attitudes and opinions, it does not necessarily quantify the information collected (Boyce 2003). In brief, the objective of exploratory research is to provide an understanding of the nature of the problem, while the conclusive research is to test the hypotheses and the relationships proposed (Malhotra et al. 2004). These three approaches (exploratory, descriptive and causal) are not mutually exclusive but can be
used to complement each other (Malhotra et al. 2004). Table 4.3 summarizes the differences between exploratory and conclusive research.

**Table 4.3: The Differences between Exploratory and Conclusive Research**

<table>
<thead>
<tr>
<th>Exploratory research</th>
<th>Conclusive research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeks information that increases the understanding about people and situations, but not in a reliable numerical form. Produces qualitative data.</td>
<td>Seeks data expressed in numbers. The data can therefore be analysed using quantitative processes.</td>
</tr>
<tr>
<td>Findings are often from focus groups or in-depth interviews.</td>
<td>Findings are typically from a survey or census.</td>
</tr>
<tr>
<td>Research methods are informal and flexible.</td>
<td>Research methods are tightly planned, structured and formal.</td>
</tr>
<tr>
<td>Findings are unlikely to be sufficient for decision-making. Often needs to be followed by a conclusive research project.</td>
<td>Findings are intended to be suitable for decision-making.</td>
</tr>
</tbody>
</table>

*Source: Boyce (2003)*

Ultimately, the nature of the research question should determine the research approach (Hair et al. 2003; Voola 2005). The exploratory approach might be appropriate when the premise of the research is to discover or clarify a phenomenon. Descriptive research should be undertaken when the research question requires description of some phenomena. Finally, causal research is appropriate when the research question involves causality between constructs being researched. The hypothesis proposed in chapter two of this thesis investigates the relationship between a numbers of variables. The Brand Equity Management model (BEM; Aaker 2001) proposes a set of variables that are investigated in this thesis. Considering the nature of this research question, a causal research design has been selected.

### 4.4.2 Data Collection

Selecting the most appropriate method of data collection is fundamental to the research process. (Hunt 1991) Kumar et al (1999) suggest two methods of data collection: secondary and primary.
Primary data is information that has been collected directly by the researcher while secondary data has already been collected and collated by a previous researcher or third party (Sekaran 2003). This thesis will use primary data collection through the administration of an electronic questionnaire.

Three common methods for collecting primary data include surveys, experiments and case studies with surveys being the most popular method (Kumar et al. 1999). Surveys do collect information through a series of questions regarding attitudes, intentions, behaviour, motivations and demographic/lifestyle characteristics (Malhotra et al. 2004). Surveys are a quantitative instrument which is part of a positivist approach to research (Malhotra et al. 2004). It is suggested that surveying a sample group of a larger population will elicit responses that are indicative of the larger population (Hair et al. 2003) and enable the collection and analysis of large amounts of data (Neuman 2006). Surveys also provide anonymity for respondents and are a low cost alternative for accumulating data (Malhotra et al. 2004).

Malhotra et al (2004) suggests three ways that surveys might be administered:
1) Self-administered questionnaire;
2) Person to person interview, and
3) Using computer assistance (Malhotra et al. 2004, p. 131).

The advantages and disadvantages of the survey types are summarized below.

Table 4.4: Advantages and Disadvantages of Survey Types

<table>
<thead>
<tr>
<th>Survey method of administration</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-administered.</td>
<td>Ease of presenting questions requiring visual aids.</td>
<td>• Careful questionnaire is needed.</td>
</tr>
<tr>
<td></td>
<td>Facilitates questions with long or complex response category</td>
<td>• Open question usually is not useful.</td>
</tr>
<tr>
<td></td>
<td>Large sample size.</td>
<td>• Respondents must have good reading and writing skills.</td>
</tr>
<tr>
<td></td>
<td>Provide anonymity.</td>
<td>• Control is difficult with respect to all questions being answered, meeting questions objectives and the quality of the answers.</td>
</tr>
<tr>
<td></td>
<td>Respondent does not have to share answers with the interviewer.</td>
<td></td>
</tr>
<tr>
<td>2. Person administered.</td>
<td>Rapport and confidence building are possible.</td>
<td>• Perceived anonymity of the respondent is low.</td>
</tr>
</tbody>
</table>

Involves face-to-face contact with respondents.

- Can probe complex issues
- Flexibility of data collection
- High response rate.
- Sample control and control data are high.

- Expensive in time and cost
- Potential for interviewer bias is high.
- Difficult to obtain wide access
- Large sample size is difficult.

3. Electronically Administered.

Involves using the computer-internet to contact the respondents.

- Facilitate diversity of questions.
- Global reach and moderate quantity of data.
- The speed of the data collection is high.
- The cost is low.
- Facilitates questions requiring sensitive information.

- Very low response rate.
- Control on sample is low.
- Control of data collection environment is low.
- Sample bias due to the lack of access.
- Difficult to assure anonymity and confidentiality.

Source: Aaker et al. (2001, p. 251) and Malhotra et al. (2004, p. 142)

Understanding the objective of the study is crucial before researchers choose the type of survey to administer. As described in the Table 4.3, conducting the face-to-face surveys requires considerable time and is difficult to apply to a large sample size. (Hair et al. 2003) Self administered surveys are able to collect large amounts of data and are generally cheaper than other types of data collection (Malhotra et al. 2002) and were deemed appropriate for this thesis. This decision is supported by prior studies in marketing research (Srinivisan et al. 2002; Wu et al 2003). There are two types of self administered surveys to be considered: paper questionnaires and electronic surveys.

Figure 4.2: Classification of Self Administered Questionnaires
Electronically administered surveys contain a number of advantages. Response rates are reported to be increased compared to written surveys through ease of use and ability to reach target population (Tingling, Patent, Parent and Wade 2003). The cost can vary and can be less than other self administered alternatives requiring no third party assistance or explanation (Hair et al. 2006). An electronic survey can be completed wherever there is computer access (Fink 2006). Electronic survey questionnaire was deemed as appropriate for this study based on previous marketing research studies (Srinivasan et al. 2002; Wu et al. 2003).

4.4.3 The Research Tactics

After the method of data collection has been established, the next step is to select appropriate research tactics. The issues involved with this decision are listed in Phase Two of The Research Process in figure 4.1 which include:

1. Developing and identifying measures for the key constructs of interest;
2. Determining the appropriate structure of the survey;
3. Developing a sample plan, and
4. Identifying appropriate statistical methods

For the purpose of this study, the survey development phase is categorised into two phases:

Firstly a literature review of the relevant constructs is completed generating a set of measures for assessment. After further consideration a final set of measures are selected and formalised as a draft survey that is pre-tested. These measures were derived from Aaker’s brand equity management model (BEM, 1991). This model originally had five inner constructs which were reduced to three for the conceptual model used in this study.

Secondly the results of the pre-test are assessed and amendments are made to produce the final survey. The pre-test stage of the survey development is the foundation upon which a reliable and valid survey is constructed. Figure 4.3 below shows the survey development stages.
4.4.3.1 Survey Development Phase One

Developing marketing measures with appropriate psychometric properties is paramount for successful marketing research (Peter 1981). Marketing research suffers from a proliferation of questionnaires and scales (Bruner 2003 and Ping 2004) which makes it difficult to build upon previous research. This thesis has attempted to use existing scales that have been obtained from two primary sources (Marketing Scales Handbook: Volume 3 & 4, Bruner, Hensel, James). Previous scales were used for each of the 12 constructs being measured unless there were none available. (Bruner 2003; Netemeyer 1998; Impara 2001). Bruner’s model of scale development is applied for the next part of the chapter.

**Step One** involves the identification of the latent constructs being measured. This thesis has 12 constructs that are being measured in three research questions and 12 hypotheses.

**Step Two** is the decision to use multi-item scales to measure the constructs. This decision is based on the survey length. Due to the complex nature of the constructs involved in this thesis it was decided to use multi-item scales. This decision is further supported by Jacoby (1978) who advises against single item scales to measure complex constructs.

**Step three** is the selection of past scales that had been used successfully in the measurement of the latent constructs.

**Step four** Bruner’s model (2003) identifies alternative measures of the constructs in the literature. These constructs are then assessed on the basis of their ability to measure what is intended. The last step of the process suggests that if the scales are deemed inappropriate, then a set of new scales need to be developed. Most of the scales used for
this study were from previous research although there was a requirement to develop two scales to measure “finance” and “value adds”.

*Figure 4.4: Selection and Usage of Scales*

- Determine the latent construct to be measured
- Determine if multiple scales are appropriate
  - YES PROCEED
  - Are there pre-existing scales available
    - YES PROCEED
    - Compare alternative scales
      - Face validity
      - Psychometric
      - Acceptance
    - NO
  - NO RATIO SCALES
- Develop New Scales

Source: Bruner (2003)
4.4.3.2 Constructs and Operationalisation

The constructs that are being measured in this study are identified in the conceptual model outlined in chapter 2. The three inner constructs (BA, BQ, BL) and the nine outer constructs (BR, KP, PQ, WS, PS, Pr, VAS, F, T) are outlined in the conceptual model below:

*Figure 4.5: Brand Equity constructs being measured in relationship to repurchasing.*

Multi item scales are best used to measure the breadth of the model constructs (Churchill 1979). The following section discusses the twelve constructs being measured and the indicators that are used. Table 4.5 below provides a list of the constructs, definitions and the number of survey items that will be used.
Table 4.5: Measures and Items Used

<table>
<thead>
<tr>
<th>Construct</th>
<th>Scales</th>
<th>Source</th>
<th>items</th>
<th>Alpha</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Recognition</td>
<td>Likert 7 point</td>
<td>Machleit et al., (1993)</td>
<td>3</td>
<td>.85</td>
<td>-</td>
</tr>
<tr>
<td>Product Knowledge</td>
<td>Likert 7 point</td>
<td>Roehm et al., (2001)</td>
<td>5</td>
<td>.89</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 7 point</td>
<td>Mukherjee et al., (2001)</td>
<td>3</td>
<td>.81</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 9 point</td>
<td>Park et al., (1994)</td>
<td>3</td>
<td>.82</td>
<td>-</td>
</tr>
<tr>
<td>Brand Loyalty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Loyalty</td>
<td>Likert 7 point</td>
<td>Sen, Gurhan &amp; Morwitz, (2001)</td>
<td>4</td>
<td>.91</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 7 point</td>
<td>Campo, Gijsbrechts &amp; Nisol, (2000)</td>
<td>3</td>
<td>.89</td>
<td>-</td>
</tr>
<tr>
<td>Personal Service</td>
<td>Likert 7 point</td>
<td>Brady and Cronin, (2001)</td>
<td>3</td>
<td>.93</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Likert 9 point</td>
<td>Cronin, Brady and Hult, (2000)</td>
<td>10</td>
<td>.89</td>
<td>-</td>
</tr>
<tr>
<td>Pricing</td>
<td>Likert 5 point</td>
<td>Yoo, Donthu &amp; Lee, (2000)</td>
<td>3</td>
<td>.88</td>
<td>72%</td>
</tr>
<tr>
<td>Value Added</td>
<td>Likert 7 point</td>
<td>(developed for this thesis)</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Finance</td>
<td>Likert 7 point</td>
<td>(developed for this thesis)</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trust</td>
<td>Likert 5 point</td>
<td>Tax, Brown &amp; Chandrashekar, (1998)</td>
<td>4</td>
<td>.96</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 5 point</td>
<td>Price &amp; Arnold, (1999)</td>
<td>5</td>
<td>.84</td>
<td>-</td>
</tr>
<tr>
<td>Brand Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Quality</td>
<td>Likert 7 point</td>
<td>Grewal, Monroe and Krishnan, (1998)</td>
<td>7</td>
<td>.91</td>
<td>74%</td>
</tr>
<tr>
<td>Warranty &amp; Service</td>
<td>Likert 7 point</td>
<td>Brady and Cronin, (2001)</td>
<td>3</td>
<td>.82</td>
<td>61%</td>
</tr>
</tbody>
</table>

Table 4.5 above contains scales for each of the constructs being measured in this thesis. The scales were obtained from previous studies in marketing research. The scales were selected on the basis of their validity, reliability and established usage. A search of previous studies was unable to locate any appropriate scales to measure “Value adds” and “Finance”. These scales were developed specifically for this study.

4.5 Measuring Brand Awareness

According to Aaker’s BEM model, brand awareness is made up of two components; brand recognition and product knowledge.

Examples of Studies Measuring Brand Recognition
Machleit, Allen and Madden developed three, seven point bipolar adjectives measuring the degree of awareness a consumer has of some specific product or brand. No information was provided pertaining to the scale’s reliability but the alpha exceeded .85. Kent and Allen (1994) investigated the role played by brand familiarity in increasing memory ability.

Regarding the TFG products, are you: (seven point Likert scale)

- Unfamiliar / familiar   Inexperienced / experienced
- Not knowledgeable / knowledgeable

**Examples of Studies Measuring Product Knowledge**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From:</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roehm &amp; Sternthal (2001)</td>
<td>(original work)</td>
<td>7-p334</td>
</tr>
<tr>
<td>Mukherjee &amp; Hoyer (2001)</td>
<td>(original work)</td>
<td>3-p333</td>
</tr>
<tr>
<td>Park, Mothersbaugh &amp; Feick (1994)</td>
<td>(original work)</td>
<td>3-p362</td>
</tr>
</tbody>
</table>

Roehm and Sternthal (2001) developed five, seven point items measuring a person’s familiarity and experience with a good or a service. Roehm and Sternthal used this scale to measure knowledge with a particular brand. However the items seem to be amenable for use with a product class as well. The scale reported an alpha of .89 and no examination of the scale’s validity was completed.

1. How often do use Nautilus products?
   Never / Constantly

2. How familiar do you consider yourself with Nautilus products?
   *Unfamiliar / Very familiar*

3. How much of a Nautilus expert would you call yourself?
   *Not at all expert / extreme expert*

4. How well acquainted with Nautilus products are you?
   *Not at all acquainted / very well acquainted*

5. How regularly do you use Nautilus products?
   *Not very regularly / very regularly*

Mukherjee & Hoyer (2001) developed three, seven point items measuring the degree to which a consumer considers him/herself to be knowledgeable and experienced compared to others on various products. The scale had an alpha of .80 for four product categories.
and .81 pooled across those categories (Mukherjee 2003). The scale seems appropriate for use with either one product category or several.

1. Compared to others you know, how knowledgeable are you about the features of different types of Nautilus products in the market?
   
   *Not at all knowledgeable / very knowledgeable*

2. In general, how knowledgeable are you about different types of Nautilus products in the market?
   
   *Not at all knowledgeable / very knowledgeable*

3. Compared to your friends, how much experience do you have with different types of Nautilus products?
   
   *Very little experience / a lot of experience*

Park, Mothersbaugh and Feick (1994) developed a three-item, nine point rating scale to measure the reported knowledge a person has about a specified product class. They reported an alpha of .91 with item-total correlation ranging from .82 - .83. The validity of the scale was not directly examined. Findings of the study showed a significant positive relationship with self-assessed knowledge, as well as with the amount of stored product-class information.

*9 point Likert scale: Very little / Very much*

1. How much do you feel you know about TFG products?
2. Compared to other club owners how much do you feel you know about TFG products?
3. Compared to a TFG expert I think I am very knowledgeable on their product.

### 4.6 Measuring Brand Loyalty

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From:</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sen, Gurhan &amp; Morwitz (2001)</td>
<td>(original work)</td>
<td>3-p334</td>
</tr>
</tbody>
</table>

Sen, Gurhan-Canlani, and Morwitz (2001) developed a brand loyalty survey consisting of four statements and a seven-point response scale to assess a person’s tendency over time to purchase a specified brand within a specified product category. The scale seems to be original and has an alpha of .91 but there was no examination of the scale’s validity.

1. How much do you like or dislike the TFG products?
   
   Dislike very much : __: __: __: __: __: __: __: Like very much
When you buy gym equipment to what extent do you buy according to a brand?

Never Buy  :__:__:__:__:__:__: Always buy

1  2  3  4  5  6  7

When you buy gym equipment, to what extent are you “loyal” to Nautilus?

Never Buy  :__:__:__:__:__:__:  Always buy

1  2  3  4  5  6  7

Campo, Gijsbrechts and Nisol (2000) constructed a brand loyalty scale based on Baumgartner and Steenkamp (1996). The scale is composed of three statements that attempt to measure a consumer’s tendency to buy the same brand within a specified product category rather than seek variation. The scales had an alpha of .890 and there was no information on the scale’s validity.

1. I think of myself as a loyal buyer of Nautilus products.
2. I would rather stick with a brand I usually buy than try something that I am not sure of.
3. I like to switch between different brands of exercise equipment.

### 4.6.1 Personal Service

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From:</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brady and Cronin (2001)</td>
<td>(Own work)</td>
<td>3-551</td>
</tr>
<tr>
<td>Cronin, Brady and Hult (2000)</td>
<td>Parasuraman, Zeithaml and Berry (1985)</td>
<td>7-557</td>
</tr>
</tbody>
</table>

Brady and Cronin developed three, seven point Likert-type statements to assess an aspect of service quality that has to do with the consumer’s sense of friendliness and positive demeanour expressed by the personnel with whom the customer has interacted. Brady and Cronin tested a third order factor model of service quality viewed overall service quality as having three primary dimensions: outcome; interaction; and environmental quality. The construct reliability for the scale was .93 and based on CFA there was evidence of convergent and discriminate validity. The average variance extracted was 82%.

1. You can count on the account management team at TFG being friendly.
2. The attitude of TFG's account managers demonstrates their willingness to help me.
3. The attitude of TFG's employees shows me that they understand my needs.
Cronin, Brady and Hult (2000) developed a ten-item, nine point scale attempting to measure a customer’s perception of the performance-based quality of service provided by a specific organisation. The items tap into several aspects of service quality but the emphasis is on the role played by employees. The scale items were based on previous work completed by Parasuraman, Zeithaml and Berry (1985). Berry proposed a ten dimensional model of service quality. After several rounds of data collection and refinement 47 items were tested with 278 students. The ten items with the highest inter-correlations with the other items in their respective dimensions were selected. The authors reported a construct reliability of .94 for the scale. Confirmatory factor analysis conducted by Cronin, Brady and Hult (2000) showed that the scale was multidimensional. Two dimensions are most obvious: employees (items 1-8) and facility (9 and 10). The scale is confirmed to be uni-dimensional and should be used with caution.

1. Generally the employees provide service reliability, consistently and dependently.
2. Generally, the employees are willing and able to provide service in a timely manner.
3. Generally, the employees are competent (i.e., knowledgeable and skilful).
4. Generally the employees are approachable and easy to contact.
5. Generally the employees are courteous, polite and respectful.
6. Generally the employees listen to me and speak to me in a language that I can understand.
7. Generally the employees are trustworthy, believable and honest.
8. Generally the employees make an effort to understand my needs.

### 4.6.2 Pricing

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From:</th>
<th>Items</th>
</tr>
</thead>
</table>

This scale was developed by Yoo and Donthu (2000) and attempted to capture a consumer’s subjective sense of a product’s price with an emphasis on its expensiveness. The scale is composed of three, five point Likert-type statements and the authors reported a composite reliability of .88. Factor analysis (EFA and CFA) were used to check the dimensionality of this scale along with eight others in the study. Based on the results, the authors concluded that all items loaded on their respective factors as expected providing some sense of the scale’s convergent and discriminate validities. The average
variance extracted for this scale was .72. Certain items of the scale are drawn from Smith and Park (1992).

1. **The price of TFG products is high.**
2. **The price of TFG products is low** (r)
3. **TFGs products are expensive.**

### 4.6.3 Value Added Services

There were no scales found measuring “value added services” according to Aaker’s BEM model. For the purpose of this study the following scale was developed using a 7 point Likert-type statements to measure a purchaser’s opinion on how much value is added to their business by dealing with the brand.

1. **TFG provides a number of services other than equipment that add value to my business.**

### 4.6.4 Finance

There was no scale found measuring “finance” according to Aaker’s BEM model. For the purpose of this study the following 4 scales were developed to measure satisfaction with the finance offered in relation to purchasing the brand. These 4 scales are 7 point Likert-type measurements.

1. **The finance package offered when buying TFG products is excellent.**
2. **Without the finance package I would not have purchased the TFG products.** (r)
3. **The finance was easy to obtain.**

### 4.6.5 Trust

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From:</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price &amp; Arnold (1999)</td>
<td>Original work</td>
<td>3-611</td>
</tr>
</tbody>
</table>
Tax, Brown et al., (1998) developed a 4 item scale with five point Likert-type responses. The scale is used to measure the degree to which a customer believes that an organisation is honest and can be counted on. The context in which the respondents were given this scale was after being told to remember a recent service experience that lead to them lodging a complaint. Some of the items were borrowed and modified from Crosby, Evans and Cowles (1990) that measured trust in a sales person. An alpha of .96 (n=257) was reported for the scale by Tax, Brown and Chandrashekran (1998). There were no findings to support the validity of the scales.

1. I believed the organisation could not be relied upon to keep its promises. (r)
2. I believed the organisation was trustworthy.
3. I would find it necessary to be cautious in dealing with this organisation. (r)
4. Overall, I believe this firm was honest.

Price and Arnould (1999) developed the “Trust of Service Provider”, a three item, five point scale that measures the extent to which one person believes another person “knows best” in a certain situation. Due to the phrasing of the items and the context in which they were developed, the focus of the scale is on the perceived trust a client has in a specific service provider. An alpha of .84 was reported for the scale and there was no information about the scale’s validity.

5. I trust TFG’s judgement
6. TFG has a lot of experience and usually knows best.
7. TFG knows best in this situation.

4.7 Measuring Brand Quality

4.7.1 Product Quality

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grewal, Monroe and Krishnan (1998)</td>
<td>Original work</td>
<td>7-453</td>
</tr>
</tbody>
</table>

A number of studies that focus on the dimensions of service quality state that service quality is a multidimensional concept (Yoo, Donthu and Lee 2000). Applying a multi dimensional measurement approach helps unfold the complex nature of service quality. Using single item indicators for complex constructs can be misleading (Jacoby 1978, Gronroos 1984) and service quality as a concept is best measured using a multidimensionality approach (Lehtinen & Lehtinen 1982; Parasuraman et al. 1985; Cronin & Taylor 1992; Babakus & Boller 1992). Furthermore, there is additional support
in the research to suggest that a multi item approach should be applied to measure individual constructs (Churchill 1979; and Jacoby’s 1978). To explain the complex nature of service quality construct, this thesis adopts multi-item scales and multidimensional concept in operationalising service quality. Considering that service quality is context-specific (Lagrosen 2001), it is important that the dimensions of service quality study are designed according to each specific situation.

Grewal, Monroe and Krishnan (1998) developed a seven point Likert-scale to measure the perceived quality of a product with an emphasis on how it is thought it will last over time. Both Sweeney, Soutar and Johnson (1999) as well as Teas and Agarwal (2000) cited Dodds, Monroe and Grewal (1991) as the source of their version of the scale. These scales reported construct reliabilities of .79(n=361) and .77 (n=328). The composite reliability for the version of the scale used by Grewal et al. (1998) was .91 (n=309). A variety of evidence was provided by Grewal, Monroe and Krishnan (1998) and Grewal et al. (1998) in support of the scales uni-dimensionality, convergent validity and discriminate validity. The variance extracted by the version used by Grewal et al. (1998) was .74.

1. My supplier’s products appear to be good quality.
2. My supplier’s products appear to be durable.
3. My supplier’s products appear to be reliable.
4. My supplier’s products appear to be dependable.
5. My image of my supplier’s products is positive.
6. I view my supplier’s brand name positively.
7. The workmanship of my supplier’s products is good.

### 4.7.2 Warranty & Service

<table>
<thead>
<tr>
<th>Authors</th>
<th>Adopted From:</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brady and Cronin (2001)</td>
<td>(original work)</td>
<td>3-564</td>
</tr>
</tbody>
</table>

Brady and Cronin developed a three, seven point Likert-type statements which measures an aspect of service quality involving the degree to which a customer thinks the time required for patrons to wait for service is important to the provider and the wait time is acceptable. This scale was developed by Brady and Cronin to ensure they had certain characteristics. The third order factor model of service quality they tested viewed overall
service quality as having three primary dimensions: interaction; outcome and environmental quality. Waiting time was confirmed as being most associated with the dimension of outcome quality. A unique aspect of the scales constructed for each of the sub-dimensions is that they have three items with one related to reliability, one related to responsiveness and one related to empathy. The construct reliability of the scale was .82. Based on CFA, some evidence of convergent and discriminate validity was provided with the average variance extracted being 61%.

1. *Waiting time for TFG products is predictable.*
2. *TFG tries to keep my waiting time to a minimum.*
3. *This service provider understands that waiting time is important to me.*
4.8 Items Generated from the Literature Review

Table 4.5 summarises the scales that were selected for this thesis and the authors who have previously applied them in other studies. The table also contains important information about the reliability and validity of the scales to further justify their selection. In total, there are three latent constructs being investigated (brand awareness, brand loyalty and brand quality) along with 9 sub-elements. Ultimately their relationship with brand equity and competitive advantage is the basis of this thesis. A review of past studies in the literature provided 47 scales for the latent constructs with 6 being developed.

Table 4.6: Literature Review of Past Studies

<table>
<thead>
<tr>
<th>Construct</th>
<th>Scales</th>
<th>Source</th>
<th>items</th>
<th>Alpha</th>
<th>Var</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brand Awareness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Recognition</td>
<td>Seven point bipolar.</td>
<td>Machleitetal., (1993)</td>
<td>3</td>
<td>.85</td>
<td>-</td>
</tr>
<tr>
<td>Product Knowledge</td>
<td>Likert 7 point</td>
<td>Roehm et al.(2001)</td>
<td>5</td>
<td>.89</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 7 point</td>
<td>Mukherjee et al. (2001)</td>
<td>5</td>
<td>.81</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 9 point</td>
<td>Park et el. (1994)</td>
<td>3</td>
<td>.82</td>
<td>-</td>
</tr>
<tr>
<td><strong>Brand Loyalty</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Loyalty</td>
<td>Likert 7 point</td>
<td>Sen, Gurhan &amp; Morwitz (2001)</td>
<td>4</td>
<td>.91</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 7 point</td>
<td>Campo, Gijsbrechts &amp; Nisol (2000)</td>
<td>3</td>
<td>.89</td>
<td>-</td>
</tr>
<tr>
<td>Personal Service</td>
<td>Likert 7 point</td>
<td>Brady and Cronin (2001)</td>
<td>3</td>
<td>.93</td>
<td>82%</td>
</tr>
<tr>
<td></td>
<td>Likert 9 point</td>
<td>Cronin, Brady and Hult (2000)</td>
<td>10</td>
<td>.89</td>
<td>-</td>
</tr>
<tr>
<td>Pricing</td>
<td>Likert 5 point</td>
<td>Yoo, Donthu &amp; Lee (2000)</td>
<td>3</td>
<td>.88</td>
<td>72%</td>
</tr>
<tr>
<td>Value Added</td>
<td>Likert 7 point</td>
<td>(developed for this thesis)</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Finance</td>
<td>Likert 7 point</td>
<td>(developed for this thesis)</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trust</td>
<td>Likert 5 point</td>
<td>Tax, Brown &amp; Chandrashekaran (1998)</td>
<td>4</td>
<td>.96</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Likert 5 point</td>
<td>Price &amp; Arnold (1999)</td>
<td>5</td>
<td>.84</td>
<td>-</td>
</tr>
<tr>
<td><strong>Brand Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Likert 7 point</td>
<td>Grewal, Monroe and Krishnan (1998)</td>
<td>7.91</td>
<td>74%</td>
<td></td>
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<td>----------------------</td>
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<td></td>
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<tr>
<td>Product Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty &amp; Service</td>
<td></td>
<td>Brady and Cronin (2001)</td>
<td></td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61%</td>
<td></td>
</tr>
</tbody>
</table>

4.8.1 Scaling and Response Format

There are a number of different scaling techniques applied in the field of marketing research study (Boyce 2003). Examples include Likert-scale, Staple scale, Semantic Differential scale, Continuous rating scale and the Thurston scale. Malhotra et al. (2002) cite the Likert-scale as the most common in the field of marketing research. This contention is also supported by the findings in the literature review illustrated in table 4.5. This thesis has also chosen Likert-scales for the following reasons. They allow respondents to indicate the extent of their attitude toward a topic or question usually by asserting how much they “agree” or “disagree”. This is the basis of the scale’s popularity as it measures both direction (agree/disagree) and intensity (“strongly” or “not strongly”) of a particular attitude. The scale is easy to administer and respond to (Albaum 1997) as well as providing interval scale properties (Likert 1932). After selecting the Likert-scale for this thesis the issue to address is the number of scale categories, odd or even number of categories (neutral point) and labels for each category (Hair et al. 2003).

The number of categories is important for the test-retest reliability, concurrent validity and predictive validity (Jacoby and Matell 1971). Hair (2003) recommends that a larger number of categories lead to greater accuracy of the scale although it may lead to difficulties for respondents who have to consider a greater number of categories for each response. This thesis has decided upon seven categories which is the most common number in the scales adopted from the literature review. This number is also supported by Ryan and Garland (1999). A seven point Likert scale automatically provides a neutral point which is seen as important (Garland 1991; Guy and Norvell 1977). The neutral position provides respondents with the opportunity to neither “agree” or “disagree” with a contention. In the absence of a neutral point, respondents may feel forced into a response in the absence of a viable alternative (Komorita 1963).

The final consideration is the labelling of the categories. Previous findings have found little difference in mean values due to labelling (Wyatt and Meyers 1987). This thesis has adopted the labels “strongly disagree” and “strongly agree”.

94
4.8.2 Survey Design

A questionnaire is commonly used to collect and record primary research data in order to satisfy the objective of the research (Boyce 2003). Questionnaires consist of a series of questions for respondents to answer. There are several reasons why a questionnaire is the choice for surveying (Boyce 2003): (1) questions can be asked in exactly the same manner (e.g. the same words and sequence), which enable data comparison; (2) it is easier to control the questionnaire compared to controlling surveys using interviewers; (3) it can be designed to cover everything in an exact manner as required by the researcher to meet the research objective; and (4) there is an efficient and correct data input. Furthermore, the data obtained can be recorded in the same way in the data processing. The questionnaire should be carefully designed in order to ensure that the data collected is both relevant and accurate (Zikmund 2003). Ensuring the quality of the questionnaire is essential prior to release since researchers rarely have a second opportunity to collect the data. Quality data is an essential ingredient of quality research and the quality of the results depends on the quality of the questionnaire (Boyce 2003).

There are two types of questionnaires; structured and unstructured. A structured questionnaire was chosen for this thesis because it is thought to be appropriate for the investigation of causal hypothesis (Neuman 2000). Structured questionnaires facilitate the collection of quantitative data which is required for the causal approach. This thesis adopts the Sections Approach (Burn & Bush 2000) which includes a sequence of sections that match the constructs in the conceptual model. The four sections include: Brand Awareness; Brand Quality; Brand Loyalty and Repurchasing.

Response rates are impacted negatively by the length of questionnaires (Boyce 2003) while short questionnaires lead to increased response rates (De Vaus 2002 and Dillman et al. 1993). The questionnaire for this thesis has been kept to sixty-three questions with an estimated time to complete of ten minutes. The demographic questions were placed at the beginning of the questionnaire as suggested by Bourque and Fielder (2003).

The physical design of the survey is an important consideration (Aaker et al. 2001) since it enhances both the response rate and the quality of the responses. It is important to include written instructions with the survey (Parasuraman 1986) to clearly explain to respondents what is required.
4.8.3 Survey Development: Phase Two

Pre-testing is an important process; it increases the quality of the research with the intention of creating a more accurate measure. Prior to releasing a survey, it is helpful to conduct pre-testing to clarify questions and enhance greater participant understanding (Chisnall 1997). This process also helps to identify other errors that are often only highlighted through multiple readings (Burns & Bush 2003; Cavana et al. 2001). Chisnall (1997) suggests that successful pre-testing involves the collaboration of experts from the relevant field assessing all aspects of the questionnaire from grammar to style and composition. This feedback serves to enhance the quality of the questionnaire (Fink 2003).

A pre-test can include interviews or pilot surveys or a combination of both. Interviews are an ideal way of gathering important information to improve the quality of the survey (Miller 1995) but can be impractical due to time constraints. It is also suggested that the method used for the pre-test should reflect the method of data collection (McDaniel and Gates 1995).

While there is no agreed sample for a pre-test (Voola 2005), Burns and Bush (2000) suggest five to ten respondents and Malhotra et al. (2004) recommend 15 to 30 respondents as appropriate. This thesis provided a “first draft” of the survey electronically to 25 respondents who were then each interviewed to ascertain feedback. This pre-test sample group were selected from the sample frame. The feedback was used to modify the original survey to the final version.

4.8.4 Sampling Plan

Based on the population size for this thesis (1900) the time to collect the data from the entire group was deemed as cost-prohibitive and a sampling size was deemed appropriate. Sampling is often used in research and includes a process whereby a smaller sample size of “observations” is selected (Babbie 2004). The sampling size for this study (1500) ensured the number of respondents from each state was proportional to the total sample from within that state.

A clear sample plan is essential in the sampling design process to avoid systematic bias that may distort the findings (Short et al. 2002). The primary aim of a sample group is to
be able to generalise the findings from the sample group to the population from which they were taken (Scheaffer et al. 1996).

Figure 4.6 below illustrates the sampling procedure applied in this thesis (Kumar et al. 1999).

*Figure 4.6: The Sampling Plan*

Identify the target population

Determine the Sample Frame

Selecting a Sample Procedure

<table>
<thead>
<tr>
<th>Probability</th>
<th>Non-Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Random</td>
<td>Convenience</td>
</tr>
<tr>
<td>Stratified</td>
<td>Judgemental</td>
</tr>
<tr>
<td>Systemic</td>
<td>Quota</td>
</tr>
<tr>
<td>Cluster</td>
<td>Snowball</td>
</tr>
</tbody>
</table>

Relevant Sample Size

*Source: Kumar et al. (1999)*

The four steps include; determining the population of interest: obtaining a sampling frame from which a sample of the population can be targeted; determine whether to adopt probability or non-probability sampling; determine the size of the sample.

### 4.8.4.1 Defining the Target Population

The aim of a sample is to gain information about a population (Short et al, 2002); therefore it is important to have a clear prior understanding of the population that the sample is intended to represent (Kalleberg et al. 1990). It is also important that the sample is representative of the population so that the characteristics of the population can be approximated (Kerlinger 1986). This can be a difficult process. A heterogeneous
sample was selected based on the conceptual model and its applications to all persons in the population (Short, Kethen and Palmer 2002).

The unit of analysis is the person, group or organisation being investigated and can be finalised once population of interest is determined (Malhotra et al. 2004). In this thesis, the unit of analysis is the individual who will provide information about their past experience in buying exercise equipment. Another consideration is whether to use a key informant or multiple informants. There are varied opinions on this subject with evidence to suggest that multiple informants increase the reliability and validity of the findings (Bagozzi, Yi and Phillips 1991). Due to increased reliability and validity, multiple informants were used for this thesis (Kumar et al. 1993)

4.8.4.2 Determining the Sample Frame

After the target population and the unit of analysis have been determined, the sample frame can be identified. The sample frame is a list of the population members where the sample is obtained (Zikmund 2003). Kumar et al. (1999) suggest that it is not necessary to list all members of a population and to specify the procedures by which each sampling unit can be located. In an effort to increase response rates, surveys were addressed personally where the information was available.

The sample frame was obtained from the client database held at “Debit Success”. This database contains over 1900 Australian fitness centre owners and operators. The database was classified into 4 areas: 1) Large fitness centre; 2) ladies only fitness centre; 3) recreation centre, and 4) personal training studio. The wide spectrum of fitness centres provided a heterogeneous sample which was deemed as appropriate for this thesis considering the aim of applying the conceptual model across all persons that are involved in the selection of exercise equipment for their facility. It was important that the database used was not related to TFG due to ethical implications of anonymity and potential issues of bias with a supplier/client relationship.

Once the sample frame was established, the next step was to determine the sampling procedure.
4.8.4.3 Selecting the Sample Procedure

The representativeness of the sample is important so that accurate generalisations about the population can be posited (Neuman 2006). There are two methods of sampling; non-probability sampling and probability sampling. Non-probability sampling involves the selection of the sampling items to be completed by the researcher. Probability sampling involves the random selection of the sampling items (Neuman 2006).

Both techniques have a number of positive and negative attributes. Researcher bias is a major issue with the non-probability method and more often than not the probability sampling techniques are seen as a better option (Boyce 2003). Figure 4.7 illustrates the two methods of sampling.

Figure 4.7: Classification of Sampling Techniques

Source: Adapted from Malhorta et al. (2002)
According to Malhorta et al. (2002), non-probability sampling can be divided into three classifications:

1. **Judgemental** sampling where selections are based on the judgement of the researcher;
2. **Quota** sampling which involves the identification of specific characteristics such as the age and the sex of the sample;
3. **Snowballing** whereby the original group of respondents provide information about other potential respondents.

The second method of sampling is called “Probability” sampling which can be divided into four categories:

1. **Random sampling** is where each member of the sample population does not have the same chance of being selected.
2. **Systematic sampling** is where the sample units are selected by applying random starting points and then selecting each sample that is at a pre-determined distance numerically from the starting point. For example you might select every fourth person.
3. **Stratified sampling** involves a two-stage process whereby the population is divided into sub-populations and then the sample is chosen by random methods such as simple random sampling.
4. **Cluster sampling** involves the population being divided into clusters which may include geographical areas before applying a simple random sample selection.

It is important to achieve a representation of the sample to ensure an acceptable level of validity and reliability is achieved (Kalleberg et al. 1990). To achieve this representation Kumar et al (1990) suggest the use of probability sampling procedures. This thesis applied a two-step process for the selection of the sample group. Firstly, the target population was divided into geographical clusters with an equal representation of the four sub categories (ladies only; recreation; personal training; and fitness centres). The second step was to apply a systematic (Kumar et al. 1999) process of selecting every fifth centre from each sub-category.

### 4.8.4.4 Determining Sample Size

The size of the sample depends on a number of qualitative and quantitative considerations including the factors being investigated (Malhotra et al. 2004). The size of the sample can be affected by the type of statistical analysis chosen to assess the data.
This thesis will use Partial Least Squares (PLS) to analyse the three research questions as it is deemed appropriate for analysing small sample sizes (Chin & Newsted 1999). Chin and Newstead (1999) showed that PLS can provide appropriate estimates with a sample size as small as 20 cases. Chin (1998a) offers three rule-of-thumbs to determine sample size that can be used as a guide when applying PLS. Given that PLS is not the only statistical technique used in this thesis there were other statistical packages that needed to be taken into consideration. This section will provide an overview of the statistical applications that will be used in relation to the sample size.

4.8.5 Statistical Analysis

To investigate the relationships of the inner and outer constructs detailed in the conceptual model in chapter 3 it was decided to use Structural Equation Modelling (SEM) and Partial Least Squares (PLS). Structural Equation modelling (SEM) has been described as superior to other multivariate techniques when investigating complex constructs (Hair et al. 1998). Applying an SEM-based method of PLS was deemed appropriate for this study. PLS does not require multivariate normal data and is suitable for the analysis of small samples (Wold 1985). PLS is appropriate for the analysis of the conceptual model in this thesis because it enables the analysis of structural models involving multiple constructs and multiple indicators (Kline 2005). Furthermore, PLS is able to provide results that are beyond what were tested providing tangential research opportunities (Chin and Fry 2000).

4.8.5.1 Structured Equation Modelling

Structural Equation Modelling (SEM) is a relatively new approach for testing multivariate model with empirical data. SEM can be traced back to 1970, initiated by Karl Joreskog, who integrated features of econometrics and psychometrics into one model called SEM statistical modelling technique (Klem 2000). SEM is an integration of path and factor analysis (Byrne 2001). In the 1970s, LISREL was the only widely available SEM program (Kline 2005). The advancement of computer technology has seen the rapid rise of software packages that analyse SEM techniques that include both covariance-based (e.g. LISREL, EQS, AMOS, SEPATH, CALIS and RAMONA) (Kline 2005; Chin & Newsted 1999) and the component-based (e.g. PLS-GUI, Visual PLS, SPAD-PLS, Smart PLS and PLS graph) (Temme et al. 2006).

SEM techniques such as LISREL, AMOS, EQS and PLS are known as second-generation data analysis techniques (Bagozzi & Fornell 1982; Fornell 1987) and provide
additional advantages over the first generation statistical techniques (e.g. factor analysis, discriminate analysis or regression analysis) The reason is they are able to analyse a set of interrelated research questions simultaneously and systematically (Gefen et al. 2000). Importantly SEM techniques perform the simultaneous analysis of the various interrelationships between multiple constructs (Anderson & Gerbing 1988). SEM is more powerful, illustrative and robust than multiple regression, since it covers the modelling of interactions, nonlineairities, correlated independents, measurement error, correlated error terms, etc (Pirouz 2006).

SEM also offers the researcher a greater flexibility for the interaction between the theory and data (Chin & Newsted 1999; Chin 1998a) and greater flexibility to conduct 1) model relationships among multiple predictor and criterion variables; 2) construct unobservable latent variables, and 3) model errors in measurements for observed variables

Table 4.7: The Differences Between First & Second generation Statistical Techniques

<table>
<thead>
<tr>
<th>Capabilities</th>
<th>Second-generation</th>
<th>First-generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective of variance analysis</td>
<td>Lisrel</td>
<td>PLS</td>
</tr>
<tr>
<td>Maps paths to many dependent variables and analyses simultaneously.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Maps specific and error variance of the observed variables into the research model.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Maps reflective observed variables.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Maps formative observed variables.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Analyse all the paths, both measurement and structural in one analysis.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Can perform confirmatory factor analysis.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Requires sound theory base.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Required minimal sample size.</td>
<td>At least 100-150 cases</td>
<td>At least 10 times the number of items.</td>
</tr>
<tr>
<td>Objective of variance analysis.</td>
<td>Overall model fit (e.g. insignificant $X^2$ or high AGFI)</td>
<td>Variance explanation (high $R^2$)</td>
</tr>
<tr>
<td>Assumed distribution.</td>
<td>Multivariate normal</td>
<td>Relatively robust to deviations from a multivariate distribution</td>
</tr>
</tbody>
</table>

Source: Gefen et al. (2000); Voola (2005)
4.8.5.2 Structural Model

The structural model analyses the interrelationships between constructs and how they influence directly or indirectly other constructs in the model (Byrne 2001). The analysis of constructs is a fundamental premise of research in the social sciences (e.g. Churchill 1979; Duncan 1984; Nunally 1978), since research often involves constructs that cannot be measured directly. There are two types of constructs in the structural model: exogenous and endogenous. Exogenous constructs are independent and act as predictors or causes for other constructs in the model. Endogenous constructs are dependent meaning they are influenced by one or more exogenous constructs. Arrows in structural models go from exogenous constructs towards endogenous constructs. These direct and indirect relationships can be assessed by path coefficient analysis that is already covered in PLS.

4.8.5.3 SEM Techniques

Two different types of SEM techniques have been acknowledged. The first type is the covariance-based method that can be operated using software such as LISREL, AMOS and EQS (Bollen 1989). The second type is variance-based or component-based method that can be operated with some existing PLS software (e.g. PLS Graph, Smart PLS) (Chin 1998b).

4.8.5.4 Covariance-based SEM (CBSEM) Technique

The most popular SEM technique is covariance-based SEM (CBSEM). The CBSEM approach uses a Maximum Likelihood (ML) function that attempts to minimize the differences between the sample covariance and those implied by the theoretical model (Chin & Newsted 1999; Chin et al. 2003). CBSEM has mostly been applied in confirmatory studies to determine whether a certain model is valid or not. In order to provide a valid model, the CBSEM must produce a non-significant result. The non-significant result shows that there is no difference between the implied covariance and the sample data. Nevertheless, Chin (1998b) argues that a non-significant difference can also mean that there is an inability of detecting model misspecification (e.g. statistical power which relates to the ability to detect and/or reject a poor model).

The CBSEM requires three pre-requisites for maximum results: 1) Goodness of Fit: 2) Adequate sample size and 3) strict assumptions that the observed variables follow a
specific multivariate distribution (normal distribution) and the observations are independent of one another (Joreskog & Wold 1982). This is why CBSEM is known as a ‘hard’ modelling (Falk & Miller 1992). Furthermore, CBSEM is more likely to have problems in obtaining a good fit for complex models with more indicators (Chin & Newsted 1999). The increasing number of latent variables will increase the degree of freedom and consequently indices will likely to be positively biased relative to simpler models (Mulaik et al. 1989; Chin & Newsted 1999).

4.8.5.5 Variance-based Technique (PLS)

Partial least squares (PLS) regression was originally developed by Herman O.A. Wold in the late 1960’s for use in the field of econometrics (Pirouz 2006). It was initially used in analytical, physical and clinical chemistry studies (Geladi & Kowalski 1986; Pirouz 2006). When developing PLS, Wold specifically wanted to address the analysis for a weak theory and a weak data set. (Wold 1982) Wold designed PLS to address a fundamental shortcoming of ordinary least squares (OLS) regression. OLS regressions may produce unstable results when data sets are too small, values are missing, instances of non-normality and multi-co linearity (Pirouz 2006).

Partial least squares is often described as ‘soft’ modelling since it softens the assumptions of the OLS regression that requires hard assumptions (e.g. large sample size, no missing values, normally distribution and no multicollinearity) (Falk & Miller 1992; Pirouz 2006). Wold (1982) states that the PLS approach is distribution-free. The practicality of the PLS applications is supported by Fornell and Bookstein (1982, p.440) who argue that “marketing data often do not satisfy the requirements of multi-normality and interval scaling or attain the sample size required for maximum likelihood estimation”. Considering its ability to avoid multivariate normality assumptions PLS is argued to have important advantages for non-experimentalists (Kroonenberg 1990).

PLS is a prediction-oriented technique. The PLS approach is particularly useful when a large set of independent variables is involved to predict a set of dependent variables (Chin 1995; Wold 1980). The covariance-based model is appropriate for small to moderate models with fewer indicators (Chin 1995). The aim of Partial Least Square analysis is to describe the common structure underlying two variables (Abdi 2003) by predicting the relationships between Y (dependent variables) from X (independent variables). Due to its predictive powers, PLS is relevant for both confirmatory analysis and exploratory studies where the theoretical background might be weak.
4.9.5.6 **Differences between PLS and CBSEM**

There are substantial differences between PLS and CBSEM analysis both providing different advantages in testing research models. PLS was developed in part to compliment CBSEM since it has the prediction-based orientation. A further detailed comparison of these two methods is given in Table 4.8.

*Table 4.8: Comparison between PLS and Covariance-based Approach*

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Component-based (PLS) approach</th>
<th>Covariance-based approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong></td>
<td>Prediction oriented.</td>
<td>Parameter oriented.</td>
</tr>
<tr>
<td><strong>Required theory base</strong></td>
<td>Applicable is scarcity of prior theory. Supports both exploratory and confirmatory research.</td>
<td>Requires sound theory base. Supports confirmatory research.</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td>Variance based</td>
<td>Covariance based</td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td>Fewer assumptions: predictor specification (non-parametric) distribution free.</td>
<td>Stringent Assumption: normal distribution and independent observations (parametric).</td>
</tr>
<tr>
<td><strong>Parameter estimates</strong></td>
<td>Consistent as both indicators and sample size increase.</td>
<td>Consistent in all conditions.</td>
</tr>
<tr>
<td><strong>Latent variable scores</strong></td>
<td>Explicitly estimated.</td>
<td>Indeterminate.</td>
</tr>
<tr>
<td><strong>Epistemic relationship between LV and its indicators</strong></td>
<td>Can be modelled in either formative or reflective mode.</td>
<td>Can be modelled in reflective mode only.</td>
</tr>
<tr>
<td><strong>Observations on indicators</strong></td>
<td>Nominal, ordinal and interval scaled.</td>
<td>Ratio preferred</td>
</tr>
<tr>
<td><strong>Implications</strong></td>
<td>Optimal for prediction accuracy.</td>
<td>Optimal for parameter accuracy.</td>
</tr>
<tr>
<td><strong>Model evaluation</strong></td>
<td>High $R^2$, cross-validation test for predictive relevance, jack-knifing or boot strapping for significance test.</td>
<td>Goodness of fit (overall model fit, e.g. insignificant $\chi^2$).</td>
</tr>
<tr>
<td><strong>Model complexity</strong></td>
<td>Large complexity (e.g. 100 constructs and 1000 indicators).</td>
<td>Small to moderate complexity (e.g. fewer than 100 indicators).</td>
</tr>
<tr>
<td><strong>Model identification</strong></td>
<td>No identification problem.</td>
<td></td>
</tr>
<tr>
<td><strong>Sample size</strong></td>
<td>Minimal recommendations range from 30 to 100 cases.</td>
<td>Minimal recommendations from 200 to 800 cases.</td>
</tr>
</tbody>
</table>

*Source: Chin & Newstead (1999, p. 314)*
4.8.5.7 PLS Model Evaluation

This section provides discussion of the evaluation techniques using PLS. Wold (1980, 1982) argues that the use of the PLS approach should apply prediction-oriented measures that follow the non-parametric analysis. Similar to CBSEM, the broad categories of the PLS model evaluation can be expressed as examining the structural model and the measurement model. The capability of each multi-item scale in capturing its construct is examined using the measurement model. The data in the measurement model is evaluated to determine the validity and reliability of the survey instruments. The data is evaluated by examining the individual loading of each item, internal composite reliability, average variance extracted (AVE) and discriminate validity (Chin 1998a). After the necessary adjustment of items and the measurement model is accepted, the structural model is evaluated to assess the relationship between constructs. In the structural model, the hypotheses are tested by assessing the path coefficients (standardised beta), t-statistics and r-squared value (Chin 1998a). Details on the operationalisation of PLS evaluation to test the proposed conceptual model and hypotheses of this thesis will be discussed in Chapter Six.

4.8.5.8 Justifications of Applying PLS in This Research

The conceptual model proposed in this thesis can be considered complex since it incorporates three inner constructs and nine outer constructs. PLS is better suited for understanding complex relationships (Fornell et al. 1990; Chin 1995, Chin & Newsted 1999).

The objective of this thesis is to understand the nature of the relationship among brand awareness, brand quality, brand loyalty and the behavioural intention to repurchase. The relative influence of these constructs on behavioural intentions is examined simultaneously in the model. PLS is a second generation model which is able to analyse a large set of independent to dependent variables simultaneously. Based on these considerations, a structured equation model using partial least square analysis is considered suitable for this thesis.

PLS does not require normally distributed data. In marketing research and social science, it is common that data does not satisfy the requirements of multi-normality and/or attain a certain number of the sample size as required for maximum likelihood estimation.
4.8.5.9 Computer Software used for Analysis

SPSS (Statistical Program for the Social Science) version 16 is a software program that is used for the preliminary data analysis in this thesis. SPSS is a statistical program that is more widely used than PLS in the social sciences. PLS Graph is a software application that provides path modeling for latent variables. PLS Graph was developed by Professor Wynne Chin and has been cited in multiple studies in the marketing and management areas (Ryan et al. 1999; Murgules et al. 2001; Westlund et al. 2001; Helm 2005; Venaik et al. 2005; Witt & Rode 2005, Ulaga & Eggert 2006, WhittAaker et al. 2007, Wang et al. 2004, Wang et al. 2007, Miller 2007).

4.9 Implementation

According to Kumar’s et al. planning process model (1999) the final stage includes the collection, analysing and interpreting of the data while considering the ethical issue in surveying.

4.10 Data Collection

This section will discuss the disadvantages of using survey method with the aim of reducing potential problems that may have otherwise occurred. An electronic survey was selected as the appropriate method of data collection for this thesis but it is important to acknowledge the weaknesses of this method and the steps that will be taken to mitigate these deficiencies. Some of the common disadvantages of administering electronic questionnaires include: 1) low response rates due to lack of computer or email access; 2) lack of completion due to interruptions that lead to survey becoming inaccessible and 3) technological resistance from respondents.

Non-response is a major challenge with electronic surveys (Chow and Larson 2003) with work place surveys reporting reduced response rates due to preoccupation with work, confidentiality and other work place pressures (Greer, Chuchinprakarn and Seshadri 2000). Chow and Larson (2003) provide a number of incentives to increase response rates that are included in table 4.9 below on the next page.
Table 4.9: Inducements for increasing response rates.

<table>
<thead>
<tr>
<th>Method</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Reducing the length of the questionnaire.</td>
<td>Jobber 1989</td>
</tr>
<tr>
<td>5. Providing a stamped returned envelope.</td>
<td>Veiga 1984</td>
</tr>
<tr>
<td>6. Any number of non-monetary incentives.</td>
<td>Jobber and Sanderson 1985</td>
</tr>
<tr>
<td>7. Simplifying the questionnaire format.</td>
<td>LaGrace and Kuhn 1995</td>
</tr>
<tr>
<td>8. Providing the questionnaire in colour.</td>
<td>LaGrace and Kuhn 1995</td>
</tr>
</tbody>
</table>

This thesis adopted the suggested incentives from the previous table:

- Reducing the length of the questionnaire
- Provide a detailed cover letter
- Simplify the questionnaire format
- Provide the questionnaire in colour.

4.11 Ethics Considerations

Ethics and confidentiality are important considerations in marketing research (Ferrel & Fraedrich 1991; Tsalikis & Fritzche 1989). Ethics relates to the development of moral standards that usually apply in the situation where actual or potential harm in the forms of physical, mental or economic may occur to someone as individual or as group. (Churchill 1999) and considers whether an action is right or wrong or good or bad (Malhotra & Miller 1998). In the context of this thesis, the primary ethical concerns are related to the respondents. These concerns include respondent’s right to be voluntarily involved and their right to privacy. Additionally, when conducting research, the researcher must be truthful, objective and provide confidentiality to the information provided by the respondents (Zikmund 2003).

The approval for this research was granted from Swinburne University’s Human Research Ethics Committee (SUHREC) on October 10, 2009, as SUHREC Project No (2009/247). Swinburne University of Technology requires research that involves human intervention to obtain clearance from the University Human Research Ethics Committee. In all stages of the research, the information sheets were used to ensure these ethical standards were maintained.
4.12 Conclusion

This chapter discusses Phase Two of Kumar et al.’s (1999) systematic research model by providing a detailed discussion on the research design (see Figure 4.1). The research design provides a foundation for the research methodology adopted in this thesis. In addition to providing the research design, this chapter also reviews a philosophical discussion of the methodology employed in this thesis. A philosophical argument of the positivistic paradigm of research was argued to be appropriate and this paradigm is used as the foundation for the subsequent discussions of the research process.

The research design consists of two main parts, the research approach and research tactics. Given the main aim of this thesis is to examine the relationships among brand awareness, brand quality, brand loyalty and the decision to re-purchase a causal approach is adopted. A quantitative survey is employed to test the hypotheses that have been developed in chapter three. A self-administered electronic on-site survey is chosen as the method for data collection. A detailed review on research tactics was conducted which included: construct developments and operationalisation; pretesting; scaling; sample planning and statistical methods. Structured Equation Modelling was selected as an appropriate statistical method for answering the research questions and the related hypotheses. The following chapters will present discussions on the results of the statistical analysis to answer the research questions and hypotheses.
5.0 CHAPTER FIVE - RESULTS

5.1 Introduction

The ability to measure the relationship between constructs is essential for the advancement of knowledge in a particular field of study (Anderson 1987). The field of marketing research would benefit from valid measures to ensure reliable results (Ping 2004). It is difficult to develop theories and conduct scientific testing without the establishment of valid constructs and a rigorous testing protocol (Sureshchander, Rajendran and Anantharaman 2001). Marketing research often lacks the rigorous statistical analysis associated with other fields and is an area that would benefit from adopting a more scientific approach.

The first stage of ensuring valid and reliable measures is to identify the concepts that are being investigated. The second step is to define the concepts and provide a clear understanding of the construct being measured (Sureshcandar et al. 2001). This thesis examined the relationship between Aaker’s model of brand equity (BEM) and a customer’s decision to repurchase. Three constructs of Aaker’s modified model (1991); brand awareness, brand quality and brand loyalty with the nine sub-constructs were tested.

The design of the questionnaire is an essential step in the research process. A successful questionnaire is developed through the inclusion of scales that have been pre-used and pretested in other similar studies (Sureshchandar et al. 2001). Chapter three of this thesis describes the scales that were selected for this study with reference to their previous involvement in similar studies. A pre-questionnaire was administered to twenty participants from the sample group to ensure validity. Feedback was used to operationalise the questionnaire and ensure an acceptable level of reliability and validity.

This chapter will present the results of the questionnaire and complete a statistical analysis of the data. The format of this analysis and the presentation of the data have been adopted from other studies within the marketing research field (Poole 2004, Voola, 2005.) The data is presented in the following format and order:

1. How the data was screened;
2. A confirmatory factor analysis is completed;
3. Partial Least Square (PLS) data analysis using a mediation technique and
4. A review of the sample characteristics with key informant responses and a sample profile.
5.2 Responses

The survey included 9 demographic questions, 1-9 presented below.

**Question 1:** How many clubs are part of the business you work in?
This question was originally included to provide the opportunity to determine if the hypothesis were affected by whether or not respondents were working at independent facilities or chains. The frequency table below shows that 45.7% of the respondents work at independent clubs while 27.8% reported that they worked at a club that was part of a chain of 4 or more.

<table>
<thead>
<tr>
<th>Choices</th>
<th>Frequency</th>
<th>% Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>69</td>
<td>45.70%</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>13.25%</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>9.27%</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>3.97%</td>
</tr>
<tr>
<td>&gt;4</td>
<td>4</td>
<td>27.81%</td>
</tr>
</tbody>
</table>

**Question 2:** Which state is the fitness centre you work in located?
The majority of responses were from Victoria (33.7%) which was over represented compared to other states with similar sample frames. NSW (1.57%) and QLD (15.23%) returned lower than expected responses considering that they both had a similar number of customers.
**Question 3** “How many members does your fitness centre have?”

While there was no distinctive pattern for response rates in relation to the number of members, it was interesting that the bigger clubs represented the greater portion of responses with (27.8%) coming from clubs with more than 3000 members. It is difficult to identify the reason for this other than two of the bigger chains are located in Victoria (Genesis and Fenix) and their head offices have multiple points of contacts with the TFG head office including finance, service and senior management.

**Question 4:** What is the total cost of the exercise equipment in your centre?

The majority of responses were from people that worked at centres with between $200,000 and $400,000 of exercise equipment. This would have been expected and represents the average amount invested in fitness centres in the Australian market.
Question 5. How much exercise equipment is your centre planning to buy in the 2009/2010 financial year?

The frequency of these responses showed that most centres were planning on buying equipment over the next twelve months. This statistic is significant in that it highlights the importance of re-purchasing and the goodwill involved. Given that 91.38% of respondents confirmed that they would be buying a significant amount of equipment over the next 7-8 months, it would appear to be inflated based on the evidence that the normal buying cycle of a fitness centre is 4-5 years.
Question 6   How would you best describe your club?

Respondents were divided into four categories based on the market segmentation of the Australian fitness market. Responses were in line with the broader totals with 60.98% being from commercial fitness clubs, 23.28% were from recreation centres, 5.96% from female only fitness centres such as Fernwood and Contours and 9.93% from personal training studios.

<table>
<thead>
<tr>
<th>Choices</th>
<th>Frequency</th>
<th>% Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Training Studio</td>
<td>15</td>
<td>9.93%</td>
</tr>
<tr>
<td>Female Only Gym</td>
<td>9</td>
<td>5.96%</td>
</tr>
<tr>
<td>Recreation Centre</td>
<td>35</td>
<td>23.18%</td>
</tr>
<tr>
<td>Commercial Fitness Club</td>
<td>92</td>
<td>60.98%</td>
</tr>
</tbody>
</table>

Question 7   Which company has been your major equipment supplier over the past 24 months?

The electronic questionnaire was sent to 1247 fitness centres from the Debit Success database. A large number of these clubs were not customers of TFG in their last purchasing decision. There are six major suppliers of commercial exercise equipment in the Australian market detailed below. Not surprisingly, 78.14% of responses came from TFG customers with the remaining 21.86% coming from the remaining five suppliers. Life Fitness, the biggest supplier in Australia, had the second highest supplier related responses with 11.26%. Possible reasons why the majority of responses came from TFG customers might include the sense of trust they felt compared to non-customers who may have been sceptical as to the motives behind the questionnaire.
Question 8  What best describes your position in your workplace?

One of the requirements for potential respondents was that they were involved with the next purchasing decision of equipment at the centre where they worked. While they did not have to be the “decision” maker, it was important that they were an “influencer”. Historically decision makers in fitness centres are either the manager or the owner while influencers include gym instructors, sales people and administration staff. The results below support the anecdotal validity of the responses with a total of 94.3% of responses coming from the owners and managers who are the traditional “decision makers”.

Frequency Table

<table>
<thead>
<tr>
<th>Choices</th>
<th>Frequency</th>
<th>% Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gym Instructor</td>
<td>4</td>
<td>2.65%</td>
</tr>
<tr>
<td>Sales Person</td>
<td>2</td>
<td>1.32%</td>
</tr>
<tr>
<td>Administration Manager</td>
<td>3</td>
<td>1.99%</td>
</tr>
<tr>
<td>Club Manager</td>
<td>83</td>
<td>54.96%</td>
</tr>
<tr>
<td>Owner</td>
<td>59</td>
<td>39.07%</td>
</tr>
</tbody>
</table>
**Question 9**  How long have you been employed at the centre you currently work in?

The purpose of this question was to ensure that respondents were in a position to answer questions that required experience with their equipment supplier. For example, the reliability of responses would be questionable if the person had worked in the centre for 6 months. 84% of respondents had worked at their centre for more than 18 months with 72.12% working there for longer than 24 months. This might be due to the high level of owner/manager response rates which is understandable given their low level turnover rates compared to other positions within the fitness centre environment.

### Frequency Table

<table>
<thead>
<tr>
<th>Choices</th>
<th>Frequency</th>
<th>% Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6 months</td>
<td>4</td>
<td>2.65%</td>
</tr>
<tr>
<td>6-12 months</td>
<td>11</td>
<td>7.28%</td>
</tr>
<tr>
<td>12-18 months</td>
<td>9</td>
<td>5.96%</td>
</tr>
<tr>
<td>18-24 months</td>
<td>18</td>
<td>11.92%</td>
</tr>
<tr>
<td>&gt;24 months</td>
<td>109</td>
<td>72.12%</td>
</tr>
</tbody>
</table>

### 5.2.1 Summary of Descriptive Statistics

The survey was sent electronically to 1247 fitness centres in Australia inviting owners and managers to complete 63 questions in relation to the factors related to their equipment purchases and their intention on their next purchasing decision. A total of 177 responses were completed between October 10, 2009 and February 4, 2010 with 27 being omitted due to incompletion. The total completed was 150 which represented a response rate of 12.02%. It is important to note that there may have been more than one response from each centre. The questionnaire was sent to an
email address which may have included the general email address accessed by more than one employee.

Of the 150 responses, 45.7% were from singular clubs while 27.81% were from multi chain clubs with more than 4 in their group. Victorian clubs accounted for 33.77% of the response, followed by Queensland (15.23%) and New South Wales (14.57%). Clubs with memberships over 3000 represented 27.81% of the responses with those with less than 500 members making up 15.89%. A total of 68.91% of respondents reported that their club planned on purchasing between $0-$150,000 of equipment this financial year and 60.98% or respondents were from commercial fitness clubs compared to 9.93% (personal training studios), 5.96% female only clubs; and 23.18% from recreation centres. The Fitness Generation was the major supplier of the clubs that responded (78.14%) with Life Fitness the second major supplier (11.26%). Managers (54.96%) and owners (39.07%) represented 94.03% of the people that completed the questionnaire and importantly 80% of the respondents had been employed at their current centre for more than 18 months with 72.12% being employed more than twenty four months.

The “Frequency Table” below provides a summary of the first nine questions of the questionnaire and a breakdown of the response selections and subsequent classifications.

Table 5.1: Summary Profile of Respondents

<table>
<thead>
<tr>
<th>Q</th>
<th>Variable</th>
<th>Choices</th>
<th>%Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What number of clubs part of the business you work in.</td>
<td>1 centre</td>
<td>45.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 centres</td>
<td>13.25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 centres</td>
<td>9.27%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 centres</td>
<td>3.97%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;4 centres</td>
<td>27.81%</td>
</tr>
<tr>
<td>2</td>
<td>What state is your fitness centre located in?</td>
<td>NSW</td>
<td>14.57%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VIC</td>
<td>33.77%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SA</td>
<td>13.91%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WA</td>
<td>15.23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NT</td>
<td>1.32%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAS</td>
<td>1.32%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>QLD</td>
<td>15.23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CHAIN</td>
<td>3.97%</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>&lt;500</td>
<td>15.89%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500-1000</td>
<td>19.21%</td>
</tr>
<tr>
<td>Question</td>
<td>Response Options</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>How many members does your fitness centre have?</td>
<td>1000-2000</td>
<td>19.87%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2000-3000</td>
<td>17.22%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;3000</td>
<td>27.81%</td>
<td></td>
</tr>
<tr>
<td>What is the total cost of the exercise equipment in your centre?</td>
<td>&lt;$200,000</td>
<td>15.23%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$200,000-$400,000</td>
<td>32.45%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$400,000-$600,000</td>
<td>16.56%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$600,000-$800,000</td>
<td>13.91%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;$800,000</td>
<td>21.75%</td>
<td></td>
</tr>
<tr>
<td>How much exercise equipment is your centre planning to buy in the 2009/2010 financial year?</td>
<td>$0</td>
<td>8.62%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$0-$150,000</td>
<td>68.91%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$150,000-$300,000</td>
<td>8.61%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$300,000-$600,000</td>
<td>2.65%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;$600,000</td>
<td>11.26%</td>
<td></td>
</tr>
<tr>
<td>How would you best describe your club?</td>
<td>P/T Studio</td>
<td>9.93%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female Only</td>
<td>5.96%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recreation</td>
<td>23.18%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Centre</td>
<td>60.98%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commercial</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fitness Club</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Which company has been your major equipment supplier over the past 24 months?</td>
<td>HF Industries</td>
<td>1.36%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Life Fitness</td>
<td>11.26%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Matrix Fitness</td>
<td>6.62%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technogym</td>
<td>1.32%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TFG</td>
<td>78.14%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>True Fitness</td>
<td>1.32%</td>
<td></td>
</tr>
<tr>
<td>What best describes your position in your workplace?</td>
<td>Gym Instructor</td>
<td>2.65%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sales Person</td>
<td>1.32%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Admin Manager</td>
<td>1.99%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Club Owner</td>
<td>54.96%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Owner</td>
<td>39.07%</td>
<td></td>
</tr>
<tr>
<td>How long have you been employed at the centre you currently work in?</td>
<td>&lt;6 months</td>
<td>2.65%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6-12 months</td>
<td>7.28%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12-18 months</td>
<td>5.96%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18-24 months</td>
<td>11.92%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;24 months</td>
<td>72.12%</td>
<td></td>
</tr>
</tbody>
</table>
5.3 **Initial Method of Analysis**

There were 27 responses deleted due to missing responses that were considered too large to complete an analysis of any patterns (Hair et al. 1998). In cases of missing data, some researchers conduct an imputation method whereby averages of the missing data fields are derived from the completed fields to provide responses based on the mean of these responses. This was not completed for this thesis with the choice made to remove any respondents that had not completed all 63 questions.

The next step was to assess the relationship between the 12 constructs of brand equity and the independent variable—repurchasing. An exploratory factor analysis (EFA) technique is often used in previous marketing research (Steenkamp et al. 1991) that includes an analysis of the relationship between various factors to identify the strongest relationship with the dependent variable. The major shortfall of this analysis is the concept of uni-dimensionality (Ahire et al. 1996). While EFA provides some valuable insights into factor analysis, the covariance structure models is a more valid assessment of the relationship between the constructs involved.

5.4 **Common Method Variance**

According to Lindell and Whitney (2001), a post-hoc test for common variance is recommended where data for dependent and independent variables is collected via self-reporting scales. Harman’s one factor test was conducted for the 12 independent variables used in this study. Each construct was measured to assess any evidence of common method variance.

5.5 **Discriminate Validity**

It is important to show that each measure used in a study can show that they are stand alone and are not similar to other measures that mean to be different (Sureshchandar et al. 2001). Each scale should be unique and differ from other scales in the same study to show that they are able to measure the relevant construct they are intended to measure. (Bagozzi et al. 1991) Discriminate validity can be determined by using a variety of models described below.

This thesis uses Gaski’s (1984) method where the correlation between two composite constructs should not be higher than their respective reliabilities which are required
for discriminate analysis. The constructs used in this thesis were assessed using Gaski’s method and the findings showed that the correlations ranged from .53 to .92 and the alphas ranged from .67 to 1.0. These findings showed that the correlations were less than their respective reliabilities providing evidence for discriminate validity.

5.6 Statistical Methods for Hypothesis Testing

This thesis investigates the relationship between three inner constructs namely brand quality; brand awareness and brand loyalty, and nine outer constructs and the dependent variable “intention to repurchase”. Structured Equation Modelling was considered an appropriate statistical method for investigating the relationships between the latent constructs and the independent variable. Structured Equation Modelling (SEM) is advanced form of statistical analysis that includes LISREL and PLS data analysis techniques (Fornell 1987). SEM is an advanced technique in that it is able to identify commonalities within a set of questions that are interrelated within a framework of variables (Gefen et al. 2000). SEM is able to model the relationships between a number of constructs (Anderson 1988) in a simultaneous manner. This modelling investigates the relationships between dependent and independent constructs through observation of the latent variables and their relationship with one another. The rigour involved with this analysis has resulted in increased popularity within marketing research (Bollen 1989). One of the primary strengths of SEM is the issue of simultaneity. SEM analyses path relationships of the relevant constructs simultaneously providing an important insight into the interrelationships of each construct given all things equal.

There are two options for SEM; variance based approaches which include PLS-PC and PLS-Graph software (Fornell and Cha 1994) and the covariance-based option that applies LISREL, AMOS and EQS software. The co-variance option accounts for observed covariance (Chin, Marcolin and Newstead 1996). On the other hand, PLS accounts for the variance and involves a two phase algorithm (Cassell et al. 2000). The first step is known as the outside model and involves the values of the latent variable being approximated and estimated as weighted means of the indicators conducted separately for each group of constructs. The second step is described as the inside model where the values of the outer constructs are approximated and then estimated as weighted means of the inner constructs. There are a number of differences and similarities between PLS and LISREL described in the table below.
Table 5.2: Differences between PLS and LISREL analysis.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>PLS</th>
<th>LISREL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective</td>
<td>Prediction Orientation</td>
<td>Parameter estimated</td>
</tr>
<tr>
<td>Approach</td>
<td>Variance Based</td>
<td>Covariance based</td>
</tr>
<tr>
<td>Parameter estimates</td>
<td>Consistent with sample size (i.e. Consistency at large)</td>
<td>Consistent</td>
</tr>
<tr>
<td>Latent variable scores</td>
<td>Explicitly estimated</td>
<td>Indeterminate</td>
</tr>
<tr>
<td>Epistemic relationship between a latent variable and its measure</td>
<td>Can be modelled in either formative or reflective mode</td>
<td>Typically only with reflective indicators</td>
</tr>
<tr>
<td>Implications</td>
<td>Optimal for prediction accuracy</td>
<td>Optimal for parameter accuracy</td>
</tr>
<tr>
<td>Model Complexity</td>
<td>Large complexity (e.g., 100 constructs and 1000 indicators)</td>
<td>Small to moderate complexity (e.g. Less than 100 indicators)</td>
</tr>
<tr>
<td>Sample Size</td>
<td>Power analysis on the portion of the model with the largest number of predictors. Minimal recommendations range from 30 to 100 cases.</td>
<td>Ideally based on power analysis of specific model. Minimal recommendations range from 200 to 800 cases.</td>
</tr>
</tbody>
</table>

Source: Chin & Newstead (1999)

This thesis contends that PLS is the appropriate model for examining the conceptual model proposed in chapter three. Falk and Miller (2002) describe PLS as a “soft-model” based on its avoidance of multivariate normality assumptions providing a number of advantages for researchers (Kroonberg 1990). Fornell and Bookstein (1982) suggest that marketing data often makes multi-normality or interval scaling untenable due to the sample size.

5.7 Individual X & Y Relationships between Constructs.

The conceptual model in chapter three described 12 hypotheses being investigated. The following section provides an individual analysis of each of these hypothesis reporting path correlations and independent coefficients.
**Hypothesis 1:** Increased brand awareness is related positively to the decision to repurchase.

*Figure 5.1: Brand Awareness*

The results for hypothesis 1 showed a strong relationship between brand awareness and the decision to repurchase with a path coefficient of (0.45) and an $r^2$ of 0.203 for repurchasing. These results were supported in the literature review conducted in chapter 2.

Brand awareness is an initial pre-requisite of the buying process. A consumer needs to be aware of a brand or product before a purchase can be made (Aaker 1991). If consumers are unable to place a brand in its appropriate purchasing context, then the advantages of recognition and recall are greatly reduced. It is related to the strength of the brand mode or trace in memory, as reflected by the consumer’s ability to identify the brand under different conditions.

**Hypothesis 2:** Brand Recognition is positively related to Brand Awareness.

*Figure 5.2: Brand Recognition*

These results indicated a very strong path coefficient between brand recognition and brand awareness. Furthermore, the $r^2$ score of 0.339 represented a significant relationship with 33.9% of the variation explained in this relationship. The relationship between brand recognition and brand awareness is supported previously in the literature. Brand recognition is defined as representation of a brand in the mind of the consumer (Peter and Olsen 2001). The sum total of all of the information stored in the mind of a consumer is described as brand knowledge and is fundamental to
brand recognition. Marketers place great importance on the means and processes involved with consumer brand recognition and knowledge. Brand knowledge is closely related to brand equity because it creates a strong link to the brand (Kellar 2003).

**Hypothesis 3:** Product Knowledge is related positively to Brand Awareness.

*Figure 5.3: Product Knowledge*

These results show a strong relationship between product knowledge (0.491) and brand awareness (r²=0.241). Product knowledge is the second sub-construct of brand awareness along with Brand recognition which reported a stronger path coefficient of 0.582.

Product knowledge refers to the amount of knowledge a consumer has stored in his/her memory about particular product classes, product forms, brands, models and the ways to purchase them. For example, a consumer may know a lot about exercise equipment (product class) the type of equipment (product form) and the name of the product (brand) (Peter and Donnelly, 2004) but their ability to recall information or knowledge about a product in sufficient detail influences a purchasing decision. Product knowledge can be detrimental for a supplier if alternatives in a category have superior features and benefits.

**Hypothesis 4:** Brand Quality is related positively to the decision to repurchase.

*Figure 5.4: Brand Quality*

Aaker (1991) suggests that brand quality has the strongest relationship with brand equity. The above hypothesis showed a strong relationship between brand quality and repurchase with a path coefficient of 0.486. Repurchasing had an r² value of 0.237. This relationship was supported in the literature review in chapter two. It is the most
important element of buyer consideration when making a purchase (Aaker, 1991). Consumers tend to buy brands with a lower perceived quality at a price discount when compared to brands with higher perceived quality that can command a price premium (Pope, 1993). Perceived quality is closely interrelated to brand loyalty especially in instances where the buyer is not able to conduct a detailed analysis of the prospective service or product. A brand with a perception of quality will increase loyalty and future sales (Kellar, 1993). Once a brand has achieved perceived quality, the chances of future earnings will increase dramatically. Perceived quality is similar to Porter’s differentiation model of product placement.

**Hypothesis 5:** Product Quality is related positively to Brand Quality

*Figure 5.5: Product Quality*

Product quality reported a strong relationship with brand quality with a path coefficient of 0.801 and brand quality had an $r^2$ of 0.642 which is the highest in the data set for the 12 hypotheses being tested in this study. These results were supported in the literature somewhat but not to the level shown in this analysis. The ultimate objective of marketing is to meet the needs of the consumer time and time again with the product or service you are providing. This objective is not possible if there are inconsistencies in the quality of the product or service (Rix, 2007). The difficult practical task is to decide the level of quality required by a customer. While the natural perception is that customer’s seek “perfection” with each product or service interaction, this is not always the case. A customer’s expectations of quality are related to the price they have paid (Rix 2007).

**Hypothesis 6:** Warranty and Service is positively related to Brand Quality.

*Figure 5.6: Warranty and Service*

Warranty and service is the second sub-construct of brand quality and reported a strong path coefficient of 0.74 which was almost as strong as the second sub-construct
of brand quality. Warranty and service are important considerations for customers that completed these responses. A comprehensive after sales service program can create the perception of quality in the mind of the consumer. Regardless of the quality of the product or its ability to perform at an expected level, a prompt responsive service department with the demonstrated ability to fix problems may provide the client with the perception of quality (Aaker 1991).

**Hypothesis 7**: Brand Loyalty is related positively to the decision to repurchase.

*Figure 5.7: Brand Loyalty*

These results supported the hypothesis that brand loyalty is related positively to the decision to repurchase. The path coefficient of 0.614 showed a strong relationship with 33.7% of the relationship being explained (r²=0.337). The literature review supported the strength of this relationship and provides strong theoretical support that brand loyalty is related strongly to customer satisfaction and retention which are related to a customer’s decision to repurchase. Brand loyalty is often the core of a brand’s equity (Aaker, 1991). As brand loyalty increases, the vulnerability of the customer base to competitive action is reduced. Brand loyalty is demonstrably linked to future profits since it translates into future sales (Ambler, 2003). Loyalty is closely linked to customer satisfaction (Lee & Cunningham 2001) and customer satisfaction relates to the decision to repurchase or switch to another supplier (Soderland, 1998).

**Hypothesis 8**: Personal service is related positively to brand loyalty

*Figure 5.8: Personal Service*

The path coefficient between personal service and brand loyalty was strong but only explained 14.6% of the relationship between brand loyalty and personal service. The literature supports the concept that personal service is an integral part of creating positive connections with a brand. Customers often equate the quality of the personal service they receive from staff to the overall brand (Gummesson, E., 2008).
before and after the product is purchased, the customer interacts with a wide range of levels within the company that supplied the product including finance; sales; warranty and service; freight and logistics. The sum of these interactions combine to influence the perception the consumer has on the product and ultimately the brand.

**Hypothesis 9:** Pricing is related positively to Brand Loyalty

*Figure 5.9: Pricing*

The data supported a positive relationship between pricing and brand loyalty (0.455) while pricing explained 20.7% of the relationship with brand loyalty (r²=.207). These results supported the literature review in chapter 2 where pricing products was reported as a crucial and often mismanaged process for suppliers. It is suggested that pricing is the most crucial element of the marketing mix after the product itself. Marketing focuses on creating value for a customer through the development of a product or service to meet a need (Cram, 2008). The correct price ensures that this is achieved and is a key contributor to customer satisfaction. Price setting begins with the establishment of customer perception for the brand or product in question (Monroe and Cox 2001).

**Hypothesis 10:** Value-Adds relate positively to Brand Loyalty

*Figure 5.10: Value*

This hypothesis was supported with the results showing a positive relationship between “value adds” and brand loyalty. Value adds is the third sub-construct of brand loyalty within the conceptual model and explains 31.7% of the relationship which is reflected in the r² score of 0.317.
**Hypothesis 11**: Finance is related positively to Brand Loyalty.

*Figure 5.11: Finance*

![Diagram showing the relationship between Finance and Brand Loyalty with a path coefficient of 0.496]{alt-text}

The path coefficient of 0.496 is the strongest of the four sub-constructs of brand loyalty ahead of pricing (0.455). Interestingly, the two constructs are similar in nature and reported the highest scores from the four outer constructs of brand loyalty. Finance explained 24.6% of the total relationship with brand loyalty which was a significant score.

**Hypothesis 12**: Trust is related positively to Brand Loyalty

*Figure 5.12: Trust*

![Diagram showing the relationship between Trust and Brand Loyalty with a path coefficient of 0.667]{alt-text}

The final outer construct of brand loyalty is “Trust”. This relationship was the strongest of the five with a path coefficient of 0.667. Trust also explained 44.5% of the relationship with brand loyalty which was the highest r2 score of the five sub elements of brand loyalty. These results were supported in the literature which refers to trust as an important element of customer retention and loyalty (Kellar 2003). Trust has recently been identified as one of the key contributing factors of customer loyalty (Morgan and Hunt, 1994). ‘The construct of trust contains belief in the brand, which provides positive outcomes not only in the present but also in the future’ (Aydin et al., 2005, p99).
5.8 Summary

This section provided an analysis of the relationships between 12 sets of exogenous and endogenous constructs. **All twelve relationships showed a positive relationship with the decision to re-purchase.** The strongest inner construct relationship with the decision to re-purchase was brand loyalty with a path coefficient 0.614 and an r2 value of 0.337. The three strongest outer construct relationships were between product quality (0.801), to brand quality (0.642) and warranty and service (0.704) to brand quality (0.496). The third strongest relationship was between trust (0.667) to brand loyalty (0.445).

The following figure 5.13 shows the results from structured equation modelling these constructs at the same time which produce some notable differences to individual PLS analysis.
Figure: 5.13: Conceptual Model and Structured Equation Modelling Results.
### 5.8.1 Summary of the Results

*Table 5.3: Hypothesis outcomes*

<table>
<thead>
<tr>
<th>No</th>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Brand awareness is positively related to the decision to repurchase</td>
<td>Yes</td>
</tr>
<tr>
<td>H2</td>
<td>Brand recognition is positively related to brand awareness</td>
<td>Yes</td>
</tr>
<tr>
<td>H3</td>
<td>Product knowledge is positively related to brand awareness</td>
<td>Yes</td>
</tr>
<tr>
<td>H4</td>
<td>Brand quality is positively related to the decision to repurchase</td>
<td>Yes</td>
</tr>
<tr>
<td>H5</td>
<td>Product quality is positively related to brand quality</td>
<td>Yes</td>
</tr>
<tr>
<td>H6</td>
<td>Warranty and service is positively related to brand quality</td>
<td>Yes</td>
</tr>
<tr>
<td>H7</td>
<td>Brand loyalty is positively related to the decision to repurchase</td>
<td>Yes</td>
</tr>
<tr>
<td>H8</td>
<td>Personal service is positively related to brand loyalty</td>
<td>Yes</td>
</tr>
<tr>
<td>H9</td>
<td>Pricing is positively related to brand loyalty</td>
<td>Yes</td>
</tr>
<tr>
<td>H10</td>
<td>Value added services is positively related to brand loyalty</td>
<td>Yes</td>
</tr>
<tr>
<td>H11</td>
<td>Finance is positively related to brand loyalty</td>
<td>Yes</td>
</tr>
<tr>
<td>H12</td>
<td>Trust is positively related to brand loyalty</td>
<td>Yes</td>
</tr>
</tbody>
</table>
5.9 Conclusion

Table 5.3 presents the results from the hypothesis testing which shows all twelve hypothesis' from the four research questions discussed in chapter three were supported. These results were obtained by using PLS analysis to test the interrelationships between the twelve constructs of the brand equity model developed for this thesis. PLS is used to understand the proportion of variance in the endogenous constructs that can be attributed to the exogenous constructs. This direct effect between two variables is ascertained through standardised beta weights in a regression analysis. This analysis incorporated the sum of the effects between the outer and inner constructs and is seen as appropriate when there are two sets of constructs with a conceptual framework that ultimately relate to a dependent variable. The data was obtained from 177 employees of Australian health and fitness clubs. Twenty-seven of these responses were incomplete and disregarded leaving an active sample of 150 survey responses.

The PLS analysis suggested that all of the relationships proposed in both the inner and outer model were significant. The inner model contained three constructs and their relationship with the decision to repurchase. Brand awareness (BA) showed the weakest path coefficient (0.049) with the dependent variable (repurchase). Brand quality (BQ) was only slightly higher with a path coefficient of 0.082 and brand loyalty (BL) showed the strongest relationship with a path coefficient of 0.512.

The PLS analysis also showed that all nine constructs of the outer model were supported. Brand awareness showed strong path coefficients with its two endogenous variables brand recognition (0.517) and product knowledge (0.492). Brand quality reported the strongest path coefficients with its endogenous variables product quality (0.798) and warranty and service (0.699). Surprisingly these two inner model constructs (BA & BQ) reported the weakest path coefficient relationships to the decision to repurchase. The path relationships between the third inner construct (BL) and its five outer constructs of personal service (0.379), pricing (0.451), value added services (0.362), finance (0.482) and trust (0.665) were all less than the path coefficients between brand quality and its two outer constructs.
6.0  CHAPTER SIX: CONCLUSIONS & IMPLICATIONS

6.1  Introduction

This chapter aims to draw conclusions from the findings highlighted in chapter five and discuss the implications of these findings for the field of marketing research. Furthermore, limitations of the research will be identified before suggesting future research directions.

Chapter six is divided into six sections. The first section (6.2) summarises the previous chapters and provides a summary of the background of the hypothesis that was investigated with the original research questions and methodology. The second section (6.3) reviews the major results. The third section (6.4) examines the theoretical contributions for the relevant marketing theories. The fourth section provides a discussion of the implications for marketing managers (6.5). The fifth section (6.6) identifies the limitations of this research and section (6.7) suggests topics for future research. The final section (6.8) summarises the thesis.

6.2  Summary of Previous Chapters.

Chapter one discussed the major theoretical factors that underpin this research presenting both the background and the rationale. Brand equity was the major topic of chapter two, identifying the major constructs associated with this concept within a literature review. The brand equity management model (BEM) originally proposed by Aaker (1991) focused on five related constructs of brand awareness; brand quality; brand loyalty, brand associations and proprietary assets. This original model was modified to adapt changes proposed by Kellar (2000) including three constructs; brand awareness, brand quality and brand loyalty. These three constructs have been a common theme in the theoretical discussions surrounding brand equity since the inception of Aaker’s original BEM model. Brand equity, as defined by these constructs, has been the source of much investigation in marketing research (Kotler, Kellar 2003).

It is the role of marketing managers to search for sustained competitive advantages to enhance company profits and long term viability (Ambler 2003). Brand Equity has directed much of this discussion and the search for sustained competitive advantage.
Suppliers of commercial grade exercise equipment in the Australian fitness market are competing in a highly competitive landscape where there is minimum product differentiation resulting in lower prices and falling profits. To survive this current situation and establish a product and service delivery that will deliver long terms profits this study explored three of the major constructs of brand equity and their potential application for marketing managers in this industry.

**Chapter Two** presented a literature review on the three major constructs of brand equity and the nine sub-constructs that included brand recognition; product knowledge; product quality; warranty and service; finance; value adds; personal service; pricing and trust. These twelve elements, comprising of three main constructs and nine sub-constructs, were discussed in relation to a customer’s decision to repurchase equipment from their current supplier.

**Chapter Three** included the formation of a conceptual model that included the 12 elements of brand equity that were discussed in the literature review. This conceptual model then formed the basis of the thesis and twelve hypotheses were developed to test the relationship between the elements and the decision to repurchase.

**Chapter Four** discussed the methodological implications of research and used Kumar’s (1999) research process as a framework to present the thesis. This model is an accepted framework for doctoral research (Chin2001) and included the standard topics of research design, research tactics and ethical considerations.

**Chapter Five** performed a statistical analysis of the data that was obtained from the survey. This chapter started with a descriptive discussion of the first nine demographic questions to provide an overview of the sample. The second part of the chapter completed a PLS analysis of the 12 hypothesis independently under an X and Y independent-dependent analysis. The third part of the chapter completed a structured equation modelling technique using partial least square analysis.

**Chapter Six** then discusses the findings from the results of the analysis conducted in chapter five. This includes a detailed discussion on the path coefficients and the significance of the r2 score of each construct.
6.3 Overall Results

The main objectives of this research were to investigate the interrelationships between three primary constructs (Brand Awareness, Brand Quality, and Brand Loyalty) and a customer’s decision to repurchase exercise equipment from their current supplier in the context of the Australian health and fitness club industry. The conceptual model that represented these inter-relationships was discussed in chapter three. The three primary constructs (BA, BQ, BL) each had related sub-constructs that were incorporated into the model. The conceptual model addressed the three main research questions:

Research question 1: Is there a positive relationship between brand awareness and the customer’s decision to repurchase exercise equipment for his/her health and fitness club?

Research question 2: Is there a positive relationship between brand quality and the customer’s decision to repurchase exercise equipment for his/her health and fitness club?

Research question 3: Is there a positive relationship between brand loyalty and the customer’s decision to repurchase exercise equipment for his/her health and fitness club?

The following section provides an explanation of the results that show the entire hypothesis was positively supported.

6.3.1 Research question 1: Is there a positive relationship between brand awareness and the customer’s decision to repurchase exercise equipment for his/her health and fitness club?

To investigate this research question three hypothesis were developed and tested:

H1: Brand Awareness is positively related to the decision to repurchase.
H2: Brand recognition is positively related to the decision to repurchase.
H3: Product Knowledge is positively related to the decision to repurchase
Table 6.1: Brand Awareness and the decision to repurchase

<table>
<thead>
<tr>
<th>No</th>
<th>Hypothesis</th>
<th>Supported</th>
<th>Path Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Brand awareness is positively related to the decision to repurchase</td>
<td>Yes</td>
<td>0.049</td>
</tr>
<tr>
<td>H2</td>
<td>Brand recognition is positively related to brand awareness</td>
<td>Yes</td>
<td>0.517</td>
</tr>
<tr>
<td>H3</td>
<td>Product knowledge is positively related to brand awareness</td>
<td>Yes</td>
<td>0.492</td>
</tr>
</tbody>
</table>

The literature review in Chapter Two discussed the importance of brand awareness (Aaker 200) and the related constructs of brand recognition (Kellar 2003) and product knowledge (Kotler, Kellar, 2001). The first research question of this thesis was to investigate the relationship between brand awareness and the decision to repurchase. The findings in table 6.1 above showed a positive relationship between all three constructs supporting the three related hypothesis. The two sub-elements (brand recognition 0.517) and product knowledge (0.492) reported strong path coefficients while relationship between brand awareness (0.049) and repurchase was significant but not as strong.

6.3.2 Research question 2: Is there a positive relationship between brand quality and the customer’s decision to repurchase exercise equipment for his/her health and fitness club?

Research question two examined the interrelationships between brand quality, product quality and warranty and service.

Table 6.2: Brand Quality and repurchase decision

<table>
<thead>
<tr>
<th>No</th>
<th>Hypothesis</th>
<th>Supported</th>
<th>Path Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>H4</td>
<td>Brand quality is positively related to the decision to repurchase</td>
<td>Yes</td>
<td>0.082</td>
</tr>
<tr>
<td>H5</td>
<td>Product quality is positively related to brand quality</td>
<td>Yes</td>
<td>0.798</td>
</tr>
<tr>
<td>H6</td>
<td>Warranty and service is positively related to brand quality</td>
<td>Yes</td>
<td>0.699</td>
</tr>
</tbody>
</table>

Based on structured equation modelling analysis using PLS technique, the results indicated that all of the hypotheses relating to the direct and indirect relationships were supported. These findings support the positive relationship proposed by Pope (1993) and Kellar (1993). The relationship between brand quality and repurchase (0.082) was significant and only slightly stronger than brand awareness (0.049). Both product quality (0.798) and warranty and service (0.699) were stronger than the previous two sub-constructs of brand recognition (0.517) and product knowledge (0.492)
6.3.3 **Research question 3:** Is there a positive relationship between brand loyalty and the customer’s decision to repurchase exercise equipment for his/her health and fitness club?

Table 6.3: *Brand Loyalty and the Customer’s Decision to Repurchase*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported</th>
<th>Path Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>H7 Brand loyalty is positively related to the decision to repurchase</td>
<td>Yes</td>
<td>0.512</td>
</tr>
<tr>
<td>H8 Personal service is positively related to brand loyalty</td>
<td>Yes</td>
<td>0.379</td>
</tr>
<tr>
<td>H9 Pricing is positively related to brand loyalty</td>
<td>Yes</td>
<td>0.451</td>
</tr>
<tr>
<td>H10 Value added services is positively related to brand loyalty</td>
<td>Yes</td>
<td>0.362</td>
</tr>
<tr>
<td>H11 Finance is positively related to brand loyalty</td>
<td>Yes</td>
<td>0.482</td>
</tr>
<tr>
<td>H12 Trust is positively related to brand loyalty</td>
<td>Yes</td>
<td>0.665</td>
</tr>
</tbody>
</table>

Research question 3 had five hypotheses that were all supported with strong relationship scores. The primary construct, brand loyalty showed a high path coefficient of 0.512 which was considerably higher than the other two primary constructs Brand awareness (0.049) and brand quality (0.082). These findings were supported in the literature review conducted in chapter two with both Lee & Cunningham (2003) and Soderland (1998).

6.4 **Theoretical Contributions**

Previous studies have examined the relationships between brand awareness, brand quality and brand loyalty. Much of this work has been completed using the constructs independently to measure the relationship with an independent variable such as customer satisfaction. **To date, there has been no noticeable work done that has investigated these three popular brand equity constructs simultaneously while examining their relationship with a customer’s intention to repurchase.** Structured equation modelling using PLS analysis provides an important insight into the interrelationship of these three constructs and their weighted relationship with a customer’s intention to repurchase given all things equal (seretus paribus).

An examination on those three key constructs of interest has contributed to the theory as follows:
1. **Filling a Gap in Knowledge**

The relationship between brand awareness, brand quality and brand loyalty has been widely discussed in the marketing literature. However, there is very little investigation into these three constructs as an integrated model that relates to a customer’s decision to repurchase. The statistical analysis selected to examine the interrelationship between the constructs and the independent variable further contributed to the originality of this thesis. Most of the research in relation to these constructs has investigated the direct (bivariate) or indirect relationships. Investigating the three main constructs simultaneously removes the problem of variable bias that exists in bivariate analysis of construct groups (Ostrom and Iacobucci, 1995, p.198). The Partial Least Square analysis of the conceptual model was designed to provide a more accurate indication of the relationships within the constructs.

This thesis supports the use of integrative models to ensure a robust analysis of the data and inter-relationships that exist therein. The conceptual model further provides more insights on the nature of the interrelationships among the twelve constructs in relation to re-purchasing exercise equipment for Australian health and fitness clubs.

2. **Inclusion of Repurchasing Question**

Although this thesis did not investigate directly the construct of competitive advantage, the inclusion of an independent variable (decision to repurchase) played a key role in assessing the three primary constructs and their relationship with future revenues and profits. A major focus of this thesis was the operationalisation of brand equity by constructing a model with key constructs to investigate the relationship weighting of these constructs to a customer’s decision to re-purchase.

This thesis contributed to the understanding of the method required to measure key marketing constructs against an outcome that can have significant impact on company performance and profitability.

The findings showed evidence that Brand Loyalty (0.512) is the major influence on a customer’s decision to repurchase (r^2=0.371) when simultaneously measuring the impact of brand awareness (0.049) and brand quality (0.082).
3. The Multi-dimensional Constructs of Brand Awareness; Brand Quality and Brand Loyalty

This thesis contributed to the understanding that multidimensional constructs provide a more robust analysis. The field of marketing research has developed a unique set of scales that serve as building blocks for future research. The rigorous assessment of these scales and the constructs they are intended to measure has seen the progression from uni-dimensional constructs to complex multidimensional constructs where each dimension is measured with multiple items (Chin 1999). In this thesis, the three primary constructs all had related sub constructs that were measured by scales used successfully in previous marketing research studies.

4. Partial Least Squares (PLS)

The use of PLS analysis is a significant contribution from this thesis. This thesis applied the PLS technique to examine the simultaneous multiple relationships proposed in the conceptual model. PLS was selected for both its practicality and suitability for marketing research (Kellar 2003). PLS offers an advantage by enabling mixed levels of measurement in the same data set (Abdi 2003).

The major advantage of using PLS in a structured equation model is the ability to simultaneously examine multiple complex relationships. This simultaneity examines the relative importance among constructs when assessed at the same time.

6.5 Future Implications for Marketing Managers

The data for this thesis was collected from owners and managers of Australian health and fitness clubs which provided a very specific set of results and findings. These findings would be most useful to suppliers in the health and fitness industry.
6.6 Limitations of the Study

6.6.1 Model Constructs

The first area of limitation relates to the dimensions contained within the research model. Although the research model and the key constructs contain the dimensions that are central to the research questions, there are a number of other possible dimensions that could also affect the relationship that exists between brand awareness, brand quality and brand loyalty and the decision to repurchase exercise equipment in a health and fitness club. The first issue is the sub-constructs that were used in relation to the three primary constructs. These sub-elements were adopted from Aaker’s original BEM model (1991) and may not be the most appropriate sub-constructs available. Due to the body of work that has been completed since Aaker’s BEM model was developed, there has been a number of other more relevant constructs emerge that may have greater relevance and reliability (Kellar 2000). Kellar proposes “Brand Knowledge” as a construct with strong relationships to “Customer Retention” (2003).

6.6.2 Context of Thesis

This thesis was conducted in the context of the Australian health and fitness industry so it must be noted that generalising of the findings beyond this context and sample group may be inappropriate.

1. The scales used in this thesis were obtained from accepted scales within the field of marketing research. They were applied however to a specific sample that presented “sample limitations” and may have skewed the responses. In the start of chapter 5, the results from the first 9 demographic questions were discussed and question 5 showed that 73% of responses were received from customers of TFG (The Fitness Generation). The remaining 27% of responses were from participants that sourced their products from the remaining five major equipment suppliers. Under these circumstances, it is difficult to suggest the sample was representative of the Australian suppliers of commercial grade exercise equipment.

2. The sample group for this thesis included four levels of employees at health and fitness clubs: owners; managers; gym floor managers and administration staff. It was assumed that these four employee groups were the “influencers” and “decision makers” for the re-purchase of exercise equipment. A major shortcoming with this
sample group was that the respondents may not have been representative of the clubs involved. For example, there may have been four respondents from the one centre, and each of these respondents was weighted equally in the decision to repurchase. Future studies of this kind may include automated email address tracking on the responses for each centre so that a set number can be set to ensure equal representation.

3. The next issue relates to the number and the type of health and fitness centres that responded to the questionnaire. The Australian health and fitness market has four distinct sectors each with a separate set of equipment requirements. These include large national chains; council operated recreation centres; women’s only clubs and personal training studios. The importance of each of the constructs in the conceptual model varies according to the needs of the relevant response group. For example, quality may be an important construct for one of the national chains that presents a point of difference based on “quality equipment”. Inversely price may be important to a smaller facility such as a personal training studio or women’s only club that are offering a cost deferential model. A more appropriate methodology may have ensured equal representation and classified the responses by the sub-group or even targeted one of the subgroups to define the research question even further.

4. The fourth limitation was the cross-sectional design of this thesis. It is difficult to infer causality within cross sectional methodologies (Bollen 1989). The cross-sectional design ignores environmental factors such as perceptions. Employees in health clubs have varied perceptions on issues which are affected by time and experience. These changes cannot be addressed in a cross sectional methodology although this issue is the same in a cross sectional design enabling valid comparisons. The issue of cross sectional design could be addressed through a longitudinal study but there are a number of limitations including the cost involved and the time considerations.

5. The fifth methodological shortcoming relates to the use of partial least squares (PLS) as a statistical tool. PLS was thought appropriate for analysis of the conceptual model. While PLS analysis is popular for analysing multi construct models, there are two shortfalls about which researchers need to be aware. (Anderson & Gerbing 1988). 1) PLS is capable of producing inflated loadings of up to 10%; 2) The paths are based on covariance techniques keeping the model closer to the
measures. (Dijkstra 1983). Considering these limitations, it is suggested that future research of this kind might include a covariance-based approach.

6.7.1 Suggestions For Future Research

An important consideration for all research work is to provide a base for future research to expand upon. This section provides four suggested areas for future research to build on the findings of this thesis.

1. This thesis has provided evidence for the positive relationship that exists between three popular constructs of brand equity and the decision to repurchase exercise equipment in the Australian health and fitness club market. A suggested direction for future research may include greater consideration to the second level constructs that related to the three first order constructs. The basis of this model was nineteen years old (Aaker 1991) and there has been considerable work done in exploring brand equity since this time. Kellar and Kotler (2000) have both produced a number of constructs to replace Aaker’s original brand equity model. Kellar (2003) talks about Brand Knowledge” and “Brand Satisfaction” as two important constructs worth including into future studies.

2. A number of constructs did not have any scales available and hence they needed to be developed for this thesis. These secondary constructs included “Finance” and “Value Adds”. Although surprisingly both of these reported strong cronbach alphas, it is more desirable to nominate constructs that have existing scales to ensure reliability and validity. The conceptual model for this thesis was based on past findings within a literature review conducted on brand equity. There is empirical evidence to suggest using multidimensional conceptualisation of brand quality, brand awareness and brand loyalty in an integrative/simultaneous model can create redundancy. Future research should consider the similarities that may occur between constructs. For example, “Service and Warranty” a secondary construct for “Brand Quality” may be confused with “Personal Service” which is a secondary construct for Brand Loyalty. Potential confusion can be removed by a closer examination of the dimensions involved with each construct.

3. “Product Quality” was a second order construct that reported a strong statistical relationship with brand quality (path coefficient of 0.798) and an r2 of 0.637. These results would suggest that it may be appropriate as a first order construct
to assess the direct relationship with the decision to repurchase. The secondary construct “Trust” also reported strong statistical relationships with the first order construct of “Brand Loyalty”. Trust is an important dimension that is seen to relate directly to a number of other constructs such as customer retention and customer satisfaction. (Urbin 2005). Future research in the field of brand equity may include these as first order constructs with related dimensions as second order constructs. There is still much debate regarding the definition of these constructs in relation to brand equity (Kotler, Kellar & Burton 2009). Potential problems can be mitigated if the objectives of future research are clearly defined with unambiguous definitions of the constructs being investigated.

4. Future studies of this nature would benefit by increasing the sample group for generalisability or narrowing it to define the findings to a particular sub-group. Future studies investigating the decision to repurchase exercise equipment would benefit by including only decision makers as respondents. Including “influencers” such as gym floor managers and administration staff may suffer from misrepresentation and either or both of this employee categories over-emphasising their importance in the decision making process. Future studies might produce different results if the sample group was limited to managers and owners.

5. This thesis used data obtained from the Australian Health and Fitness club market industry. The conceptual model and the associated dimensions that supported the first order constructs were selected on the basis of their past validity and reliability. Subsequently this study produced findings from an Australian perspective. Future studies could include an international perspective either by using sample groups from other countries, or geographical areas such as Europe, South America and Asia or other dimensions such as religion and culture. Extending this research into the Asia context, and therefore allowing comparison with other geographical locations, would provide an opportunity to address the impact of cultural backgrounds. The application of the survey instrument into other geographical locations (countries) would allow the robustness of the model and some missing scales to be developed.

6. This thesis used a cross-sectional research design which causes some limitations to the findings. The major issue being that causality is difficult to infer using a cross sectional design. This limitation can be overcome by using a longitudinal design which would acknowledge the dynamic nature of constructs
observing changes over time. This approach may provide a greater insight in the constructs discussed and their inter-relationships over time could provide a different set of results.

7. This thesis originally set about to investigate the relationship between brand equity and competitive advantage. The ethics committee suggested that it is difficult to measure competitive advantage due to the conceptual nature of the construct. Subsequently the construct of “re-purchasing” replaced “competitive advantage” in the conceptual model and became the dependent variable. While the findings showed a positive relationship between the twelve elements of BEM and the decision to re-purchase future studies may benefit from using competitive advantage rather than re-purchase. Competitive advantage is a term that is synonymous with strategic planning and may be more widely recognisable with senior management.

6.8 Conclusion

Chapter Six of this thesis presented an overview of the various stages of the research process used for this study. Conclusions were proffered based on the findings of the statistical analysis. The contributions to the field of marketing research were identified and discussed. The implications for managers seeking to leverage the benefits of brand equity were suggested. The inherent limitations of the methodology were identified with suggested changes to increase the strength of the findings. Finally suggestions for future research of this kind were made.

The six stages of this research covered the reasons underpinning the topic of brand equity, literature review, methodology, results and analysis and discussions to provide the thoroughness that was necessary. The conclusion discussed the results of the three research questions that were presented in chapter three. The research questions were investigated through twelve hypotheses. The statistical analysis used PCA and PLS techniques to measure the twelve hypothesis. The first part of this analysis included the constructs being assessed as exogenous and endogenous variables. The findings were reported in the second part of chapter five. The second part of this analysis included the structured equation modelling of the conceptual model using partial least square techniques. This was the preferred method of analysis providing more comprehensive insights in understanding the interrelationships in the chosen constructs of brand equity and the decision to re-purchase exercise equipment. The multidimensional conceptualisation of brand equity and the three first order
constructs of brand awareness, brand quality and brand loyalty provided a broader insight into the dimensions that underpin the constructs. In particular, the adaptation of Aaker’s Brand Equity Model and application to the Australian health and fitness club industry made this thesis unique and unparalleled.

The managerial implications from the findings in this thesis provided a set of interesting issues. Firstly, the constructs of brand equity were operationalised and provided an important framework to measure performance and improve profitability. Simply stated, this model of brand equity presented twelve areas of focus that are positively related to the customer’s decision to repurchase. The impact on profitability could be significant. There were a number of limitations that were identified as a concern which included the dimensions of the first order constructs, the sample group, the use of cross-sectional data and the deficiencies involved with PLS analysis. The chapter concluded with suggestions for future research which included the dimensionality of the constructs, the selection of constructs for the brand equity model and the ranking of first and second order constructs.

This research has made contributions to the field of marketing research by suggesting an operationalised model of brand equity. It is suggested that this appropriate for a company endeavouring to increase profits through increased customer retention and re-purchase rates. It is anticipated that these findings will provide valuable guidelines for academics and practitioners in this field. The results will provide a greater understanding of the constructs involved in brand equity, the inter-relationship of these constructs and the decision to re-purchase.
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145


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158


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177


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