An analysis of buyer behaviour in response to rebate promotions

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ABSTRACT

Rebate promotions are a significant promotional tool that have received scant research focus. In comparison to coupons, for example, rebates have received minimal academic attention. Unlike other promotion vehicles, rebates are unique in that they offer a post-purchase discount. More importantly though, consumers receive the discount only if they complete the promotion’s requirements. Many in the popular press argue these requirements are made deliberately onerous in order to deter redemption.

It is an easy argument to make. After all, rebate promotions have a redemption rate far below 100%. In interviews with fulfilment houses, redemption rates of 5%-15% were widely quoted. Add to this the documented cases of consumer protection agencies prosecuting companies for conditions deemed, “…particularly unusual and onerous…” (ACCC, 2010 pg.1), where consumers have been misled, or where conditions have been concealed (ACCC, 1996), then one begins to understand the press reports.

Redemption requirements are the focus in Section 1 of this thesis. Through a audit of 268 recent rebate promotions, 12 commonly used promotion requirements are identified. They are investigated to determine if their usage varies between offers, product groups, and/or rebate types.

To assist manufacturers design promotions that provide tangible savings to consumers whilst minimising the opportunity for fraudulent claims, identifying rebate requirements alone is not enough. It is perhaps more important to determine if a promotion’s requirements could in fact foster non-redemption.

There is little research examining rebate redemption requirements and it seems no attempt has been made to develop a measure of what constitutes a reasonable and, perhaps more importantly, an unreasonable set of compliance requirements. One contribution of this thesis is the confirmation that some requirements are more likely than others to discourage consumers from redeeming. Using Best-Worst Scaling (Finn and Louviere, 1992) it was possible to rank the 12 commonly used requirements and demonstrate that the most onerous were up to 50 times more likely to deter consumers from redeeming than the least onerous.

In Section 2 of this thesis the focus shifts to examining the effectiveness of rebate promotion design in comparison to a simple point-of-sale (POS) discount. Whilst it is important to know if consumers find a rebate promotion offer attractive, it is equally
important to know if they find it attractive relative to other promotions present in the marketplace.

Prospect Theory and Construal Level Theory (CLT) form the basis of this analysis. The results of Section 2 suggest that when the dollar value of the saving is equal between promotions, consumers have a stronger preference for the promotion where the saving is received in the shortest timeframe (i.e., the POS discount). As the dollar value of the saving offered by the rebate increases relative to the POS discount promotion, consumers become more disposed to the rebate promotion. This interaction becomes more pronounced as the savings gap between promotion types widens. This is the opposite of the result predicted by Prospect Theory, but is consistent with the predictions of CLT.

It has been argued that people have difficulty comparing offers expressed in different units. Specifically, that bonus product offers will be judged more favourably than POS discounts. This proposition is tested by directly comparing preferences for a bonus product rebate versus a POS discount offer. The results show that bonus product promotions are neither preferred to POS promotion nor the more typical ‘cash back’ rebate promotion.

Section 2 concludes with an examination of rebate offer framing. Previous research suggests offers should present pricing information in terms of a regular price, a rebate value, and an after rebate price. Three forms of Rebate offer price framing are tested. Results of this experiment show promotions which contained a combination rebate/price structure, resulted in a higher preference for the rebate offer.
DECLARATION

This thesis contains published work and/or work prepared for publication, some of which has been co-authored. The bibliographical details of the work and where it appears in the thesis are outlined below. Further, the agreed contribution by the student and co-authors are listed.

  - Appears in Chapter 3:
  - Student Contribution = 90%
  - Co-Author Contribution = 10%

  - Appears in Chapter 8:
  - Student Contribution = 90%
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# TABLE OF CONTENTS

ACKNOWLEDGEMENT............................................................................................................................. I

ABSTRACT ................................................................................................................................................. III

DECLARATION ............................................................................................................................................. V

CHAPTER 1. INTRODUCTION .......................................................................................................................... 1

SECTION 1 ................................................................................................................................................... 7

CHAPTER 2. SALES PROMOTION .................................................................................................................. 9

2.1 RETAILER PROMOTIONS .................................................................................................................... 10

2.2 TRADE PROMOTIONS .......................................................................................................................... 13

2.3 CONSUMER PROMOTIONS .................................................................................................................. 17

CHAPTER 3. STUDY 1: AN AUDIT OF REBATE PROMOTIONS ........................................................................... 27

3.1 METHODOLOGY .................................................................................................................................. 28

3.2 RESULTS ............................................................................................................................................. 30

3.3 SUMMARY AND DISCUSSION ............................................................................................................... 39

CHAPTER 4. REBATE PROMOTIONS: FRAUD DETERRENCE VS. EASE OF USE ........................................... 41

4.1 BREAKAGE ......................................................................................................................................... 47

4.2 PROMOTION REQUIREMENTS ............................................................................................................. 49

CHAPTER 5. STUDY 2: RANKING THE ONEROUSNESS OF REBATE CONDITIONS ......................................... 53

5.1 METHODOLOGY .................................................................................................................................. 53

5.2 SAMPLE ............................................................................................................................................. 58

5.3 RESULTS ............................................................................................................................................. 60

5.4 SUMMARY ......................................................................................................................................... 70

SECTION 2 .................................................................................................................................................. 73

CHAPTER 6. CONSUMER SALES PROMOTION ............................................................................................. 75

6.1 THE REASONS WHY FIRMS USE CONSUMER SALES PROMOTIONS .................................................. 75

6.2 HOW SALES PROMOTIONS AFFECT SALES ..................................................................................... 84

6.3 MARKETING IMPACT .......................................................................................................................... 93

6.4 CONSUMER BEHAVIOUR .................................................................................................................... 95

CHAPTER 7. REBATES AND THE DEAL PRONE CONSUMER .............................................................................. 97

7.1 GENDER ............................................................................................................................................. 99

7.2 INCOME ............................................................................................................................................. 99

7.3 AGE .................................................................................................................................................... 101

CHAPTER 8. STUDY 3: THE CHARACTERISTICS OF REBATE REDEEMERS ..................................................... 103
CHAPTER 9. CONSUMER BEHAVIOUR THEORIES APPLIED TO CONSUMER RESPONSES TO REBATE PROMOTIONS 111

9.1 INVOLVEMENT THEORY ........................................................................................................... 111
9.2 PROSPECT THEORY ................................................................................................................ 115
9.3 CONSTRUAL LEVEL THEORY ................................................................................................ 121
9.4 SUMMARY ................................................................................................................................ 123

CHAPTER 10. REBATE SALES PROMOTIONS ............................................................................. 127

10.1 BONUS PRODUCT REBATE PROMOTIONS .................................................................. 127
10.2 CONSUMER LEARNING AND REBATES ........................................................................... 130
10.3 REFERENCE PRICES AND REBATES .............................................................................. 131

CHAPTER 11. RESEARCH HYPOTHESES ................................................................................. 135

CHAPTER 12. STUDY 4: COMPARING DISCOUNT & REBATE PROMOTIONS WITH EQUAL DISCOUNTS 137

12.1 METHODOLOGY .................................................................................................................... 137
12.2 HYPOTHESES TESTING PLAN .......................................................................................... 140
12.3 RESULTS ............................................................................................................................. 141
12.4 SUMMARY ........................................................................................................................... 145

CHAPTER 13. STUDY 5: COMPARING DISCOUNT & REBATE PROMOTIONS WITH UNEQUAL DISCOUNTS 149

13.1 METHODOLOGY .................................................................................................................... 150
13.2 SAMPLE .................................................................................................................................. 158
13.3 HYPOTHESES TESTING PLAN .......................................................................................... 159
13.4 RESULTS ............................................................................................................................. 161
13.5 SUMMARY ........................................................................................................................... 184

CHAPTER 14. DISCUSSION AND CONCLUSION ..................................................................... 189

14.1 RESEARCH LIMITATIONS .................................................................................................... 191
14.2 CHARACTERISTICS OF REBATE PROMOTIONS ............................................................... 191
14.3 THE ONEROUSNESS OF REBATE REQUIREMENTS ......................................................... 193
14.4 REBATE PRONENESS ........................................................................................................... 197
14.5 PROSPECT THEORY AND REBATE PROMOTIONS ........................................................... 198
14.6 PROSPECT THEORY AND RISK ......................................................................................... 200
14.7 CONSTRUAL LEVEL THEORY AND REBATE PROMOTIONS ........................................... 201
14.8 MANAGERIAL IMPLICATIONS OF REBATE THEORY ......................................................... 203
CHAPTER 15. REFERENCES ........................................................................................................... 209
APPENDIX 1. STUDY 2 BIBD MATRIX ....................................................................................... 219
APPENDIX 2. STUDY 4 SURVEY INSTRUCTIONS .................................................................. 220
APPENDIX 3. STUDY 4 SURVEY MEASURES ......................................................................... 221
APPENDIX 4. STUDY 4 RESPONDENT SCREENING ............................................................... 223
APPENDIX 5. STUDY 4 CHI-SQUARE TEST RESULTS ............................................................ 224
APPENDIX 6. STUDY 5 SAMPLE CHARACTERISTICS ............................................................. 225
APPENDIX 7. STUDY 5 REBATE SAVING MEASURE ............................................................... 227
LIST OF FIGURES

Figure 1: Sales Promotion Schematic ................................................................. 9
Figure 2: Rebate Promotion Samples ................................................................. 30
Figure 3: Promotions Containing Each Requirement Grouped by Product Category .............. 32
Figure 4: Pre-Registration Process ................................................................. 33
Figure 5: Redemption Counter Examples ......................................................... 33
Figure 6: Obscure Serial Number Sample ....................................................... 34
Figure 7: UPC Identification Sample ............................................................... 35
Figure 8: Multiple Sample Packaging Example ............................................. 35
Figure 9: Range of Requirements per Promotion by Product Category .................. 37
Figure 10: Rebate Promotion Usage ............................................................... 38
Figure 11: Dilbert ‘Rebaterus’ Cartoon ............................................................. 46
Figure 12: Individual BWS Scores by Requirement ......................................... 65
Figure 13: Promotion Requirements’ Onerousness and Heterogeneity .................. 67
Figure 14: Gains from Price Discrimination .................................................. 76
Figure 15: Product usage by brand status interaction ....................................... 83
Figure 16: Product usage by brand status interaction ....................................... 84
Figure 17: Effect of Promotions on Sales ......................................................... 88
Figure 18: Typical Value Curve ..................................................................... 117
Figure 19: The Silver Lining Effect ................................................................ 119
Figure 20: Bonus Product Promotion ............................................................. 128
Figure 21: Example of Promotion Advertisements .......................................... 138
Figure 22: Example of Promotion Treatment 2 .............................................. 151
Figure 23: Treatment 3 – Promotion Advertisements Examples ....................... 153
Figure 24: Treatment 4 – Rebate Price Format Examples ............................... 154
Figure 25: Survey Respondent Routing Procedure ........................................ 158
Figure 26: Advertisement Samples for Treatments 1 and 2 ......................... 162
Figure 27: Treatment 1 (Laptop) – Percentage of Offer Preferences ............... 164
Figure 28: Treatment 2 (Printer) – Percentage of Offer Preference ................. 168
Figure 29: Rebate Promotion Perceived Savings Pairwise Comparisons .......... 172
Figure 30: Treatment 2 Rebate Example Ad Comparisons ............................ 177
LIST OF TABLES

Table 1: Product Family Descriptions .................................................................................. 29
Table 2: Rebate/Product Composition .................................................................................. 31
Table 3: Common Complaints about Rebate Promotion Requirements ................................. 50
Table 4: Common Rebate Promotion Requirements .............................................................. 54
Table 5: Example of a Choice Set 1 of 12. ........................................................................... 57
Table 6: Sample Characteristics .......................................................................................... 58
Table 7: BWS Score by Condition ....................................................................................... 62
Table 9: Comparison of BWS Means between Subgroups .................................................. 69
Table 10: Summary of studies relating income with promotion response ......................... 101
Table 11: Demographic Question Design ........................................................................... 105
Table 12: Redemptions by Age Group, Gender, and Method .............................................. 107
Table 13: Rebate Awareness and Purchasing Decision Influence ....................................... 108
Table 14: Summary of Research Hypotheses .................................................................. 135
Table 15: Product Families ............................................................................................... 139
Table 16: Offer Preference Measure ..................................................................................... 142
Table 17: Chi-Square test of Deal Preference Group .......................................................... 142
Table 18: Deal Preference on Rebate Saving Kruskal-Wallis ($X^2$) Test Results............ 144
Table 19: Deal Preference on Price Awareness Kruskal-Wallis ($X^2$) Test Results .......... 145
Table 20: Promotion Comparison Groups .......................................................................... 151
Table 21: Promotion Comparison Treatment Structure ...................................................... 155
Table 22: Recent Promotion Experience .......................................................................... 156
Table 23: Rebate Savings Measure Cronbach's Alpha ...................................................... 157
Table 24: Chi-Square Tests of Demographic Variables between Study 4 and 5 .......... 159
Table 25: Chi-Square test of Deal Preference for Treatment 1 (Laptop) ............................. 164
Table 26: Treatment 1 (Laptop) Logistic Regression Classification Matrix ...................... 166
Table 27: Treatment 1 (Laptop): Effects of Rebate Value on Offer Preference ............... 167
Table 28: Treatment 2 - Chi-Square test of Deal Preference ........................................... 167
Table 29: Treatment 2 (Printer) Logistic Regression Classification Matrix ...................... 169
Table 30: Treatment 2 (Printer): Effects of Rebate Value on Offer Preference .............. 170
Table 31: Rebate Saving Measure by Rebate Discount Level ........................................... 171
Table 32: Mann-Whitney U Tests Rebate Saving Measure by Rebate Discount Level .... 173
Table 33: Recent Rebate Experience and Offer Preference ................................................ 175
Table 34: Group 3 Promotion Comparison Sample Size .................................................... 176
Chapter 1. INTRODUCTION

There are many tools available to increase sales. Chief among these is the price promotion. A popular form of price promotion is the coupon, and to a lesser extent the mail-in rebate. Also known as ‘Cashbacks’ or more simply as ‘Rebates’, mail-in rebates (hereafter rebates), are a post purchase discount that comes with strings firmly attached. Rebates are distinct from coupons in that the effort required to obtain the discount and the receipt of the discount itself, both occur after rather than at or before purchase. Consumers must complete the rebate redemption form, collate the required proof of purchase items (e.g. package bar codes, serial numbers, sales receipt) and submit the complete package so it arrives prior to the expiry date. Provided all requirements are met, and the rebate application is approved, the refund cheque can take up to 14 weeks to arrive (Grow and Chhatwal, 2005).

Rebate offers are on the rise, especially for computer products (Chuang, 2004). This is despite numerous consumer complaints of not receiving rebate cheques, long wait times for payment, stringent rules to qualify, and the extra effort needed to redeem them (Chuang, 2004, Ploskina, 2008, Ross, 2010, Ewoldt, 2010). They are popular with manufacturers too. They can be used to lower a product’s price and increase sales while limiting the number of consumers that obtain the discount (Greenman, 1999).

According to an online survey conducted in November 2004 by the market research firm, The NPD Group (NPD, 2005), approximately a third of consumers said they had bought a technology product with a rebate in the last six months. They estimate that 400 million rebates are offered each year, amounting to a total face value of $6 billion. Office product retailer, Staples Inc., claimed that it and its vendors pay $3.5 million in rebates each week (Grow and Chhatwal, 2005). Rebate offers are no longer confined to a few dollars. Offers of $50, $100, or more for high-tech products can be common encounters (Dalton, 2005).

Rebate promotions are attractive to consumers as they hold the promise of an often substantial price reduction. This belief is supported by an NPD Group survey finding that 17% of the 6,800 adults surveyed purchased more expensive products because of rebates. The survey also found that 21% purchased a product sooner than expected due to a rebate promotion, and 9% of the adults purchased brands they would not have without a rebate offer (NPD, 2005). A PC executive estimated that a rebate program
An Analysis of Buyer Behaviour in Response to Rebate Promotions

could boost sales of an item by 20–50% depending on the value of the offer, timing of the promotion, and the extent of the product’s distribution (Menzies, 2005).

However, despite their popularity, rebates have been criticized by consumers, the media, and regulators because considerable numbers of consumers who are enticed to purchase by the rebate offer actually fail to redeem them. Broadly, this phenomenon is referred to as “breakage”. Chuang (2004) noted that 40% of rebate forms never get mailed in, and another 20% of the rebate redemptions were disqualified. Dalton (2005) cited a survey that found 50% of the respondents did not even attempt to redeem a rebate offered on a product they had purchased. Approximately 41% who missed out on the rebates forgot to redeem them. A quarter of the survey sample lost the redemption forms, receipts, or product bar codes. Twenty percent felt the rebate was not worth the effort, and another 14% felt the redemption process was too complicated.

There are a few other benefits to rebates. A consumer rebate promotion, as opposed to a trade deal, helps a manufacturer direct the total discount to consumers. In the case of price promotions, retailers may not pass the full price reduction onto customers (Neslin, 2002, Ailawadi et al., 2009). Furthermore, with rebates, retailers are unlikely to stockpile inventories and sell the product at higher prices when demand for the product rises (Ault, 2000). Rebate forms also help manufacturers obtain contact information from purchasers of their products. Manufacturers can use the information for subsequent survey contacts or direct marketing efforts.

Despite the popularity of rebates, only a handful of scholarly studies have examined consumer behaviours in response to rebate offers. It is particularly noteworthy that the majority of these existing rebate studies are dated; ten, fifteen, and some over twenty years old. Whilst much has changed in the area of sales promotions, particularly online, researchers have ostensibly overlooked rebate promotions. In fact Neslin (2002, p.67) notes, rebates are “…a vastly under-researched area. There are very few papers on rebates and little generalizable empirical work on their effectiveness and redemption…”

Authors such as Tat and Schwepker Jr (1998) have examined rebate redemption motives and found that price consciousness, time, and effort to redeem, and perceived satisfaction with rebate usage, impact redemption. Others have examined optimum rebate amounts (Ali et al., 1994), consumer perceptions of manufacturers’ motives for offering rebates (Avila and Avila, 1986), consumer attributions of satisfaction with
An Analysis of Buyer Behaviour in Response to Rebate Promotions

rebate shopping experiences (Hunt et al., 1995), and consumer perceptions of the redemption process (Jolson et al., 1987, Tat et al., 1988).

There is, however, no research specifically addressing the compliance requirements of rebate promotions. This is despite ample evidence in the popular press of consumer dissatisfaction with rebate requirements. Furthermore, the Australian Competition and Consumer Commission (ACCC) has issued several statements warning companies over misleading, onerous, or obscure rebate conditions (ACCC, 1996, ACCC, 1998, ACCC, 2010). For rebates to continue as an effective promotion tool, they must have credibility with consumers. This requires compliance requirements that both discourage fraud and encourage positive consumer sentiment. A difficult balance.

This thesis proceeds as follows. Section 1 comprises four chapters that examine rebate promotions and in particular their redemption requirements. The research objective of Section 1 is to more clearly position rebate promotions within the more expansive sales promotion literature. Moreover, Section 1 undertakes the groundwork on defining the composition of rebate promotions. That is, defining characteristics such as rebate face value, frequency of use – both within product categories and by individual firms – and redemption requirements. This level of analysis is missing from the literature and is an essential element to further rebate research.

Chapter 2 begins by presenting a review of the sales promotion literature. This serves to both inform the reader as to the breadth of the sales promotion literature, whilst positioning rebate promotions within this expansive category. Three areas of sales promotions are reviewed, Trade, Retail, and Consumer. It is within this later area that rebate promotions reside. Chapter 2 also serves to contrast coupons and rebate promotions. Whilst they are similar in some respects, rebates have been described as the ‘analogue of couponing’ (Blattberg and Neslin, 1990), they are significantly different in others. Furthermore, the scarcity of rebate research becomes apparent in the chapter, highlighting the need for the following rebate promotion audit.

Chapter 3 takes an industry-based approach, through an audit of current practices in rebate promotions, to identifying the more common redemption requirements used in rebate promotions. This study contributes to the literature by providing a summary of rebate redemption requirements, the frequency of their use, and the patterns that exist in how rebate offers are structured between product categories, and/or rebate types. Further, rebate offers are characterised (i.e. cash vs product) and advertising price
An Analysis of Buyer Behaviour in Response to Rebate Promotions

formats described. There exists no such audit in the current literature. The findings of this chapter are used as inputs in the subsequent studies in Chapters 4, 12 and 13.

Chapter 4 takes the learnings from Chapter 3 as the basis to review the existing literature on rebate redemption requirements. During this review, it becomes clear that rebate redemption requirements are a major source of angst in the popular press, and a trigger for to action from the ACCC. Interviews with Australian based rebate ‘fulfilment houses’ provide a real world perspective on the rebate redemption industry. These interviews provide insight on why redemption requirements have emerged, and how they effect redeemers. As a result of this review it becomes evident that there is no research examining rebate redemption requirements and it appears no attempt has been made to develop a measure of what constitutes a reasonable and, perhaps more importantly, an unreasonable set of compliance requirements.

As such, Study 2 presented in Chapter 5 of this thesis, provides the basis for such a measure. Using a Best-Worst analysis the more common rebate requirements identified in Chapter 3 are compared, and a set of requirements deemed ‘reasonable’ to the average consumer are distilled. Study 2 investigates promotion redemption requirements from two angles. Do consumers perceive differences between the onerousness of conditions? And, can these perceptions influence their redemption behaviour? Understanding these questions is an important first step in allowing industry to balance the challenging goals of discouraging fraud without unduly inconveniencing consumers.

Section 2 comprises eight chapters that focus on the use of rebate promotions as a sales tool. The goal of section 2 is to investigate the consumer behaviour that underpins rebate promotions. Point-of-Sale (POS) promotions (such as coupons) provide an immediate discount at the time of purchase, with higher discount values producing a short-term increase in market share (Bawa and Shoemaker, 1987b, Shoemaker and Tibrewala, 1985). Yet over time this instant discounting can be integrated into the consumer’s reference price, making it difficult to maintain the original, higher, non-discounted price (Khouja et al., 2008b, Blattberg et al., 1995, Yi and Yoo, 2011).

Rebates (a post-purchase discount), on the other hand, provide a method of offering the same, or larger, discount without lowering the advertised price. It is unclear from existing research how consumers perceive the discount presented in rebate promotions. In particular, when compared to a POS promotion with a discount of equal or lesser
An Analysis of Buyer Behaviour in Response to Rebate Promotions

value, will they exhibit a preference for the instance POS discount or the delayed rebate discount?

Research by Compeau and Grewal (1998) and Krishna et al. (2002) has highlighted the significant effects of price presentations on consumers’ deal perceptions of various sales promotion tools. These include, coupons, free gifts, price bundles, price deductions, and manipulations of advertised reference prices (ARPs). However, despite the widespread use of rebates, no research has compared consumers’ evaluations of rebate offers vis-a-vis POS promotions.

Chapters 6 extends the work of Chapter 2 by presenting a review of the existing literature of consumer sales promotion. The review focuses on why firms use consumer sales promotions, and how rebate promotions fit into the marketing mix. The literature on rebate dependent consumers is reviewed, a discussion which contributes to the learnings of Chapter 8. Similarly, a discussion on ‘Repeat Purchasing’ in this chapter is the basis for hypothesis development in Chapter 10.

Chapter 7 reviews the topic of the ‘Deal Prone’ consumer, which had received substantial coverage in academic literature (Blattberg et al., 1978, Bawa and Shoemaker, 1987a, Bawa et al., 1997, Lichtenstein and Burton, 1997). Whilst it is not within the scope of this thesis to examine the deal prone consumer per se, a review of the literature is warranted given the discussion of demographics in subsequent chapters.

Several significant research questions flow from the reviews in Chapters 6 and 7. For example, what impact would simplifying the redemption process have on redemption rates, and would a simplified redemption process effect firms’ profitability (Jolson et al., 1987, Tat and Lee, 1993)? In addition, Chapter 7 yields a research question that is examined in Chapter 8.

Chapter 8 examines these questions through a field study of a rebate promotion undertaken by a leading Australia manufacturer of household durable goods. Chapter 4 reveals that several researchers have called for research on simplifying the rebate redemption process (Khouja et al., 2008b, Jolson et al., 1987, Tat and Lee, 1993), and the impact of increased redemption rates on firms’ profitability (Tat and Lee, 1993). The study in Chapter 8 examines the impact and usage of online redemptions. Online redemption could simplify the process through reducing the onus of proof, streamlining the application form, and increasing the visibility of the program conditions. By comparison, a mail-in redemption process has more laborious compliance requirements.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

The research objective of this study is to determine if there are differences in redemption behaviour between an online and mail-in rebate redemption process.

Chapter 9 introduces three theories on consumer behaviour; Involvement Theory, Prospect Theory, and Construal Level Theory (CLT). Prospect Theory and CLT provide diametrically opposed predictions of consumer choice when presented with the choice between a POS discount and rebate promotion. As such, hypotheses are developed from the discussion that are tested in the two studies undertaken in Chapters 12 and 13.

Chapter 10 drills further into the composition of rebate promotions and yields three testable hypotheses. A review of the literature covering different forms of rebate promotion (for example, bonus product promotions) yields one hypothesis. The effect on redemption behaviour of previous rebate promotion experience yields another. Finally, rebate advert price formats and the use of advertised reference prices yields the third. Chapter 11 presents a summary table of the hypotheses generated in Chapters 9 and 10.

Beginning from the premise that rebate promotions do not exist in isolation, i.e. there will often be competing promotions in the marketplace, the final two chapters of this thesis compare the efficacy of rebate and discount offer framing within the context of Prospect Theory, specifically the ‘Silver-lining’ principle, and Construal Level Theory. Chapter 12 presents a study on consumer choice between two competing promotional offers: one a Point of Sale (POS) discount promotion and one a rebate promotion, where the promotions have an equal discount.

Chapters 13 extends the results of Chapter 12 with a study that predicts consumers' choice between two competing promotion offers: one a POS promotion and one a rebate promotion, where the discounts presented are not equal. Chapter 13 also examines the choice between rebate promotions types; cashback (or cash equivalents) and bonus products. Findings from previous research on offer framing are applied to explore if including an advertised price affects consumer perceptions of deal value.

Chapter 14 concludes the thesis with a discussion of the results and conclusions. Findings are referenced back to relevant literature. Managerial implications discussed. In addition, limitations and future research opportunities are expressed.
Section 1
The Characteristics of Rebate Promotions
Chapter 2. Sales Promotion

Sales promotions are all around us; they are ubiquitous. Shopping centres are awash with them: “Buy One, Get One Free”, “50% Off”, “Claim a $100 Rebate”. One cannot switch a television on without experiencing a barrage of promotion-based advertising. Driving down a highway is a kaleidoscope of billboards, bus stops, even rubbish bins, awash with promotions designed to influence consumer opinions and provoke a response.

Yet defining sales promotions is not a simple task. There is no uniform formula, no magic ingredient, which guarantees success. Blattberg and Neslin (1990) suggest, however, any definition would have common themes. They argue sales promotions: are action focused, are marketing events, have a direct impact on behaviour, and are designed to influence consumers or intermediaries. Further, they offer the following definition to encapsulate these themes,

“Sales promotion is an action-focused marketing event whose purpose is to have a direct impact on the behaviour of the firm’s customers.” (Blattberg and Neslin, 1990, pp.3)

Ultimately, the target of any sales promotion is the end user, or consumer, of a product. The path from manufacturer to consumer, however, is not necessarily a direct one (Figure 1). Retailers, for example, offer promotions to consumers independent of the manufacturer (Retailer Promotions). Alternatively, the manufacturer may offer incentives to retailers, or trade outlets, in exchange for priority locations (Trade Promotions). Equally, the manufacturer may promote directly to the consumer, bypassing their distribution channel entirely (Consumer Promotions).

Figure 1: Sales Promotion Schematic

![Figure 1: Sales Promotion Schematic](image-url)
Sales promotions are an integral part of the marketing mix for many consumer products. Marketing managers use price-oriented promotions, such as coupons, rebates, and price discounts to increase sales and market share, entice consumers to trial, and encourage them to switch brands or stores. Non-price promotions such as sweepstakes, frequent user clubs, and premiums add excitement and value to brands and may increase brand attractiveness. In addition, consumers like promotions. They provide utilitarian benefits such as monetary savings, increased quality (higher quality products become attainable), and convenience, as well as hedonistic benefits such as entertainment, exploration, and self-expression (Chandon et al., 2000).

2.1 RETAILER PROMOTIONS

The literature (Ailawadi et al., 2009, Neslin, 2002) identify three forms of retailer deals: in-store price cuts, feature advertising, and in-store displays. Feature advertising promotes the store's price for selected items and is often distributed through press adverts. Displays can be constructed either at the end of the aisle or in-aisle.

In a study based on data from 19 food categories sold in 106 major U.S.A. supermarket chains Dhar et al. (2001) investigate category performance across retailers given their individual pricing, promotion, and merchandising strategies, whilst controlling for the level of manufacturer support. They found that feature advertising helps build store traffic, while in store displays encourage opportunistic purchasing (i.e., impulse buying).

Furthermore, feature based promotions are more effective in increasing store market share in high penetration, high frequency products. Conversely, in store display promotions enhance category volume in low-visibility fill-in categories where the displays provide increased exposure.

Kinley et al. (1999) examine if product involvement and/or gender affect consumer’s use of promotional activities in the retail clothing setting. There results indicate that both males and females use promotional references equally; gender had no effect. Product involvement, however, produced differences – high involvement individuals are influenced by window displays, store imagery and advertising information to a greater degree than consumers with a low involvement.

Shankar and Krishnamurthi (1996) investigate the influence of retailer price policy and feature displays on regular price elasticity. Utilising A.C. Nielsen store data for a
leading brand and size of mouthwash they showed that frequent feature displays serve to reduce a brand’s price elasticity. Put another way, frequent feature displays lead to an automatic inclusion of the brand in the consumer’s consideration set, and to a lesser focus on its regular price. Further, over a period of time, brand feature displays may serve more as a signal of differentiation than a price cut signal. There are advantages in retailers maintaining a low regular price elasticity for brands. It allows them to extract price premiums without large drops in volume thereby improving profitability in the long run.

In a related study, Bolton (1989) develops a model to investigate whether promotional activities by retailers, such as displays or newspaper advertising, are related to price elasticities. They look for effects at both the brand and product category levels, and then test the model using scanner data for three brands across twelve stores. In general their findings support Shankar and Krishnamurthi (1996), in that brand or category display activity had no significant effect on price elasticity.

The Bolton (1989) study differs from Shankar and Krishnamurthi (1996) in an important way; Bolton (1989) also investigated products at the category level. In contrast to Shankar and Krishnamurthi (1996) they find that brands with high category press advertising frequency had a higher price elasticity than those with low frequency. Interestingly brand level press advertising frequency had no effect on price elasticity.

An explanation for the opposite effects at category level may lie in the different way consumers are exposed to each type of promotion. Frequent exposure to category press advertising occurs away from the store, e.g. at home, and can induce consumers to compare prices across brands. This could increase their price sensitivity. Alternatively, repeated exposure to in-store displays may influence consumers to focus more on the displayed brand, lowering their price sensitivity.

Bucklin and Lattin (1991) argue consumers’ susceptibility to in-store promotions is a function of their shopping decision making state – planned or opportunistic. Consumers who have planned their purchasing before entering the store will have no need to process in-store information; they have in effect already made up their minds. On the other hand, consumers who have not planned their purchasing are more likely to process in-store information; they may be strongly influenced by in store promotions.
Utilising scanner data for coffee and crackers they found that the effect of price is less substantial in the presence of feature or display. Feature advertising or displays tend to be associated with lower price elasticity.

Further support is found in Allenby and Ginter (1995) analysis of canned tuna. When allowing brand level in-store display and feature activities to effect household price sensitivity they found it lead to a decrease in elasticity. They note the effect is particularly strong for feature advertisements, suggesting that many households may identify their brand selection before actually going to the store.

In a more recent study Nordfält (2011) investigates a different aspect of in-store displays – how to increase their attention grabbing effect. They argue displays need to do more than simply capture attention. A combination of an attention-capturing device and a discount can increase sales more than if utilised in isolation.

They set up end cap displays in six large supermarkets and observed three consumer behaviours – those who looked, those who stopped, and those who bought – while manipulating various aspects of the displays. Their results reveal a substantial effect on sales – an increase of 977% – between the ‘worst’ and ‘best’ displays.

The sales effect of successful in-store displays is not restricted to bricks and mortar stores. Breugelmans and Campo (2011) argue that when it comes to in-store displays, online stores are in a unique position; they have lower costs and more flexibility. Further, they can more easily customise their marketing efforts based on customer’s previous purchases.

Their results confirm in-store display’s positive effect on brand sales for online grocery stores, with an increase in sales of up to 106 percent. Further, the sales effect at category level was minimal, with brand switching the dominate effect within categories. Said another way, in-store displays change online shoppers’ brand choice rather than their category choice.

Similar to the findings in Nordfält (2011), Breugelmans and Campo (2011) find evidence that not all display types are equally effective in increasing brand sales. Displays that appear early in the shopping process (pre-emptive) on the homepage for example, outperform those that appear when the consumer is making their product choice (targeted). The increase in brand market share for first screen displays where there are no competing products, is more than twice as large as that for aisle displays.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

The advantages of appearing early in the shopping process and being displayed without competition products outweigh the advantages of targeting buyers at the time they make their choices.

In another angle, Bridges et al. (2006) suggest the promotional status of the most recent purchase influences response to subsequent promotional activities and in turn, switching behaviour in that product category. In what they term “promotion enhancement” they argue consumers are more responsive to marketing mix activities in a product category after they have made promotional purchases in that category. Promotional activities are more salient when consumers are more familiar with the product category.

Conversely, usage dominance suggests that consumers who purchase and use a brand become less responsive to promotional activities for that brand because their most recent experience dominates their purchase decisions.

Bridges et al. (2006) used sales data for peanut butter, tuna, margarine, and tissues to compare the interaction between promotion enhancement and usage dominance with retailer promotions (such as in store displays, press advertising, and price cuts). They found support for both effects, however, promotion enhancement was dominant. Specifically for regular price, price promotions, and feature advertisements, the effects of promotion enhancement were greater than usage dominance, in three of four product categories.

2.2 TRADE PROMOTIONS

Promotions targeted at manufacturers’ trade partners, such as retailers, are known as push promotions. They offer extra value or incentives to engage in local marketing activities to stimulate retail sales. In the U.S.A. the Consumer Packaged Goods (CPG) industry spends more than $75 billion on trade promotions annually, of which trade promotions constitute approximately 60% of their total advertising budget (Ailawadi et al., 2009).

The literature (Ailawadi et al., 2009, Neslin, 2002) identify three forms of trade deals: off-invoice discount, discretionary funds, and bill-backs. Off-invoice discounts provide a given reduction to a retailer for each unit purchased from the manufacturer during the promotion period.

Off-invoice discounts can encourage forward buying. Forward buying occurs when retailers purchase product at a discount during the promotion period to satisfy demand
An Analysis of Buyer Behaviour in Response to Rebate Promotions

in future periods. The retailer compares the discount with the cost of carrying extra inventory, to determine whether and how much too forward buy. The drawback in promotions like off-invoice allowances, is that they are not tied to what the retailer sells to consumers but to what they buy from the manufacturer. This can lead to post promotion sales dips and troughs, and loss of margin, if the extra stock is not sold through; they have in effect reduced the price for future months.

Discretionary funds, also referred to as cooperative or advertising funds, are payments to retailers to support them in promoting the brand. A common mechanism is for the manufacturer to accrue funds based on the retailer’s purchases. In this way, the funds reflect the retailer’s performance and provide an incentive to grow sales.

Bill-backs, or charge-backs, are similar to off-invoice discount, in that a discount is offered on a per-unit basis. However, off-invoice discount is applied as the goods left the manufacturers door, charge-backs are claimed by the retailer for each unit they sell during the promotion period.

Pass Through

Pass-through is the degree to which funds provided by a manufacturer translate into retail promotion. That is, the amount of the manufacturer’s funds that are ‘passed through’ to the consumer. Retailer pass-through rates depend on several factors, including price elasticity, market structure, and product category. Thus, manufacturers may not know how their trade deals will affect the retailers’ promotional activities, making effectiveness uncertain (Martín-Herrán et al., 2010).

Pass-through is often less than 100 percent, and frequently it is literally zero; the retailer accepts the funds from the manufacturer but does not change its retail price at all. Whilst most manufacturers receive pass-throughs well below 100%, there are a small number who enjoy pass-through rates much greater than 100% and some manufacturers even receive promotion spending without providing any funding (Neslin, 2002, Ailawadi et al., 2009).

Further, the pass through rate for promotions of high share manufacturers is larger than for small share. Additionally, higher priced manufacturers and larger categories have higher pass-through rates (Ailawadi et al., 2009). Pauwels (2007) finds similar results in their study of scanner data. Leading brands obtain higher pass-through, feature and display support, and benefit from retail category management decisions. As a result,
smaller brands obtain less sales benefits from their own promotions and are less effective in their competitive reaction to leading brand promotions.

Sethuraman and Tellis (2002) examine pass-through rates via a symmetric duopoly model that analysed the relationship between advertising, trade promotion, and retail promotion. The model shows that the relationship between advertising and retail price promotion depends on the role of advertising.

If a manufacturer’s advertising successfully differentiates the brands, creating brand loyalty, consumers will be less sensitive to price promotions; the pass-through rate will be lower. That is, a higher level of manufacturer advertising is associated with smaller and less frequent, retail price discounts.

Conversely, if manufacturer advertising is informative it increases consumer’s knowledge of their choices. As a result, consumers are motivated to do more comparison shopping, thereby increasing sensitivity to retail price promotions. That is, a higher level of advertising will be associated with larger and more frequent retail price discounts.

Martin-Herrán et al. (2010) obtained similar results in their analytical bilateral monopoly model of price promotions, applied to products such as automobiles and household appliances. They find that the manufacturer’s choice of promotional activities depends on the consumer’s sensitivity to promotions and to regular prices. In particular, when a promotional offer generates more sales in the short run than a permanent reduction of the retail price, the manufacturer is better off offering trade deals rather than consumer promotions (such as rebates).

They argue manufacturers should effectively target their promotional activities by taking into account the relative magnitude of both promotional and price elasticities. For example, in the case of consumer rebates, retailers can free ride on the manufacturer’s promotional effort by increasing their regular price to up to the point where they totally nullify the short-term sales effect. Thus, the rebate promotion would mainly benefit retailers and consumers, such that a trade-deal would have provided better outcomes to manufacturers.

In an analytical model of price promotion in which brand loyalty determines the depth and frequency of discounts, Allender and Richards (2012) investigate retailer promotion behaviour for carbonated soft drinks and ice cream. The model’s results suggest
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Retailers will not pass on shallow trade deals from manufacturers of weak brands. Since the price promotion that results from such trade deals will not be enough to overcome the loyalty of the strong brand consumer and make the promotion profitable.

In an analytical model of decision making under an assumption of category profit maximisation Moorthy (2005) argues that the trade promotions of one manufacturer in a given period, influence the extent to which the retailer promotes another manufacturer’s brand in the same period.

The evidence of this ‘cross pass-through’ is, however, mixed. Ailawadi et al. (2009) on the other hand find no evidence in their study of actual funding and promotion spending data.

Rebates and Channel Co-ordination

Rebates allow manufacturers to improve value chain performance by aligning intermediary’s actions to the firms marketing goals. The channel coordination aspect of rebates allows manufacturers to overcome the pitfalls associated with traditional trade deals.

For example, trade deals offered to resellers may not be passed onto consumers, rather retained by the intermediary as increased profit (Bulkeley, 1998). Further, Gerstner and Hess (1991a) show that the value of the rebate required to generate a given demand increase is lower than that required for a trade deal, and that the subsequent manufacturer profit is higher.

In a model-based examination of promotion allowance pass-through rates, Sang Yong and Staelin (1999) suggest consumer brand and store loyalties play an important role. Where consumers are less brand loyal, manufactures will undertake more in-store promotional activities, allowing retailers to retain a greater proportion of manufacturer allowances.

When store loyalty is low (i.e., consumers shop around) pass-through rates increase because retailers are likely to use more of the allowance to attract customers. Equally, when price elasticity increases pass-through rates increase, allowing manufacturers to decrease the level of support offered.

In a field study with a major U.S. retail chain Ailawadi and Harlem (2009) compare actual manufacturer funding and retailer price promotions over two consecutive years. Their findings yield important insights into pass-through rates. The retailer spent more
An Analysis of Buyer Behaviour in Response to Rebate Promotions

on promotions, across all products, than it received in allowances. The distribution of the funding, however, was not uniform across product or categories, and seemed to be at the discretion of the retailer.

The median pass-through rate for manufacturers who provided funding was 20%. Further, 14%-15% of manufactures who provided no promotional funding received some level of promotional activity. Conversely, 17%-25% of manufacturers who provided funding received no activity. Looking solely at manufacturers who both provided funding and received activity, yielded a median pass-through rate of 75% (Ailawadi and Harlam, 2009).

Even if the reseller passes the trade deal fully onto the consumer, other undesirable outcomes, such as inventory accumulation, can occur (Ault, 2000). Trade deals provide an incentive for retailers to increase their inventories at a time when prices are low. During times of high prices or demand, the retailer draws upon his increased inventories, rather than ordering new stock from the manufacturer. In both incidences, reduced manufacturer profits result. By bypassing the retailer, rebates enable the manufacturer to offer a price discount to the consumer without this inventory accumulation effect.

In their model Yang et al. (2010) show the channel coordination aspect of rebate use can be enhanced if combined with manufacturers’ suggested retail prices (MSRP). The authors incorporate the concept of loss aversion, where the negative utility of a price exceeding a consumer’s reference price is greater than the positive utility of when it does not, and allow the MSRP to serve as the reference price.

Their model predicts that in the absence of a MSRP retailers, in response to a rebate offer, will increase their price to capture additional profit. Conversely, as loss aversion increases, more of the rebate saving is attributed to the consumer because the retailer becomes increasingly less able to increase their prices. With the exception of very low levels of loss aversion, the MSRP will enhance the effectiveness of a rebate. The consumer will face a lower net price and the profit for both manufacturer and retailer are higher.

2.3 CONSUMER PROMOTIONS

Sales promotions are integral to a firm’s communication strategy (Tat and Lee, 1993) and marketers have created a vast array of clever promotions to stimulate demand. Chief
An Analysis of Buyer Behaviour in Response to Rebate Promotions

among these is the price promotion, specifically the coupon. Coupons provide an immediate discount to the consumer at the time of purchase. Yet over time this instant discounting integrates into the consumer’s reference price, making it difficult to maintain the higher non-discount price in the absence of the discount (Khouja et al., 2008b).

Consumer promotions are an important element of retail markets. Some of the more commonly used techniques are “loss leader” promotions (deep discount deals), feature advertising (store flyers), and in-store displays. The total promotion spending across all product categories in the USA in 2004 reached $429 billion (Ailawadi et al., 2009).

A key hope of retailers is that promotions not only increase sales of the promoted item(s) but also attract more consumers into the store. Once consumers are in the store, they are likely to buy other products. One mechanism to increase store traffic is loss leader promotions, where prices for the selected items are set at or below the retailer’s marginal costs. Retailers consciously incur loss or earn no profit on these items, in the hope that deep discounts will increase store traffic, and, customers will buy other items in addition to the loss leaders. The strategy hinges on the hope that the negative margin contribution of the loss leader will be more than offset by the profit generated from the purchases of additional products (Ailawadi et al., 2009).

In a study of scanner data Gauri, Talukdar, and Ratchford (2008) find that loss leader promotions not only increase store traffic and average spending, but they lead to higher net profit contribution for the promoting stores.

**Coupons**

Coupons are a significant form of consumer promotion. From their humble beginnings in 1895, a one cent (1c) off a box of “Grape Nuts” cereal (Blattberg and Neslin, 1990), by 2011 they had grown into a half trillion dollar industry in the United States alone. Estimates of coupon usage have ranged from USD35 billion in 1975, to 222 billion in 1988, to USD310 billion in 1992, to 256 billion in 1999 (Blattberg et al., 1978, Neslin, 2002 #158). A more recent report (NCH, 2012) puts coupon usage in the United States at USD470 billion in 2011, with 3.5 billion coupons redeemed, saving consumers USD4.6 billion.

Coupons are distributed via a range of channels. Notwithstanding the ubiquitous nature of electronic media, freestanding inserts (FSI) are by far the most widely used
An Analysis of Buyer Behaviour in Response to Rebate Promotions

distribution method (89.4%), followed by in store displays (4.2%) and direct mail (2.3%) (NCH, 2012).

Given their wide spread usage, it is not surprising coupons are an extensively researched marketing tool. Coupon research can be divided into two broad streams: one that examines the profile of consumers who redeem coupons, and the other that investigates the impact of couponing decisions on performance measures such as redemption rates, incremental sales, market share, and profitability (Kumar and Swaminathan, 2005).

Lichtenstein et al. (1990) define coupon proneness as the increased propensity to respond to a purchase offer because the coupon form of the offer positively affects purchase evaluations. Researchers have investigated the deal-prone consumer in terms of demographic and behavioural segmentation variables (Blattberg et al., 1978, Dodson et al., 1978). Others, (Bawa and Shoemaker, 1987a, Neslin et al., 1985) have studied coupons within the broader context of brand loyalty and brand switching topics. For example, consumers who have bought the product on a regular basis in the past are more likely to respond favourably to a coupon promotion.

Others have investigated the benefits of coupon redemption. These include perceived savings (Milkman and Beshears, 2009), enjoyment (Mittal, 1994, Papatla and Krishnamurthi, 1996), variety-seeking (Laroche et al., 2003, Narasimhan, 1984), reduction of perceived risk (Lu and Moorthy, 2007), and elevation of mood or ‘arousal’ (Donovan et al., 1994, Sherman and Smith, 1987).

Conversely the costs associated with coupons, such as time and effort (Saini et al., 2010), the stigma of looking cheap (Argo and Main, 2008), and embarrassment (Brumbaugh and Rosa, 2009), have been shown to negatively impact coupon redemption. Therefore, when individuals receive a coupon they conduct a cost–benefit analysis in order to decide whether the coupon is worth redeeming.

Barat et al. (2013) argue the intention to redeem a coupon is a function of coupon proneness, opportunity cost, income effect, and devaluation effect. In an online study of 2258 university students, they found that both income effect and coupon proneness have a positive effect, while opportunity cost has a negative effect on an individual’s intention to redeem coupons.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Brumbaugh and Rosa (2009) investigates if the in-store experience might influence coupon use. In a study of 600 shoppers they find consumers experience perceived discrimination and hold metaperceptions of what cashiers believe of them that affect their confidence over coupon use or make them feel embarrassed for using coupons, and that such confidence and embarrassment influence the number of coupons they redeem.

Colombo et al. (2003) investigate whether coupon proneness varies across different types of coupons. That is, if a consumer is coupon prone with respect to one type of coupon (e.g. FSI coupons), are they likely to be coupon prone for all types of coupons. Their findings suggest that with the exception of mail-in coupons, there is a general tendency towards coupon proneness such that consumers who are prone to using one type of coupon are prone to using other kinds. In other words, consumers appear to be consistent in their coupon proneness across coupon types.

A related question is whether coupon proneness may be category specific. Swaminathan and Bawa (2005) measured coupon proneness specific to four categories: two grocery products (coffee and detergent) and two service products (oil change and beauty salon). They argue that coupons may not have the same impact on a consumer across all product categories, and that coupon proneness should be measured at the product category level. For example, a consumer who is prone to using coupons in general may choose to disregard coupons in a category where he is highly brand loyal but where coupons for his favourite brand are not available.

Bawa et al. (1997) developed a model of redemption behaviour, based on Item Response Theoretic (IRT), which includes coupon proneness and coupon attractiveness as predictors. Using data gathered from grocery store shoppers they found coupons for more heavily used categories tend to attract a broader cross section of consumers with varying levels of coupon proneness. Coupons for large-share brands and with higher face values tend to enjoy higher redemption rates. Furthermore, delivery vehicles and redemption requirements influence coupon attractiveness. For example, their study found FSI coupons to be the most attractive.

There is considerable research examining the coupon characteristics that effect redemption intentions and behaviour. These characteristics include coupon face value, distribution media and the prior probability of purchasing the couponed brand (Bawa et al., 1997, Bawa and Shoemaker, 1987a, Reibstein and Traver, 1982, Shoemaker and Tibrewala, 1985).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Pokrywczyński (1994) in a study of 152 coupon users investigated coupon usage and brand awareness. They found a positive relationship between coupon collecting and top-of-mind brand awareness. Further, a subset of consumers, those who felt that the amount of effort needed to collect coupons and expiration date were important, were more likely to exhibit such a relationship.

Taylor (2001) extend coupon research into the service industry by examining a coupon’s impact on repeat purchase and purchase timing with five fast-food outlets. Their results reveal similarities with packaged goods coupons: prior purchase is a good predictor of coupon proneness and coupon redemption did not deter repeat purchases. Unlike packaged goods, however, coupons in the service industry do not affect purchase timing. That is, due to the inability to stockpile a service, coupons do not lengthen the repurchase cycle following redemption.

In a related study Kwon and Boon Young (2010) examine coupon use in the Korean service industry. Specifically, if redemption rates vary between online and offline coupon distribution. Their results show online coupons have a higher redemption rate than offline. This is most likely a result of the selective nature of online distribution. Consumers must visit coupon websites to download the coupons as opposed to passively receiving them through offline channels. What isn’t clear from the results is whether the higher redemption rate was accompanied by a sales increase, or, whether it was regular buyers receiving a discount.

The effect of coupon face value on redemption rates is mixed. Shoemaker and Tibrewala (1985) determined higher face values produce higher stated levels of redemption among infrequent or non-buyers of the promoted brand. Higher face values had little effect on the stated redemption level among regular buyers of a brand. Conversely, Krishna and Shoemaker (1992) found that higher face values had a positive influence on redemption rates for both non-buyers' and buyers' alike.

Inman and McAlister (1994) notes that by 1991, 99% of coupons issued included an expiry date – up from 74% in 1987. They attribute this substantial rise to “…manufacturers’ desire to limit their financial liability…” (p.423). More recently, NCH (2012) reports manufacturers controlling their liability by reducing coupon duration period. The average period from coupon drop to expiry has decreased from 11.6 weeks in 2007 to 9.9 weeks in 2011.
Using scanner data Inman and McAlister (1994) develop a model of coupon redemption behaviour in the presence of expiry dates. They find the inclusion of an expiry date has a significant effect on consumer behaviour. Specifically it produces a spike in sales close to the expiry date. Further, it appears the spike comes from consumers who are heavy users of coupons.

In a later study, Kumar and Swaminathan (2005) investigate the coupon face value elasticity of demand. Using scanner data, they develop a model measuring the drop in coupon effectiveness (elasticity) over time, and propose this information be used to set coupon promotion periods. They argue the coupon expiry date be chosen such that the marginal increase in sales is sufficient to offset the costs.

**Rebates**

Rebates, a post-purchase discount, provide a method of offering the same, or larger, discount as coupons without lowering the reference price. Rebates, however, have downsides for consumers; they come with strings firmly attached. However, they have significant advantages for manufacturers such as channel coordination (Gerstner and Hess, 1991a), relationship marketing (Tat and Schwepker Jr, 1998), price discrimination (Chen et al., 2005, Gerstner and Hess, 1991a), and slippage (Lu and Moorthy, 2007, Soman, 1998).

Next to coupons, rebates are the most popular promotion tactic used by consumer goods companies and are the most common promotion strategy used by technology retailers (Bowman, 1989). Consumer-product makers such as Procter & Gamble Co. pioneered rebates in the 1970s as a way to advertise small discounts without actually marking the products down. In the '90s, their popularity soared as computer makers and consumer-electronics companies used them to clear end-of-life products. At the same time rebate values have jumped, from a few dollars, to hundreds of dollars (Grow and Chhatwal, 2005).

Rebates are popular because they can be used to achieve key price points and drive demand, while limiting the number of consumers that purchase at the discounted price. As explained by one retailer, “Manufacturers love rebates because redemption rates are close to none. They get people into stores, but when it comes time to collect, few people follow through. And this is just what the manufacturer has in mind” (Greenman, 1999).
The popularity of rebates is common in the literature, however, their exact value is difficult to establish. Estimates range from $702 million in 1980 (Tat and Lee, 1993), to $10 billion in 2002 (Millman, 2003) to $6 billion in 2005 (Grow and Chhatwal, 2005). Recently, Parago, the largest rebate fulfilment house in the United States, estimated rebate programs paid out USD8 billion to U.S. consumers in 2010 (Parago, 2011).

The significant difference between coupons and rebates is when the redemption occurs – coupons at the time of purchase and rebates post-purchase. When a coupon entices a sale the customer receives the discount, and the manufacturer incurs an immediate reduction in sales revenue. The consumer has already expended the effort necessary (i.e., collecting and using the coupon) to redeem the discount. If the consumer does not redeem the coupon, no sale is made, and the manufacturer receives no revenue. Therefore, the risk in non-redemption for coupons lies with the manufacturer.

Conversely, a rebate entices a sale at the regular price, with the promise of a future discount. The consumer has expended no effort and receives no benefit at the time of purchase. The discount is conditional on some future action and as such, a rebate does not offer a guaranteed benefit to the consumer. It has been likened to a gamble, where the probability of winning (redeeming the rebate) is equal to the likelihood of completing the redemption requirements (Soman and Gourville, 2005).

Because the discount may subsequently not be redeemed, the non-redemption risk is effectively transferred to the consumer (Lu and Moorthy, 2007). Said another way, the seller has their payment and the buyer pays the cost of non-redemption. Referred to as slippage (Bulkeley, 1998), or breakage (Tat and Lee, 1993) non redemption behaviour is an appealing aspect of rebates (Chen et al., 2005). Is a major factor in rebate popularity (Furger, 1997, Greenman, 1999), and “…an easy way for companies to make money” (Charalambous, 2008 p.3)

In addition to breakage, Jolson (1987) attributes the consumer growth and popularity of rebates over coupons to their relatively large refund values and no need to clip and save. Rebate advantages over coupons for manufacturers include minimal consumer risk, ease of scheduling, and little opportunity for fraud. Rebate advantages for retailers include minimal processing and paperwork relative to coupons. Finally, the rebate provides relationship-marketing possibilities to the manufacturer.

The clear benefit of rebates in consumers' minds is the price reduction offered. Rebates also encourage consumers to buy products sooner than they expected (21%), to buy
An Analysis of Buyer Behaviour in Response to Rebate Promotions

more expensive products than they would have without a rebate offer (17%) and to purchase brands they would not have without a rebate offer (9%) (NPD, 2005).

Hunt et al. (1995) suggest that for promotions to be successful in building long-term brand loyalty, consumers need to make a connection between its benefits and the brand. A rebate is a promotion that offers a discount if the consumer takes the time and effort to fulfil the requirements. The effort expended in claiming the rebate could itself contribute to establishing a connection with the brand.

Manufacturers seeking to build brand loyalty should not underestimate the effects of satisfaction with the rebate process itself. Hunt et al. (1995) found a strong, direct relationship between a shopping experience that included a rebate and both word of mouth and repeat purchase behaviour. Others (Tat and Schwepker Jr, 1998) suggest that receiving the rebate payment should increase the consumer’s satisfaction with the rebate process and when done effectively can transfer some of this satisfaction to the brand.

Despite the attention rebates have received in the business news and popular press (Arar, 2007, Barlyn, 2007, Ewoldt, 2009, Mies, 2009, Moses, 2009, Ploskina, 2008), and calls for regulation to protect consumers (Odell, 2011), research on consumer rebate promotions is limited. In fact Neslin (2002, p.67) notes, rebates are “…a vastly under-researched area. There are very few papers on rebates, and little generalizable empirical work on their effectiveness and redemption (or its counterpart, slippage). Rebates have become a dominant form of promotion for many durable goods so the need for insights on this vehicle is acute.”

Most rebate research has relied on consumer surveys and economic models to address issues such as optimum rebate reward amounts (Ali et al., 1994, Khouja, 2006), consumer satisfaction with rebate shopping experiences (Hunt et al., 1995), consumer perceptions of the redemption process (Jolson et al., 1987, Tat et al., 1988), and consumer motives toward rebate redemption (Tat, 1994, Tat and Schwepker Jr, 1998).

What has so far been missing from the rebate research is an examination of the factors influencing the net effectiveness of rebate offers. In the chapters that follow, some of these factors will be examined in more detail. For example, the effectiveness of advertised reference price framing is examined in Chapters 10 and 13. Chapters 4 and 5 examine how redemption requirements influence consumers’ intentions to purchase.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

The following chapter lays the basis for much of this work by way of an audit of industry rebate promotions. The findings of this study are evident in the design of three out of four subsequent studies contained within this thesis. Its significance, however, extends beyond influencing future studies; it is the first study of its kind in the rebate promotion literature. Whilst the characteristics of coupon promotions are well known, this is the first study to describe rebate redemption requirements, rebate attributes (such as rebate face value, redemption time, rebate type), and differences in rebate design between product categories.
In the previous chapter, a review of sales promotion literature established that rebate promotions have long been a part of the marketing mix. Since their inception in the 1970’s they have grown in face value and market presence. They are attractive to both consumers and manufacturers, albeit for different reasons. Yet there is scant research on this important marketing tool, and even less on the structure, or the core composition, of rebate promotions.

For example, Hyeong Min (2006) has investigated the impact of price presentation formats on consumers’ evaluation of rebate offers. While Mayer (1995) has examined the framing of rebate offers. There is, however, no research that categorises rebate promotions, quantifies rebate face values, defines redemption periods, or describes the scope of redemption requirements employed.

When one looks at the rebate promotion’s counterpart in the arena of consumer promotion, the coupon, the picture is vastly different. Marketing scholars have researched coupons extensively for many years, and from very divergent perspectives. As detailed in the previous chapter, areas of study include consumer attitudes towards coupons, coupon enjoyment, and embarrassment from using coupons. The mechanics of coupon redemption, redemption frequency, brand loyalty, brand competitiveness, purchase intention, perceived purchase risk, and total amount spent have all been extensively studied. Moreover, coupons differ from one another in type (cents off, buy-one-get-one free or a percentage off the ticket-price), method of distribution, and dispensing source.

However, the widespread use of rebate promotion in marketing practice notwithstanding, there has been no such attempt to review, describe, or, detail rebate promotions. For example, there is no existing literature detailing rebate promotion requirements. Whilst there are numerous press reports of dissatisfaction with rebate promotions (Ewoldt, 2009, Arar, 2007, Barlyn, 2007, Ploskina, 2008), no academic studies exist specifically analysing rebate promotion redemption requirements. Perhaps, because rebate promotion requirements themselves have not been described or categorised.

To address this gap, this chapter reports the findings of an industry-based audit of Australian rebate promotions over twelve months in 2011/12. Given the preponderance of consumer complaints in the popular press, describing rebate requirements is a central
An Analysis of Buyer Behaviour in Response to Rebate Promotions

goal of this study. If rebates are to be an effective promotion tool, they must have credibility with consumers. This requires compliance requirements which both discourage fraud and encourage positive consumer sentiment; a difficult balance. It therefore follows, that the first step in such an endeavour is to identify the range of requirements used in rebate promotions.

Also of interest in the following study is determining if rebate promotions vary by product category. For example, the consumer electronics industry was responsible for the growth in popularity of rebate promotions in the ‘90s (Grow and Chhatwal, 2005). Given this, are consumer electronics rebate promotions structured differently to those in other product categories?

Furthermore, rebate promotions offer either cash, (or cash equivalents such as cheques, debit cards etc.), or products as the sales incentive. How prevalent are each of these forms of rebate incentive? Further, are there differences between product categories in the usage patterns for each type of rebate incentive?

It is common in the popular press to read complaints that rebate requirements are too hard or complex. Some commentators have even suggested that companies make redemption requirements deliberately difficult in order to dissuade redemptions (Ploskina, 2008, Ross, 2010). If this were the case one would expect that firms that utilise rebate promotions more frequently to have a greater number of redemption requirements.

3.1 METHODOLOGY

Data collection proceeded in two stages as identified by Griffith and Krampf (1998). In the first stage, information on rebate promotions was collected from the websites of leading Australian retailers and manufacturers, along with direct internet searches. It is noteworthy that whilst the search for rebate promotions was primarily conducted online, the promotions themselves were not online only promotions. They were available in ‘bricks and mortar’ stores.

An online advertising search was deemed appropriate for several reasons. Firstly, given the geographic size of Australia it is not practical to physically visit all retail outlets. Secondly, the conditions accompanying the promotions surveyed did not vary across locations, they applied Australia-wide. The sample is seen as representative for that period of time. Thirdly, it is common practice for manufacturers to post promotion conditions on their websites to comply with Australian consumer law, requiring
An Analysis of Buyer Behaviour in Response to Rebate Promotions

conditions be made readily available to consumers. Promotions were included in the study only where the full terms and conditions could be sourced from the promoter.

In the second stage, promotions where grouped based on their primary product function. For example, products whose primary usage occurred in a household laundry where classified as ‘Laundry Products’ (Table 1). This grouping methodology facilitated further analysis between groups, in particular if rebate promotions characteristics varied by product category. In addition, the type of rebate (i.e., cashback or product reward) the number and type of redemption requirements, promotion dates, rebate payment method, and the maximum payment time were among the characteristics recorded for each eligible product.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Electronics</td>
<td>Products associated with audio/visual or computing including hardware and software, televisions, DVD/Blu-ray players, theatre systems, gaming consoles.</td>
</tr>
<tr>
<td>Electrical Products</td>
<td>Hand held electrical products, excluding A/V or Computer products, e.g. coffee machines, vacuum cleaners, electrical tools, shavers, toothbrushes.</td>
</tr>
<tr>
<td>Household Products</td>
<td>Large ‘durable’ products used in the house not falling into other categories, e.g. air conditioners, water heaters, water tanks, swimming pool accessories</td>
</tr>
<tr>
<td>Kitchen Products</td>
<td>Products specifically designed for use in the kitchen, e.g. refrigerators, ovens, cooktops, food processors, dishwashers</td>
</tr>
<tr>
<td>Laundry Products</td>
<td>Products specifically designed for use in the laundry, e.g. washers, dryers, cloths irons, steam presses</td>
</tr>
</tbody>
</table>

Promotions Defined

A promotion was considered a rebate promotion and included in this study if, in order to receive their reward/discount the applicant was required to buy an eligible product and undertake a post purchase redemption process (Figure 2). Promotions advertised as ‘rebates’, ‘cashback’, or ‘bonus product’ where the consumer received the reward at point of purchase were not included.
Requirements Defined

For the purpose of this study redemption requirements were defined as those where the applicant had to complete a task. Further, they had to be designated as mandatory. This most often took the form of an asterisk, e.g. “Please complete all mandatory fields marked with *”, or, via a statement similar to, “Each claim must be made on a fully completed Promotion claim form.”

This is in contrast to general terms and conditions which define the scope of the promotion, eligibility criteria, legal definitions etc. For example, the request to complete a redemption form was considered a requirement, as was recording the product serial number, or, cutting the barcode from the box. On the other hand, conditions such as employees of the promoter were not eligible for the offer and/or that bonus products could not be exchanged for cash, were not considered requirements.

3.2 RESULTS

A total of 268 individual rebate promotions from 102 manufacturers covering 2475 products were collected (Table 2). The promotions consisted of either a cash back (56.6%) or bonus product (43.4%) rebate offer. Of the five product categories 73% of the products were either a consumer electronics product (37%) or a kitchen appliance (36%). Consumer electronics products accounted for 50.5% of cash back rewards and kitchen appliances 55.5% of bonus product rewards (p<0.001).
Table 2: Rebate/Product Composition

<table>
<thead>
<tr>
<th>Rebate Type</th>
<th>Consumer Electronics</th>
<th>Electrical Product</th>
<th>Household Product</th>
<th>Kitchen Product</th>
<th>Laundry Product</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Back</td>
<td>708</td>
<td>160</td>
<td>136</td>
<td>303</td>
<td>95</td>
<td>1402</td>
</tr>
<tr>
<td>Product</td>
<td>205</td>
<td>172</td>
<td>60</td>
<td>596</td>
<td>40</td>
<td>1073</td>
</tr>
<tr>
<td>Total</td>
<td>913</td>
<td>332</td>
<td>196</td>
<td>899</td>
<td>135</td>
<td>2475</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean Rebate Face Value</th>
<th>Mean Shelf Price</th>
<th>Mean Rebate %%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Back</td>
<td>$151.32</td>
<td>$1,350</td>
<td>14.43%</td>
</tr>
<tr>
<td>Product</td>
<td>$110.33</td>
<td>$595</td>
<td>36.11%</td>
</tr>
<tr>
<td>Total</td>
<td>$175.35</td>
<td>$1,413</td>
<td>15.54%</td>
</tr>
</tbody>
</table>

**General Characteristics**

The mean rebate face value across the sample was $175.35, the median=$100.00, and std dev=$270.35. The samples mean product shelf price was $1,413.68, the median=$799.00, and std dev=$2,136.03. Dividing the rebate face value by the product shelf price yields the rebate value as a percentage saving. The sample had a mean saving of 15.54%, a median=9.08%, and std dev=31.12%.

The results of ANOVA tests established there were significant differences in the rebate value, shelf price, and the rebate percentage between the product categories. Tukey post hoc tests revealed household and kitchen products had the highest mean rebate face value (p<0.001), whilst electrical products had both the lowest mean product shelf price and highest mean rebate percentage (p<0.001). Further, t-tests showed cash back promotions had a lower mean rebate face value (p<0.001), a higher mean shelf price, which produced a lower mean saving percentage (p<0.001) than bonus products.

**Analysis of Redemption Requirements**

Whilst the specific requirements varied between the 268 promotions, there were eight that were more common. Seven are shown in Figure 3, whilst the eighth is the requirement to complete a redemption form – either manually or online – which was common to all. Of the seven, the requirement to supply an invoice copy (98.8% of promotions) and the date of purchase (93.6% of promotions) were common to almost all promotions. Further, the store name (83.7% of promotions), store location (75.7% of promotions) and product serial number (77.9% of promotions) were required by most promotions. Additionally, Figure 3 shows the requirement to provide a sample of the packaging – usually the bar code – was more common to consumer electronics.
promotions (57.1%), as was the requirement to pre-register the purchase prior to commencing the redemption process (82.8%).

Figure 3: Promotions Containing Each Requirement Grouped by Product Category

C1 – Pre-Claim Registration

Requirement C1 requires the consumer to register their purchase online before commencing the redemption process. It is noteworthy that pre-registration was a precursor to the process of redemption and did not negate the requirement to complete a redemption form. Not completing the pre-registration before redeeming, however, led to the consumer becoming ineligible to redeem.

For example (Figure 4), a number of promotions required the consumer to complete pre-registration online within 14 days of purchase – there was no offline path for pre-registration. At completion of the pre-registration the consumer was sent a confirmation email containing a registration number. The consumer then had an additional 14 days in which to complete the online redemption process, utilising the pre-registration number. When completed, the online form had to be printed and mailed with the necessary proof(s) of purchase, to be received by the manufacturer within a set number of days. It is questionable whether most consumers who purchase a qualifying product, would expect to have to meet this level of compliance?
This pre-registration requirement has the potential to cause consumer angst in a number of ways. Firstly, there is no obvious role in deterring fraud. A more reasonable explanation is that it is a budgeting measure, providing a timely estimate of the manufacturers pending liabilities. With this information promoters could, depending on redemption rates, alter, extend, or close an offer. There are ways of managing budgets without causing consumer angst. For example, several promotions limited the number of redemptions available. They provide counters (Figure 5) on their website showing the number of redemptions remaining.

C3 – Product Serial Number

The serial number is generally located on the product, and in most cases is easily obtained. A problem may occur if the product can be mounted, like televisions, or installed like dishwashers. In their cases the serial number may not be easily accessible after installation. The consumer is then faced with weighing the value of the rebate against the cost and/or difficulty of accessing the serial number.
Whilst the serial number is generally easy to locate, it may not always be easy to identify. Figure 6 is such an example – here the number required is the last 9 characters of a 15 character sequence printed on a sticker titled ‘Machine SN’. It is easy to conclude that ‘Machine SN’ is short for Machine Serial Number and thus the full 15 character sequence is required. The online redemption form, however, would only accept 9 characters. It is not hard to imagine this being a source of angst.

Figure 6: Obscure Serial Number Sample

In a similar example, the author has had personal experience of attempting to enter a serial number via an online redemption form that required the number to be entered in a different format to that shown on the data label. The data label listed 910-900125, whilst the redemption form required 9109100125 (i.e., without the ‘-‘).

C4 – A Packaging Sample

The condition requiring an item from the packaging sample seems simple – first cut the barcode from the packaging and send it in. It is, however, a requirement often cited in industry reports as causing consumer angst and frustration (Arar, 2007, McDermott, 2001). It requires the consumer keep the original packaging, which presumes an awareness of the need to do so before beginning the redemption process. It is not a common condition across product categories with consumer electronics promotions accounting for 57% of its use (Figure 3). No household product promotions had this requirement.

The most common packaging requirement was the barcode. Confusion could arise where there is more than one product in a bundle, or, more than one barcode on the packaging. For example, a computer system consists of several items, a computer, keyboard, mouse, printer etc. It may not always be clear which barcode, from which product, is required. Figure 7 shows two examples where the promoter took the extra step of including an illustration to assist the consumer to identify the correct
An Analysis of Buyer Behaviour in Response to Rebate Promotions

information. This measure may be a result of frequent customer complaints. This assistance was not common across the audit of Australian rebate promotions.

Figure 7: UPC Identification Sample

Some promotions required more than one barcode be included in the redemption. For example, several promotions required two separate sections of the packaging be included – the barcode and a token located on an inside flap of the box (Figure 8).

Figure 8: Multiple Sample Packaging Example

C8 – Completing a Redemption Form

The requirement to complete a redemption form, either manually or online, would be a component of most companies procedures. From a consumer view point, it is difficult to foresee a rationale why an applicant would not have to provide this basic level of information. It is foreseeable that some consumers may have difficulty completing an online form, or finding and downloading a form from a website.

A number of promotions only provided an online redemption process via their website. This requires the applicant to scan and ‘attach’ the copy invoice to the form before submitting. For some this would be a difficult task – they either lack the technical knowledge and/or the equipment to do so. Whilst they were permitted to print the form after completion and mail it with invoice, it constitutes an additional step. Had the manufacturer provided an offline option for redemption this additional step would not be required.
The Number of Requirements per Product Category

The reader is reminded that whilst the specific requirements varied between the 268 promotions, there were eight that were more common. Seven are shown in Figure 3 above, whilst the eighth is the requirement to complete a redemption form – either manually or online – which was common to all. The number of redemption requirements in fact had a range of one to ten (Figure 9), with mean=5.57, median=5.00, and std dev=1.931.

It is of interest to examine whether the number of redemption requirements differs between product categories. For example, the consumer electronics industry was responsible for the growth in popularity of rebate promotions in the ‘90s (Grow and Chhatwal, 2005). Given this, do consumer electronics rebate promotions differ to other product categories in the number of redemption requirements employed? One method of investigating this relationship is determine whether there are significant differences between the mean number of rebate redemption requirements employed between product groups.

The results of applying an ANOVA to the data revealed the mean number of requirements was significantly different (p<0.001) between product categories. Tukey post hoc tests confirmed promotions for consumer electronics had a higher mean=6.63 (p<0.001) requirements per promotion than the other four groups. Laundry appliance promotions were amongst the lowest with a mean number of requirements of 4.62. There was no significant difference in the number of requirements between cash back (mean = 5.73) and bonus product (mean = 5.39) promotions.

When one looks at the distribution of requirements four categories have a peak frequency of five with less than 45% of their promotion carrying six or more redemption requirements. By comparison consumer electronics promotions have a peak of eight, with 76% of the promotions carrying greater than five requirements (Figure 9).
The Number of Redemption Requirements by Promotion

It is common in the popular press to read complaints that rebate requirements are too hard or complex. Some commentators have even suggested that companies make redemption requirements deliberately difficult in order to dissuade redemptions (Ploskina, 2008, Ross, 2010). Whilst directly testing this claim is beyond the scope of this study, it is of interest to understand the relationship between the number (frequency) of rebate promotions used by manufacturers and the number of requirements employed. One would expect that if the assertion is correct, the number and/or complexity of requirements per promotion would increase as promoters used rebates more frequently.

An analysis of the number of times manufacturers utilised rebate promotions during the survey period, reveals a negative sloped frequency chart (Figure 10). That is to say, there are a decreasing number of manufacturers utilising rebate promotions with greater frequency. Furthermore, the sample can be divided into three, approximately equal, groups – those that ran rebate promotions two or fewer times during the period (34.9%), between three and five (32.3%), and six or more (32.3%). These ‘promotion frequency’ groups are denoted 1 through 3, and low through high users respectively (Figure 10).
Having established that firms utilise rebate promotion with different regularity it is of interest to determine if there are differences between the number of redemption requirements employed between these frequency groups. One method of investigating this relationship is to determine whether there are significant differences between the mean number of rebate redemption requirements employed between the frequency groups.

ANOVA results show there are significant differences in the mean number of requirements between the frequency groups. Tukey post hoc tests showed Group 1 (low users of rebate promotions) promoters had the lowest mean number of requirements per promotion at 4.88 (p=0.022), followed by Group 2 (medium users of rebate promotions) = 5.56 (p=0.01), and Group 3 (high users of rebate promotions) = 6.63 (p<0.001). In other words, as promoters use rebate promotions more frequently the number of requirements employed per promotion increases.

**Payment Terms**

A total of 252 (94.0%) promotions included a ‘maximum’ payment time in the terms and conditions. This usually took the form of a statement to the effect, “Please allow up to xx days to receive your payment”. The payment period had a mean = 50.6 days, with a median = 55.0 days and std = 22.7 days. Applying an ANOVA using the previously defined promoter groups (Figure 10) shows significant differences in the promised payment period between groups. Tukey post hoc tests indicate Group 1 (low users of rebate promotions) promise significantly quicker payment, mean = 43 days than both Groups 2 (mean=54 days, p=0.002) & 3 (mean=55 days, p=0.003). There was no
significant difference in the promised payment period between cash back (mean=52 days) and product (mean=49 days) promotions.

**Bonus Product Promotions**

Bonus product promotions have an advantage for manufacturers over cash backs because their perceived value is often substantially higher than their cost, particularly if the bonus product is made by the promoter. This is reflected in higher face values and rebate percentages for bonus product versus cash back promotions. There are, however, aspects of these promotions which appear unreasonable and warrant discussion.

Some promotions required the consumer to pay the cost of shipping the bonus product. Is it a reasonable expectation when applying for a ‘bonus product’ that you would have to pay the shipping charge? The shipping charge could have a substantial effect on the promotions attractiveness, and if discovered post-purchase could be a source of negative sentiment. Further, the consumer had to provide bank details at the time of redeeming so the shipping costs could be charged prior to the bonus being despatched. For some consumers privacy concerns will outweigh the value of the bonus product and they will not redeem. Additionally, it was not clear how long after the freight was paid that the bonus product would be shipped. Angst would be increased if consumers considered this gap was too long.

### 3.3 SUMMARY AND DISCUSSION

The survey results revealed interesting insights between product categories. Computer products favour cash backs over bonus product promotions. They had one of the lowest mean rebate face values, shelf prices, and rebate percentages. Conversely, they had the highest minimum, maximum, and mean number of redemption requirements. Two of the more seemingly onerous requirements, pre-registration and sample packaging, were associated almost exclusively with this category. Whilst the rebate was more likely to be cash back, 59% were paid via EFTPOS cash card, which also carry strict conditions, including an expiry date. This finding may be a result of the low margin, short life cycle products common to this category, where suppliers need to continually turn over inventory before it is superseded.

Kitchen appliance promotions were heavy users of bonus products. They had the highest average rebate face value, shelf price, and rebate percentage. Whilst they had among the highest number of redemption requirements they tended to be a less onerous
An Analysis of Buyer Behaviour in Response to Rebate Promotions

type. They were also more likely to use store specific promotions, which may explain the requirement to provide store name and location – providing this information requires little additional effort by the consumer.

Of the 33% that used cash back, 50% were paid via cheque or EFT payment, 35% via store voucher, only 16% via EFTPOS cash card. Kitchen appliance promotions appear less likely to cause undue angst to consumers claiming their rebate. Given their higher shelf price and range of products, they may be more sensitive to negative publicity and its effects on repeat business and sales of complementary product.
Chapter 4. Rebate Promotions: Fraud Deterrence vs. Ease of Use

In the preceding chapter, an industry-based audit of rebate promotions was conducted. As a result of this audit, a clearer picture of rebate promotions has emerged. For example, the composition of rebate redemption requirements has been defined. Further, we now know that the number rebate conditions employed varies by product category. Similarly, we know that as firms utilise rebate promotions more frequently the number of redemption requirements employed per promotion increases.

Armed with this new knowledge of rebate redemption requirements, this chapter looks more closely at their origins and current usage. As will be discussed later in this chapter, redemption requirements feature regularly in the popular press as a source of angst. Further, as will be discovered, the Australian Competition and Consumer Commission has made several ruling against firms in relation to the onerousness of redemption requirements. If rebates are to be an effective promotion tool, they must have credibility with consumers. This requires redemption compliance requirements which both discourage fraud and encourage positive consumer sentiment; a difficult balance. It is reasonable that companies engaging in rebate promotions protect themselves against fraud, by ensuring that consumers applying for a rebate have bought a qualifying product within the promotion period. As such, those claiming a rebate have a certain onus of proof.

Policing promotion compliance is costly and has given rise to specialty ‘fulfilment houses’ that lessen this burden by providing promotion management services. To determine what are services offered by these service providers, and to get a sense of the real world experience with the rebate redemption process, comment was sort from five of the larger fulfilment houses in Australia. In the following sections, their responses have been reproduced where appropriate to add this real world element to the discussion. Unfortunately, none of the five would give official statements. However, there were willing to provide information on the condition of anonymity.

Through the interviews, it was discovered that fulfilment services range from designing websites, to processing redemption forms, to issuing payments, and everything in between. They are generally not responsible for creating or setting promotion requirements. Firms have the option to employ a fulfilment house to handle the whole promotion, or if they have a limited budget, only certain aspects of the promotion, e.g. processing claims.
The interviews revealed that with the increased usage of Rebate promotions there has also been an increase in the likelihood of fraud. A number of fraud examples where given and are quoted below,

“(A)...printer supplier ran a cashback promotion. People would buy 10 printers, claim the cashback, then return the printers for a credit. This led to longer rebate payment terms, 60-90 days, so the product was outside the return window before the cashback was paid.”

And,

“Promotions which require a unique code from the packaging to be entered on a website, or SMS’ed, lead to people writing programs to crack the code algorithm and then enter them on mass.”

One advantage of the fulfilment house is identifying perennial fraudsters. According to one fulfilment house, there is a “...core group of people who actively seek to claim when they aren’t entitled, via multiple I.D.s.”. Another states, “...it (fraud) occurs but is a low percentage of total claimants,” and continues, “...it is harder (now) because of the use of technology.” And yet another, “...prior to the use of technology things like unique barcodes were common.” Other authors have similarly noted the part fulfilment houses play in monitoring fraudsters, “...Young America Corp., the nation's largest processor, says it now monitors 10,000 addresses suspected of submitting bogus rebates” (Grow and Chhatwal, 2005).

Redemption requirements are an important aspect of rebate promotions. As such, a closer examination of promotion requirements is required. Having identified the eight most common requirements in Study 1, the investigation is extended to determine if these requirements could effect redemption behaviour.

The requirement to complete a redemption form providing the applicants contact details along with a copy of the receipt proving purchase, are reasonable requests. An invoice generally contains the date of purchase, the product details, and store information. More importantly, they are sequentially numbered, thus providing a unique identification code for each purchase. Provided manufacturers ensure no invoice/store/date combination is submitted twice, a copy invoice/receipt provides a strong confirmation that a qualifying purchase has been made.
The purchase date, store name, and store location are generally all available on the copy invoice, so requiring them to be entered separately on the redemption form serves no obvious additional purpose in deterring fraud. In the case of online redemption, however, having the consumer complete these details has the advantage of reducing the administrative burden for the manufacturer.

Given the proliferation of desktop publishing software it is conceivable that an invoice could be fraudulently created or altered to give the appearance that a qualifying purchase has been made to claim a rebate. Providing the product serial number affords an additional level of surety and cross-checking for the manufacturer. As previously outlined, providing a serial number would in most cases be relatively simple. Whilst this requirement has some role to play in reducing fraud, it shouldn’t cause confusion or contribute to the consumer submitting the wrong information. Further, where a mistake on the consumer’s behalf is ‘reasonably’ foreseeable, the strictness of the condition could be relaxed. Perhaps, for example, the consumer is given a second chance to submit the correct detail.

Pre-registration is the most onerous redemption requirement and serves no clear function in reducing fraud. Perhaps the most insidious aspect of pre-registration is the requirement to perform multiple tasks in a set sequence. Add to this the necessity to complete each of the steps within a narrow timeframe, and likelihood of generating consumer annoyance becomes more certain. It is easy to argue that pre-registration is designed to encourage slippage by providing multiple points at which claims can be denied. If the consumer has provided all necessary proofs of purchase, it seems unreasonable for a claim to be disallowed based on this requirement alone.

Whilst a relatively high number of requirements may be interpreted as onerous by most, it is more likely to be the case if the ‘extra’ requirements are also difficult and if non-compliance leads to a rejected claim. Furthermore, the composition of promotion requirements, rather than their total number, could be the determining facet. For example, Promotion A with five conditions (e.g. a registration form, store name, store location, copy invoice and purchase date) could be perceived as less onerousness than Promotion B with only four conditions (e.g. a registration form, copy invoice, packaging sample and pre-registration).

One of the more significant findings of Study 1 relates to the behaviour of companies who were regular users of rebate promotions. As the frequency of rebate promotions
An Analysis of Buyer Behaviour in Response to Rebate Promotions

increases so too do the number of redemption requirements and length of payment time per promotion. In other words, it is harder to claim and be paid. It is easy to conclude that this is a deliberate ploy to generate sales and suppress redemptions. That through experience promoters have learnt increasing the number, and/or onerousness, of redemption requirements does in fact reduce redemptions. It is a reasonable contention.

It may be, however, that these promoters have simply been exposed to higher levels of fraudulent claims, and as such have tightened their compliance requirements. Perhaps, by promoting more they are more exposed to budget over runs and require tighter controls to ensure only legitimate claims are paid. As noted by one fulfilment house contacted, “...compliance costs are one of the most costly aspects of cashback promotions”

It has been argued by many in the popular press that companies make the redemption process deliberately onerous in order to reduce redemption rates. The results of Study 1, whilst not proving the case either way, do offer support for this premise in some product categories and promotions.

In an examination of coupon promotions, Inman and McAlister (1994) ask whether promotion conditions, specifically expiration dates, have any effect on consumer behaviour. Using scanner data for 260 spaghetti sauce coupon drops they find a surge in sales close to the expiry date. Put another way, they find the promotion conditions do effect consumer behaviour.

Xia et al. (2010) examine this issue from a slightly different perspective. Do promotion characteristics affect consumers’ perceptions of fairness, thereby influencing their perceptions of price fairness? For example, whilst acquiring a product on promotion may reduce consumers’ monetary expenses, it may increase consumers’ nonmonetary expenses. In the case of coupons, that includes searching for and clipping a coupon. Whereas, in the case of rebates saving a receipt and carton bar code. The nonmonetary costs, however, do not always result in a lower price. A coupon may have expired or a rebate redemption may be refused. Do these unrewarded efforts influence consumers’ price fairness perceptions?

Using college students in a simulated shopping experiment, Xia et al. (2010) found that when consumers are denied the saving, those who spent more nonmonetary effort perceived the price as less fair than those who spent less effort. Equally, as the level of perceived effort increased, the feeling of entitlement to the promoted price increased.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

And, higher perceived effort led to a more negative interpretation of the inferred retailer’s motives, which further contributed to the higher feeling of entitlement to the promoted price. In short, when consumers are denied the promoted price, perceived level of effort may have a negative effect on inferred retailer motives and the fairness of the promotion.

One fulfilment company acknowledged that stricter requirements, “...do (negatively) impact redemption rates”, but adds “...not deliberately so.” Another company commenting on the number of conditions, “Has no effect on the redemption rate because all manufacturers have the same sort of conditions. Consumers are aware that they have to do stuff.” And another, “People also expect to have a higher onus of proof with higher value products and buy prices.”

Conversely, one commenter was quite certain that redemption requirements negatively effect redemptions rates, “people do get turned off by the conditions and don’t redeem.” They offered the following example, “...a company ran a promotion several years ago with minimal data collection and received over 98,000 redemptions. They ran an identical promotion a year later, with the requirement to enter more data via a website and received only a little over 18,000 redemptions.”


Promotion requirements have even been ridiculed in cartoons, e.g. to claim a rebate Dilbert must pass five tests of a monster named ‘Rebaterus’. He gives up without receiving the rebate (Figure 11).
This perception is re-enforced when, in the name of consumer protection, regulators have to step in and force companies to more clearly disclose conditions (Odell, 2011). And consumer advice groups, such as the Better Business Bureau, report rebate promotion complaints almost tripling in number from 964 in 2001 to 2,715 in 2005 to as high as 4,500 in 2008 (Trope and Liberman, 2010).

The Australian Competition and Consumer Commission has issued several statements warning companies over misleading and obscure rebate conditions (ACCC, 1996, ACCC, 1998). Furthermore, prosecutions have resulted where conditions were deemed, “…particularly unusual and onerous…” (ACCC, 2010 pg.1), where consumers have been misled, or where conditions have been concealed (ACCC, 1996).

The process of claiming the rebate creates a barrier to redemption and contributes to the phenomenon known as ‘breakage’, whereby consumers who are eligible for the rebate fail to apply. Manufacturers may make the rebate process intentionally onerous (i.e., more elaborate than required to reduce fraud) in order to increase the breakage rate and their profit (Rae-Dupree and Spring, 2004, Federal Trade Commission, 2002, Matthew, 2007).

A related phenomena, known as ‘slippage’, occurs where consumers who receive a rebate payment fail to use it (Grow and Chhatwal, 2005). Promoters have the ability to influence slippage in a number of ways. Rebate cheques and cash cards can carry expiry dates. Further, cheques and cash cards can be store specific such that they can only be used in the store that issued them. Cash cards have an added advantage – they are often discarded without the full balance being spent (Ewoldt, 2010).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

4.1 Breakage

The delayed incentive characteristics of rebates make them advantageous to sellers (Soman, 1998, Arcelus et al., 2007, Ploskina, 2008). Consumers drawn by the rebate’s effective lower price may have minimal knowledge or concern for the associated redemption efforts that may prevent them from claiming the discount. Breakage occurs when consumers eligible to redeem a rebate fail to do so. Jolson et al. (1987) identified five key reasons for breakage: 50% lost the required proof(s) of purchase, 47% found the attractiveness of the rebate relative to the redemption effort as insufficient, 31% were not given a rebate form at the point of sale, 10% were put off by the delayed payment. Other authors cited onerous redemption requirements (Tat et al., 1988), time-inconsistent preferences (Soman, 1998), procrastination (Gilpatric, 2009, Soman, 1998), and forgetfulness (Lu and Moorthy, 2007).

Effort-Reward Relationship

Tat (1988) found a negative relationship between rebate redemption and the perceived redemption process difficulty. In a later study Tat and Lee (1993) identified three consumer motives for rebate redemption: price consciousness, personal satisfaction from redeeming a rebate to save money, and perceived time and effort of the redemption process. The first two had a positive influence on the consumer’s decision to redeem. Time and effort were inversely related to redemption rates. Rebate users agree there is too much time and effort required in the redemption process, which deters them from claiming redemptions (Tat and Lee, 1993).

Paradoxically, a later study by Tat and Schwepker Jr (1998) investigating linkages between various consumer motives and rebate redemption, found people who gain satisfaction from the redemption process are more likely to redeem. Whilst time and effort had no direct effect on the redemption rate, they had a significant effect on satisfaction with the redemption process, and therefore indirectly on redemption rates. That is to say, they found a significant indirect relationship between time and effort and redemption rates. The less time and effort involved in redeeming the greater the satisfaction gained from the process and thus the more likely an individual is to redeem.

Gerstner and Hess (1991) conclude that the decision to redeem rebates is a function of redemption costs (T) and the rebate value (R), such that consumers will redeem provided R>T. Redemption costs are a function of an individual’s opportunity cost of time, which is determined by their income and social circumstances. Examples of
factors which influence an individual’s opportunity cost of time include: single versus dual parent families, families with young versus no children, individuals caring for the sick or elderly, and/or those completing further education (Lu and Moorthy, 2007).

Therefore, the redemption requirements are relatively more expensive for consumers with a high (H) opportunity cost of time than consumers with a low (L) opportunity cost (i.e., $T_H > T_L$). As $T_H$ approaches $R$, H consumers will be less likely to redeem, whereas L consumers, paying $P_1 = P_0 - R + T_L$, will be more likely to redeem (Gerstner and Hess, 1991a).

Tat and Schwepker Jr (1998) suggest that consumer satisfaction, and therefore redemption rates, can be increased by reducing the length of time required to pay the rebate, making rebate forms readily available, and requiring less strenuous tasks to qualify. Whilst the authors recognised increased redemption rates mean increased costs for the manufacturer, they suggest the resulting increased customer loyalty will offset this cost.

In a more recent survey NPD (2005) found the most commonly cited reason for dissatisfaction with rebate programs was "prefer instant cash" (35 percent), followed by "too much work for the money" (25 percent), “forgot to mail in or go online to redeem their rebates before the expiration” (17%). The survey also asked what types of changes would improve the rebate redemption process, to which almost half said “shorten the waiting time it takes to receive rebate funds”, reduce “…the information and materials required to complete rebate forms” (43%), and “use purchase codes instead of receipts” (33%).

If one accepts the underlying assertion of those in the popular press – that the redemption process is made deliberately onerous to discourage redemption – it follows that promoters fear relaxing redemption requirements would produce a substantial increase in redemption rates, and thus an increase in cost. There is sufficient evidence in the literature of a myriad of factors affecting redemption behaviour, of which onerousness is but one. For this reason, it is unlikely that simplifying the redemption process alone would cause a substantial rise in redemption rates. Given, the abundant evidence that onerousness is a significant cause of consumer angst and resentment, the following hypothesis (H1) is proposed. Hypothesis H1 will be tested in Chapter 8, where the two paths to redemption will be fully described.
**An Analysis of Buyer Behaviour in Response to Rebate Promotions**

**H1**: A rebate promotion offering two paths to redemption, each with different levels of onerousness, will not see a preference for the simpler path.

**Time-Inconsistent Preferences**

Time-inconsistent preferences arise when individuals discount the cost of taking proximal action more heavily than that of distant actions, which leads consumers to over-estimate their likelihood of redeeming (Gilpatric, 2009, Soman, 1998). At the point of purchase, the consumer weighs the perceived benefit of an incentive higher than the perceived future hassle of redeeming the rebate. Even though the rebate arrives some time after the redemption effort, the saving is clear, salient, and unambiguous at the time of purchase and integrated easily into the purchase price.

Yet when consumers contemplate redeeming, the immediate effort appears large and the distant reward appears as insufficient compensation (Soman, 1998, Lu and Moorthy, 2007). So long as the effort is required in the future it will be under-valued, encouraging further procrastination, and as a result redemption may not occur (Soman, 1998). Yet another group of consumers may simply forget to redeem, regardless of their initial intentions to do so (Matthew, 2007).

As such, consumer purchasing decisions appear more responsive to the face value of the rebate, and future consumer redeeming decisions are more responsive to the costs of redemption (Khouja et al., 2008b, Soman, 1998). Furthermore, the longer the rebate redemption period, the lower the final redemption rate (Khouja et al., 2008b, Gilpatric, 2009).

At least four consumer behaviour approaches help explain why people are more likely to overestimate the probability of future redemption behaviour. Soman (1998, p.429) succinctly summarises them as follows: “First, choice is determined by current factors (visceral or cognitive). Second, there is broad consensus that the pain of future effort is underestimated. Third, future effort is difficult to incorporate in intertemporal decision making by virtue of being inherently ambiguous to evaluate and susceptible to unpredictable visceral factors. Fourth, losses are discounted at a higher rate than gains.”

**4.2 Promotion Requirements**

An underlining assumption in the breakage literature is that consumers in fact find promotion requirements onerous and further, that this influences their redemption
An Analysis of Buyer Behaviour in Response to Rebate Promotions

behaviour. Whilst not suggesting this premise is incorrect, there are no studies expressly comparing rebate promotion requirements and their relative onerousness.

There are, however, numerous press reports either criticising promotion requirements, or, recounting stories of woe in relation to rebate promotion experiences. A simple Google search on, “I hate mail in rebates” yields over 200,000 results. It even has its own Facebook page!

Table 3 provides a summary of the more common issues taken from a search of the literature. The most common complaints are over the rebate payment taking too long, and, difficulty around choosing the right bar code on the packing. The later was highlighted as a potential source of angst in the results of Study 1.

**Table 3: Common Complaints about Rebate Promotion Requirements**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn't send ‘proof of previous ownership’</td>
<td>Barlyn (2007)</td>
</tr>
<tr>
<td>Displeasure at receiving the Rebate payment as credit card</td>
<td>Tonn (2010), Clark (2005), Ellen ()</td>
</tr>
<tr>
<td>Fine print (difficult to read)</td>
<td>Edwards (2009)</td>
</tr>
<tr>
<td>Incomplete application</td>
<td>Moses (2009), McCarron (2009)</td>
</tr>
<tr>
<td>Incorrect copy invoice submitted</td>
<td>Barlyn (2007)</td>
</tr>
<tr>
<td>Price confusion</td>
<td>Edwards (2009)</td>
</tr>
<tr>
<td>Privacy concerns</td>
<td>Edwards (2009)</td>
</tr>
<tr>
<td>Product purchased outside promotion dates</td>
<td>Ploskina (2008), Gelles (2005)</td>
</tr>
<tr>
<td>Rebate form unavailability</td>
<td>Edwards (2009)</td>
</tr>
</tbody>
</table>
An Analysis of Buyer Behaviour in Response to Rebate Promotions

It is worth noting that each of the examples shown in Table 3 occurred after the consumer tried to redeem (i.e., they produced a rejected claim) so strictly speaking they were not a source of breakage. Whilst managers should be keen to address repeated sources of consumer complaints, they should be equally keen to know which aspects of their promotions encourage breakage. By taking actions to correct their adverse side effects, managers can proactively address consumer’s angst before they become a complaint.

In the next section, the characteristics of promotion requirements are investigated from two angles. Do consumers perceive differences between the onerousness of conditions? Can these perceptions influence their redemption behaviour?
Chapter 5. **Study 2: Ranking The Onerousness Of Rebate Conditions**

It is reasonable that companies engaging in rebate promotions protect themselves against fraud, by ensuring that consumers applying for a rebate have bought a qualifying product within the promotion period. As such, those claiming a rebate have a certain onus of proof. The question becomes, can the onus of proof act as a disincentive to redemption? If so, then this knowledge would be invaluable to marketing professionals when designing rebate promotions.

Study 1 in Chapter 3, showed that as companies use rebate promotions more frequently they employ a higher number of redemption requirements. This is perhaps one reason so many in the popular press argue companies make the redemption process deliberately onerous in order to reduce redemption rates. That through experience with rebate offers, promoters have learnt that increasing the number, and/or onerousness, of redemption requirements reduces the number of redemptions. Whilst not addressing this question directly, the results of Study 1 offer tacit support for this premise in some product categories and promotions.

Having identified the eight most common requirements, the investigation is extended in this chapter to determine if these requirements could effect redemption behaviour. In particular, is any one requirement, or group of requirements, more likely to deter redemption? The literature suggests that consumers could be discouraged from redeeming if the requirements of the promotion were burdensome or difficult, and/or if the benefits of redeeming outweighed the risks or disadvantages. In other words if the requirements of the promotion were onerous in nature.

5.1 **Methodology**

The requirements identified in Study 1 (Chapter 3), as being common to rebate promotions, were selected as the basis of this study (Table 4). Each requirement was assigned to one of four groups based on the general ‘intent’ of the requirement. For example, the category ‘Nuisance Value’ are requirements that serve no obvious purpose in deterring fraud, yet require the consumer to ‘jump through a number of hoops’ in order to redeem or use their refund.

The category ‘Activity’ are requirements that require the consumer to perform a designated action. ‘Paperwork’ is seen as information based requirements that require
lack of effort to complete. ‘Privacy’ requirements are those where the consumer has to provide ‘sensitive’ information, such as bank account and/or credit card details.

### Table 4: Common Rebate Promotion Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Nuisance Value (NV) | **Redeem Online Then Mail**  
(complete the redemption application online, then print and mail a copy to the manufacturer) |
| Nuisance Value (NV) | **Register Purchase Before Redeeming**  
(Visit manufacturers website within 14 days of purchase and registering details of purchase. The manufacturer will then send you an email confirming registration and provide a unique code. You then return to the website and redeem your cashback using the unique code, within 14 days. You then print and mail the redemption application to the manufacturer within 14 days.) |
| Nuisance Value (NV) | **Payment Via EFT Card**  
(Your cashback is paid using an EFTPOS card. You must call the provider to activate the card before it can be used. The card expires after 6 months and any unused credit is lost) |
| Activity (AC) | **Provide a Copy Receipt**  
(include a copy of the purchase receipt with the redemption form) |
| Activity (AC) | **Sample Packaging**  
(Cut a sample from the product packaging, usually the bar code, and include it with the redemption form) |
| Activity (AC) | **Serial Number**  
(Provide the serial number from purchased product) |
| Paperwork (PW) | **Complete Redemption Form**  
(Complete a redemption form either manually or online) |
| Paperwork (PW) | **Provide Purchase Date**  
(Enter the date the product was purchased on the redemption form) |
| Paperwork (PW) | **Provide Store Location**  
(Enter the store location where the product was purchased on the redemption form) |
| Paperwork (PW) | **Provide Store Name**  
(Enter the store name where the product was purchased on the redemption form) |
| Privacy (PR) | **Pay Freight on Bonus Products**  
(Your rebate is a bonus product, e.g. free washing powder, which must be shipped from the manufacturer. You are required to pay the freight to ship the bonus product.) |
| Privacy (PR) | **Provide Bank Account Details**  
(Your cashback is paid via direct transfer. You are required to include your bank account details on the redemption form) |
In addition to the eleven requirements identified in the industry audit (Chapter 3), the requirement to ‘Payment Via EFT Card’ was added as an additional, 12th requirement. At the time of undertaking the industry audit the significance of this requirement was not fully appreciated. During the literature review in Chapter 4 it became evident from press reports that it was in fact a source for angst (Tonn, 2010, Clark, 2005).

**Best-Worst Scaling**

The aim of this survey is to develop an understanding of consumer perceptions of rebate promotion requirements. In particular, is any one requirement, or group of requirements, more likely to deter redemption. The preceding section identified that consumers could be discouraged from redeeming if the requirements of the promotion were burdensome or difficult, and/or if the benefits of redeeming outweighed the risks or disadvantages. In other words if the requirements of the promotion were onerous in nature.

How then might one measure the degree of onerousness? When measuring product attribute preferences in consumer research, discrete choice experiments, simple rating, and ranking scales are widespread and generally well accepted. Likert-type scales, where subjects rate each attribute, e.g. Less Onerous to More Onerous, is a popular method. Similarly, ranking tasks, in which respondents are asked to order the list of items from best to worst, is another popular method.

However, several researchers claim that discrete choice experiments have significant disadvantages. Firstly, respondents perceive the distance between Likert scales differently, e.g. people’s interpretation of the distance between four and five on a scale varies. Secondly, people may limit their responses to certain parts of a rating scale, and different parts of the scale are used more often than others. Finally, attribute importance measured by rating scales is usually not measured relative to other attributes (Cohen, 2009b).

To address some of the above limitations when examining consumer preferences, Finn and Louviere (1992) presented the Best-Worst scaling (BWS) – also known as Maximum Difference Scaling. In BWS, respondents are shown several sub-sets or “comparison sets” of attributes or scenarios. Respondents choose both the best and worst attribute (scenario) in each subset. As respondents can only choose one most and one least preferred item in each choice set, they are necessarily required to make trade-offs between items or benefits. Furthermore, BWS avoids the problem of rating bias, as
there is only one way to choose the “most” and the “least” preferred item (Cohen, 2009b).

To illustrate the technique, assume a subset of four items (A, B, C, D) taken from a larger set, from which a respondent chooses A as the “best” item and D as the “worst” among the four options. The selection of “best” and “worst” items indicates the respondent prefers A to each of B, C, and D and prefers B and C over D. As a result, one now has information on five of the six paired comparisons from just two choices. To obtain a full ranking of the items in a large set, the rounds of best worst tasks and associated choices is repeated, each of which is composed of different subsets of items (e.g., BDFE, FGHW, etc.), but following an experimental design ensuring the connectivity between tasks, and featuring item frequency and positional balance (Erdem and Rigby, 2013).

This study is particularly interested in determining the relative onerousness of each promotion requirement. As such, BWS was preferred to other direct measures of importance, such as rating and ranking methods, because for each set of requirements BWS forces, “...respondents (to) choose the pair that exhibits the largest perceptual difference on an underlying continuum…” of onerousness (Finn and Louviere, 1992). In other words, it is assumed that the respondent will choose the two items that are most distant from each other in terms of onerousness.

Furthermore, interpreting the scale is relatively simple, as revealed by Marley and Louviere (2005). They show that the difference in BWS scores is a close approximation of the true scale values. These properties allow for a quick and simple examination of the relative value of an issue by simply scaling the number of times an issue is considered “best” against the number of times it is considered “worst”.

A Balanced Incomplete Block Design (BIBD) was used to organize the items into choice sets. One advantage of BIBD is that large numbers of items can be studied in order to get the full ranking of all items in a relatively small number of subsets. The simplest BIBDs is one that each item appears only once with each other. Comparing each item with each other item more frequently increases the internal validity of the survey, but makes it longer and more repetitive for the respondent (Cohen, 2009b).

The BIBD for $\nu$ attributes is denoted as $(b, r, k, l)$ where $b$ is the number of choice sets (blocks), $r$ is the repetition per level, $k$ is the number of items in each choice set (block size) and $l$ is the pair frequency. The crossdes package in R was employed to generate a
An Analysis of Buyer Behaviour in Response to Rebate Promotions

12,5,5,1 BIBD. This experiment design requires each individual to examine twelve sets of five promotion requirements that each appeared five times across all choice sets. Further, each choice set contains five requirements, with each requirement appearing only once with any other. (see Appendix 1 for the full BIBD). The order of the requirements within in each choice set was randomised to improve the reliability of the results.

Respondents were asked to select which requirement of the five in each set they considered “…**MOST** likely to discourage…(them)…from redeeming”, and which requirement “…**LEAST** likely to discourage…(them)…from redeeming”. See Table 5 for an example choice set. Because discouraging redemption is deemed a negative event, these responses were coded as the ‘Least’ variable in the BWS analysis. Conversely, being the least likely to discourage redemption was coded as the ‘Most’ variable.

**Table 5: Example of a Choice Set 1 of 12.**

<table>
<thead>
<tr>
<th>Least Likely to Discourage Redemption</th>
<th>Promotion Condition</th>
<th>Most Likely to Discourage Redemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redem Online Then Mail</td>
<td>(complete the redemption application online, then print and mail a copy to the manufacturer)</td>
<td>○</td>
</tr>
<tr>
<td>○</td>
<td>Complete Redemption Form</td>
<td>(Complete a redemption form either manually or online)</td>
</tr>
<tr>
<td>○</td>
<td>Provide Store Location</td>
<td>(Enter the store location where the product was purchased on the redemption form)</td>
</tr>
<tr>
<td>○</td>
<td>Payment Via EFT Card</td>
<td>(Your cashback is paid using an EFTPOS card. You must call the provider to activate the card before it can be used. The card expires after 6 months and any unused credit is lost)</td>
</tr>
<tr>
<td>○</td>
<td>Provide Bank Account Details</td>
<td>(Your cashback is paid via direct transfer. You are required to include your bank account details on the redemption form)</td>
</tr>
</tbody>
</table>

The BIBD utilised in this study resulted in each of the 12 rebate redemption requirements appearing five times. As such, the individual-level scales for each requirement can range from a minimum of -5, (where the respondent rates it as ‘Most’
likely in all five choice sets) to maximum of $+5$ (where the respondent rates it as ‘Least’ likely in all five choice sets). For example, if a respondent selected a requirement as ‘Least’ likely four times (+4), and ‘Most’ likely once (-1), a value of +3 (4-1) would be obtained.

5.2 Sample

Participants were recruited from Amazon’s Mechanical Turk (www.MTurk.com) online marketplace and received USD1.50 compensation for their participation. MTurk was selected primarily because it provides access to a large pool of respondents at a relatively low cost. Whilst the MTurk marketplace is relatively new, research (Buhrmester et al., 2011) suggests that participants are at least as diverse as other internet sources, is more diverse than American college samples, and is at least as reliable as traditional collection methods.

A total of 1,302 surveys were completed, from which 55 (4%) were rejected because the respondent was below survey’s minimum age of 21, yielding 1247 records. Further, those respondents who did not complete all 12 combination sets were deleted. As a measure of inattentiveness surveys completed faster than two standard deviations from the mean completion time (Jarnebrant et al., 2009) were removed. A total of 1067 surveys were retained.

The sample (Table 6) consisted of 52% Male vs. 48% Female, with 88.5% aged between 21-49 years, and 58.5% married or in a relationship. Most of the sample was employed 69.0% (44.5% fulltime), with the next largest groups being unemployed 17.3%, followed by stay at home parents 9.2%. University education was common, with 47.9% having an Undergraduate and 11.8% a Postgraduate degree. Almost one quarter (23.5%) of the survey had a household income of $25,001-$40,000, while 74.1% were less than $70,000. Most had experience with coupon (63.9%) and bonus product (60.4%) promotions, whilst relatively few (23.8%) with rebate promotions.

<table>
<thead>
<tr>
<th>Table 6: Sample Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
</tbody>
</table>

(ASC, 2010)
### An Analysis of Buyer Behaviour in Response to Rebate Promotions

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Count</th>
<th>Response Rate</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-29 Years Old</td>
<td>484</td>
<td>45.4%</td>
<td>18.93%</td>
</tr>
<tr>
<td>30-39 Years Old</td>
<td>307</td>
<td>28.8%</td>
<td>17.80%</td>
</tr>
<tr>
<td>40-49 Years Old</td>
<td>153</td>
<td>14.3%</td>
<td>19.34%</td>
</tr>
<tr>
<td>50-59 Years Old</td>
<td>93</td>
<td>8.7%</td>
<td>18.61%</td>
</tr>
<tr>
<td>60 years or older</td>
<td>30</td>
<td>2.8%</td>
<td>25.32%</td>
</tr>
</tbody>
</table>

### Household Income

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Count</th>
<th>Response Rate</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $10,000</td>
<td>64</td>
<td>6.0%</td>
<td></td>
</tr>
<tr>
<td>$10,001 - $25,000</td>
<td>170</td>
<td>15.9%</td>
<td></td>
</tr>
<tr>
<td>$25,001 - $40,000</td>
<td>251</td>
<td>23.5%</td>
<td></td>
</tr>
<tr>
<td>$40,001 - $55,000</td>
<td>171</td>
<td>16.0%</td>
<td></td>
</tr>
<tr>
<td>$55,001 - $70,000</td>
<td>135</td>
<td>12.7%</td>
<td></td>
</tr>
<tr>
<td>$70,001 - $85,000</td>
<td>96</td>
<td>9.0%</td>
<td></td>
</tr>
<tr>
<td>$85,001 - $100,000</td>
<td>68</td>
<td>6.4%</td>
<td></td>
</tr>
<tr>
<td>More than $100,000</td>
<td>80</td>
<td>7.5%</td>
<td></td>
</tr>
<tr>
<td>I would rather not say</td>
<td>32</td>
<td>3.0%</td>
<td></td>
</tr>
</tbody>
</table>

### Relationship Status

<table>
<thead>
<tr>
<th>Relationship Status</th>
<th>Count</th>
<th>Response Rate</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>391</td>
<td>36.6%</td>
<td>48.28%</td>
</tr>
<tr>
<td>Single</td>
<td>373</td>
<td>35.0%</td>
<td>33.83%</td>
</tr>
<tr>
<td>Divorced</td>
<td>62</td>
<td>5.8%</td>
<td>4.52%</td>
</tr>
<tr>
<td>In a relationship</td>
<td>234</td>
<td>21.9%</td>
<td></td>
</tr>
<tr>
<td>I would rather not say</td>
<td>7</td>
<td>0.7%</td>
<td></td>
</tr>
</tbody>
</table>

### Education

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Count</th>
<th>Response Rate</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 10/3rd Year High School</td>
<td>9</td>
<td>0.8%</td>
<td>1.98%</td>
</tr>
<tr>
<td>Year 12/5th Year High School</td>
<td>299</td>
<td>28.0%</td>
<td>29.62%</td>
</tr>
<tr>
<td>Trade/Technical qualification</td>
<td>97</td>
<td>9.1%</td>
<td></td>
</tr>
<tr>
<td>University Undergraduate Degree</td>
<td>511</td>
<td>47.9%</td>
<td>19.14%</td>
</tr>
<tr>
<td>University Postgraduate Degree</td>
<td>126</td>
<td>11.8%</td>
<td>10.61%</td>
</tr>
<tr>
<td>I would rather not say</td>
<td>25</td>
<td>2.3%</td>
<td></td>
</tr>
</tbody>
</table>

### Employment Status

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Count</th>
<th>Response Rate</th>
<th>Participation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full time</td>
<td>475</td>
<td>44.5%</td>
<td>58.6%</td>
</tr>
<tr>
<td>Employed on a casual basis</td>
<td>60</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td>Employed part time</td>
<td>201</td>
<td>18.8%</td>
<td>10.78%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>185</td>
<td>17.3%</td>
<td>6.98%</td>
</tr>
<tr>
<td>Retired</td>
<td>27</td>
<td>2.5%</td>
<td></td>
</tr>
</tbody>
</table>
An Analysis of Buyer Behaviour in Response to Rebate Promotions

<table>
<thead>
<tr>
<th>Carer or stay at home parent</th>
<th>98</th>
<th>9.2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would rather not say</td>
<td>21</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

**Recent Promotion Experience**

<table>
<thead>
<tr>
<th>Promotion Type</th>
<th>Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonus Product Promotion</td>
<td>645</td>
<td>60.4%</td>
</tr>
<tr>
<td>Rebate Promotion</td>
<td>254</td>
<td>23.8%</td>
</tr>
<tr>
<td>Coupon Promotion</td>
<td>682</td>
<td>63.9%</td>
</tr>
<tr>
<td>Trade-in Promotion</td>
<td>63</td>
<td>5.9%</td>
</tr>
<tr>
<td>Premium Promotion</td>
<td>154</td>
<td>14.4%</td>
</tr>
<tr>
<td>None of the Above</td>
<td>192</td>
<td>18.0%</td>
</tr>
</tbody>
</table>

5.3 **RESULTS**

For any respondent, +5 is the maximum possible score – achieved when an item is “best” in all appearances – and –5 is the minimum possible score – achieved when an item is “worst” in all appearances. Any individual with an attribute score beyond this range indicates an error within the data set. In this experiment, being ‘Least Likely’ is the ‘Best’ outcome and ‘Most Likely’ is the ‘Worst’.

The first analysis was simply to rank order the BWS scores for each requirement from highest to lowest. In other words, the first analysis compares the average of the number of times each requirement was selected as ‘Least Likely’ minus the number of times that same requirement was selected as ‘Most Likely’ (i.e., B minus W). The BWS score is positive when that attribute was chosen more often as ‘Least Likely’ (best) rather than ‘Most Likely’ (worst). The opposite is true for those attributes containing negative BWS scores. (See Table 7).

The “Best” column illustrates the frequency that the particular requirement was ranked ‘Least Likely’. For example, the top-scoring requirement was ‘Provide Store Name’ (selected 3225 times), followed by ‘Provide Purchase Date’ and ‘Provide Store Location’ (selected 2133 and 2084 times respectively).

The “Worst” column shows the frequency with which respondents selected a requirement as the ‘Most Likely’. It is worth noting that the attributes in this column appear to be almost perfect reciprocals of the “Best” column, implying consistency in the selections made by the respondents. It can be seen that ‘Provide Bank Account Details’ was selected most likely 3174 times and ‘Pay Freight on Bonus Products’ 3493 times.
To determine the attribute rank ordering a “maximum difference” scale, that is simply the difference between the “best” and “worst” columns, can be calculated (Marley and Louviere, 2005). This provides an aggregate rank position for each attribute.

An alternative method is to calculate individual BWS scores. The total number of times the respondent chooses the attribute as ‘Most Likely’ is subtracted from the total number of times he/she chooses it as ‘Least Likely’. The average of this individual BWS score over all respondents is algebraically equivalent to the aggregate mean BWS score defined above. The standard deviation of the individual BWS score over all respondents measures the extent to which the importance of the attribute varies over the sample.

These results are presented in Table 7 and an easier-to-interpret graphical representation is included as Figure 12. It can be seen that the conditions perceived as most onerous were ‘Pay Freight on Bonus Products’ and then ‘Provide Bank Account Details’. The least onerous was ‘Provide Store Name’ followed by ‘Provide Purchase Date’ and ‘Provide Store Location’.
Table 7: BWS Score by Condition

<table>
<thead>
<tr>
<th>Requirement (Category)</th>
<th>Best (Least Likely)</th>
<th>Worst (Most Likely)</th>
<th>Aggregate BWS</th>
<th>Mean of Individual BWS Score</th>
<th>Stdev of Individual BWS Score</th>
<th>SQRT (B/W)</th>
<th>Relative Onerousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Store Name (PW)</td>
<td>3225</td>
<td>43</td>
<td>3182</td>
<td>2.98</td>
<td>1.692</td>
<td>8.660</td>
<td>100.00</td>
</tr>
<tr>
<td>Provide Purchase Date (PW)</td>
<td>2133</td>
<td>68</td>
<td>2065</td>
<td>1.94</td>
<td>1.683</td>
<td>5.601</td>
<td>64.67</td>
</tr>
<tr>
<td>Provide Store Location (PW)</td>
<td>2084</td>
<td>62</td>
<td>2022</td>
<td>1.90</td>
<td>1.189</td>
<td>5.798</td>
<td>66.95</td>
</tr>
<tr>
<td>Serial Number (AC)</td>
<td>1482</td>
<td>109</td>
<td>1373</td>
<td>1.29</td>
<td>1.351</td>
<td>3.687</td>
<td>42.58</td>
</tr>
<tr>
<td>Complete Redemption Form (PW)</td>
<td>1246</td>
<td>200</td>
<td>1046</td>
<td>0.98</td>
<td>1.460</td>
<td>2.496</td>
<td>28.82</td>
</tr>
<tr>
<td>Provide a Copy Receipt (AC)</td>
<td>654</td>
<td>325</td>
<td>329</td>
<td>0.31</td>
<td>1.389</td>
<td>1.419</td>
<td>16.38</td>
</tr>
<tr>
<td>Sample Packaging (AC)</td>
<td>582</td>
<td>341</td>
<td>241</td>
<td>0.23</td>
<td>1.238</td>
<td>1.306</td>
<td>15.09</td>
</tr>
<tr>
<td>Redeem On-line Then Mail (NV)</td>
<td>584</td>
<td>1043</td>
<td>-459</td>
<td>-0.43</td>
<td>1.535</td>
<td>0.748</td>
<td>8.64</td>
</tr>
<tr>
<td>Payment Via EFT Card (NV)</td>
<td>345</td>
<td>1909</td>
<td>-1564</td>
<td>-1.47</td>
<td>1.915</td>
<td>0.425</td>
<td>4.91</td>
</tr>
<tr>
<td>Register Purchase Before Redeeming (NV)</td>
<td>194</td>
<td>2039</td>
<td>-1845</td>
<td>-1.73</td>
<td>1.526</td>
<td>0.308</td>
<td>3.56</td>
</tr>
<tr>
<td>Provide Bank Account Details (PR)</td>
<td>181</td>
<td>3172</td>
<td>-2991</td>
<td>-2.80</td>
<td>2.227</td>
<td>0.239</td>
<td>2.76</td>
</tr>
<tr>
<td>Pay Freight on Bonus Products (PR)</td>
<td>94</td>
<td>3493</td>
<td>-3399</td>
<td>-3.19</td>
<td>1.594</td>
<td>0.164</td>
<td>1.89</td>
</tr>
</tbody>
</table>
The category results are also quite revealing – represented by different coloured columns in Figure 12. Firstly, requirements in the ‘Privacy’ (PR) category - those that require personal information, such as bank account details – received consistently high ratings as “Most Likely” to deter redemption. Equally, the ‘Nuisance Value’ (NV) conditions were consistently rated as next “Most Likely” to deter redemption. Conversely, conditions in the Paperwork (PW) category were consistently rated as ‘Least Likely’ to deter redemption.

The ratings for the conditions in the ‘Activity’ (AC) category were not as clear-cut. That the ‘Sample Packaging’ and ‘Copy Invoice’ conditions had a mean BW score close to zero, suggests that either all respondents view them as intermediately onerous, or people differed markedly in their assessments; some saw them as a deterrent to redemption, some did not. This point is examined later in the discussion of heterogeneity later in this chapter.

**Ratio Scaling**

Another way to compare attribute importance is to derive ratio scores by taking the square root after dividing the total best (B) scores by the total worst (W) scores for each person (i.e., sqrt(B/W)). The resulting coefficient measures the choice probability compared to the most important item benchmark of 100 per cent (Marley and Louviere, 2005). The sqrt(B/W) is scaled by a factor such that the least onerous requirement with the highest sqrt(B/W) becomes 100. All requirements can then be compared to each other by their relative sqrt(B/W) ratio. The result is interpreted as X per cent (e.g. 60%) as likely to be chosen as the least onerous.

The relative importance for each promotion requirement is shown in Table 7. The requirement that is least likely to deter redemption “Provide Store Name” is denoted as 100. All other requirements are interpreted relative to “Provide Store Name” and to each other. For example, from Table 7 the relative importance of “Provide Serial Number” is considered to be 42.58, whereas “Pay Freight on Bonus Products” is only 1.89. One can therefore conclude that “Provide Store Name” is a little over two-times less onerous as “Provide Serial Number” (100/42.58) and over fifty times less onerous than “Pay Freight on Bonus Products” (100/1.89).
Heterogeneity

Heterogeneity is the degree to which people differ in their opinions. In the case of the onerousness of promotion requirements, heterogeneity can be gauged by the standard deviation of individual BWS scores.

Table 7 includes the standard deviation for individual BWS scores. There are some requirements that have a relatively low standard deviation, e.g. ‘Provide Store Location’ with Stdev=1.189. This indicates a relatively high level of agreement between respondents as to the onerousness of this requirement. Other requirements such as ‘Provide Bank Account Details’, have a higher standard deviation, e.g. stdev=2.227, indicating less similarity between respondents in assessing onerousness.

A graphical representation of a requirement’s onerousness heterogeneity is shown in Figure 12 below. The solid bars represent the mean BWS for each requirement. The black lines, or ‘whiskers’, through the mean BWS represent one standard deviation on each side of the mean (i.e., two standard deviations in total). Thus, attributes with a higher standard deviation have longer ‘whiskers’, implying greater respondent heterogeneity. Said another way, the length of the whiskers can be interpreted as the share of respondents who have a lower, or higher, individual BWS score relative to the mean BWS score (Cohen, 2009a); the longer the ‘whisker’ the greater the share.
Figure 12: Individual BWS Scores by Requirement
The most onerous requirement will have the largest negative mean BWS, which is represented by the longest bar below the ‘0’ line in Figure 12 (i.e., ‘Pay Freight on Bonus Products’). The second most onerous has the next largest negative mean BWS (i.e., ‘Provide Bank Account Details’). Further, given the survey design allows a mean BWS range of -5 to +5, the fact that their mean BWS score is within one standard deviation of the most onerous score (-5) is significant. It implies that a considerable portion of respondents always chose these items as most onerous whenever they appeared in their choice set.

Examining the ‘whiskers’ of the three items with a mean BWS close to zero, “Provide a Copy Receipt”, “Sample Packaging”, and “Redeem On-line Then Mail”, one can see that they were neither mostly chosen as best nor worst. In fact, their ratings almost cancel each other out, thereby making their mean BWS almost zero.

Both dimensions of a requirement’s onerousness and heterogeneity are visualised in Figure 13 below, where the mean BWS score and its standard deviation are graphed together. If promoters are genuinely interested in not discouraging redemption they should avoid those requirements with BWS scores to the left of the zero line in Figure 13, because they are perceived as onerous.
Figure 13: Promotion Requirements’ Onerousness and Heterogeneity
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Next, the mean individual BWS scores were compared to investigate preference heterogeneity between subgroups. The purpose of this analysis is to ascertain if these subgroups differed in their opinion of the onerousness of promotion requirements. For the purposes of this comparison ANOVA where run with the 12 promotion requirements as dependent variables and gender, age, relationship status, employment status, income, education, and previous promotion experience as independent variables. The results of the ANOVA and post hoc Tukey’s test revealed very few statistical differences. Those results with significant differences are shown in Table 8.

Whilst there were some statistically significant differences between some requirements, one questions their practical significance. For example, providing the product serial number was rated as less onerous by Males vs Females (1.41v1.15), yet both genders view this requirement less likely to deter redemption (i.e., Mean BWS > 0).

Similarly, ‘Provide Bank Account Details’ was seen as less onerous by Single versus Married people (-2.44 v -3.17). These results are, however, on the same side of the centre line (i.e., Mean BWS < 0) indicating both single and married persons view the condition as more likely to deter them from redeeming.

In fact, the lack of significant differences is itself significant. It shows the ranking of onerous requirements to be consistent irrespective of socio-economic variables, previous rebating or couponing experience, and product type.
Table 8: Comparison of BWS Means between Subgroups

<table>
<thead>
<tr>
<th>Requirement (Category)</th>
<th>Aggregate Mean BWS</th>
<th>Male</th>
<th>Female</th>
<th>Married</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Store Name (PW)</td>
<td>2.98</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide Purchase Date (PW)</td>
<td>1.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide Store Location (PW)</td>
<td>1.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serial Number (AC)</td>
<td>1.29</td>
<td>1.41*</td>
<td>1.15*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Redemption Form (PW)</td>
<td>0.98</td>
<td>0.74**</td>
<td>1.21**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide a Copy Receipt (AC)</td>
<td>0.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Packaging (AC)</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redeem On-line Then Mail (NV)</td>
<td>-0.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment Via EFT Card (NV)</td>
<td>-1.47</td>
<td>-1.19**</td>
<td>-1.80**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Register Purchase Before Redeeming (NV)</td>
<td>-1.73</td>
<td>-1.62*</td>
<td>-1.85*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide Bank Account Details (PR)</td>
<td>-2.80</td>
<td></td>
<td>-3.17**</td>
<td>-2.44**</td>
<td></td>
</tr>
<tr>
<td>Pay Freight on Bonus Products (PR)</td>
<td>-3.19</td>
<td>-3.05*</td>
<td>-3.30*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An '*' denotes a level of significance at the p< 0.05 level. An ** denotes a level of significance at the p< 0.001 level.
5.4 SUMMARY

This attempt to compare the onerousness of redemption requirements is an important first step in balancing the challenging goal of discouraging fraud without unduly inconveniencing consumers. The results of the Best-Worst analysis in this chapter suggest that four requirements are universally considered as not discouraging redemption: providing the store name and location, the purchase date, and product serial number. Additionally, three conditions: completing a redemption form, providing proof of purchase, and sending a sample of the product packaging, are seen by most as not discouraging redemption.

As noted in Study 1, however, providing a serial number and a packaging sample are often a source of consumer complaints. In and of themselves, these conditions do not appear difficult, providing the serial number is easy to find and the packaging has not been discarded. That they are a source of complaint, however, suggest that they may not be as straightforward as they appear. A point perhaps overlooked by respondents in this survey.

Companies should pay special attention to those attributes that show a high amount of heterogeneity and intermediate onerousness - those requirements found in the upper left part of the coordinate system (Figure 13), e.g. ‘Payment via EFT Card’. The higher heterogeneity of these requirements suggests a wide variation in ranking scores, such that whilst some find it very onerous, some find it not onerous at all. This variation can be seen in Figure 12 where the ‘whisker’ extends above the ‘0’ line into the non-onerous range. The significance for promoters lies in recognising a subset of their customers believe the requirement to be onerous, even though they may not be onerous for all consumers.

Equally, the requirement to provide personal information, specifically it appears financial information such as bank account details, would deter almost all respondents from redeeming. The results of Study 1 identified two instances where financial information was required: where the rebate is paid by EFT and where the customer was required to pay the freight on bonus products.

Discussions with fulfilment houses revealed some interesting insights into how the structure of rebate promotions has evolved. Prior to the Global Financial Crisis cashback promotions were paid via money orders, which could be ‘cashed’ at the local
An Analysis of Buyer Behaviour in Response to Rebate Promotions

post office. As rebate promotions became more popular firms began switching to paying by cheques. Whilst quicker and easy to administer than money orders, cheques are not without administrative burden, particularly for large promotions. The push to reduce this burden led to electronic funds transfers (EFTs) becoming more popular. One company comments, “Cheques are dead.”

One problem with EFTs is the requirement for applicants to disclose their bank details at the time of redemption, something not everyone is happy to do. One company comments, “...(EFTs) has lead to a reduction in redemptions because of privacy concerns about supplying so much personal data.”

If payment by EFT encourages breakage then firms should provide consumers the choice of alternate payment options. For example, debit cards have a number of advantages for firms: they can be branded, firms get a discount when purchasing in bulk, and they are cheap to mail.

Study 1 identified that approximately 45% of rebate promotions were in the form of bonus products. Compared to cash rebates, products have the advantage of a higher perceived face value with lower cost. Unlike cash rebate though, they have higher storage and transport costs. As one fulfilment house remarked, “With bonus product promotions, postage is one of the biggest costs.” The Best-Worse Scaling results showed that attempting to recover these costs from the consumer, via a freight charge, is a significant potential source of breakage.

It is noteworthy, however, that this requirement may have been rated negatively as much on "fairness" grounds as on privacy concerns. After all, would consumers expect to pay for the delivery of their "bonus" product?

It seems clear that managers should offer a selection of rebate payment methods and deliver “bonus” products free of charge. Doing so has the dual benefits of reducing potential customer complaints and improving consumer's experience with their brands.
An Analysis of Buyer Behaviour in Response to Rebate Promotions
Section 2
An Analysis of Rebate Promotions
Chapter 6. **CONSUMER SALES PROMOTION**

Rebates promotions are one of the more popular pricing mechanisms used by manufacturers and retailers to increase sales and discriminate among consumers who vary in their price sensitivity (Blattberg and Neslin, 1990, Jolson et al., 1987). Rebates are frequently used in the consumer goods sector (Tat and Schwepker Jr) and are the most common promotion tactic used in consumer electronics (Lanctot). Rebates are popular because they can be used to lower a product’s price and increase sales while limiting the number of consumers that redeem the rebate to obtain the price discount (Lanctot).

Price is a critical factor that consumers consider in ascertaining the overall value of an offering, i.e., whether or not the benefits of the exchange outweigh the sacrifices. Understanding what the customer is being asked to give up in exchange for what they are buying is therefore key to the ability of the promoter to deliver superior value.

The following sections examine the literature on consumer sales promotions and in particular the mechanisms by which these promotions effect sales. In the subsequent chapters of Section 2, rebate promotions are compared to Point-of-Sale (POS) promotions. To understand the need for this research an explanation of how consumer promotion effects sales is required.

6.1 **THE REASONS WHY FIRMS USE CONSUMER SALES PROMOTIONS**

Consumer sales promotions are integral to a firm’s communication strategy (Tat and Lee, 1993) and marketers have created a vast array of clever promotions to stimulate demand. From a manufacturers viewpoint a fundamental function of a sales promotion is to persuade consumers to buy Brand A over Brand B, C, or D.

Given that all forms of sales promotions are vehicles by which to vary price, it is important to explore why sellers choose sales promotions ahead of conventional price discounts. During interviews with fulfilment houses (see Chapter 4), a number of reasons were identified for manufacturer’s preference for rebates over other forms of promotions. Promotions such as “2-for-1” specials, or, “50% More For No Extra Cost”, require special packaging promoting the offer. This packaging takes time and resources to develop and implement, and adds cost to the product. Furthermore, the promotion packaged product needs to be ‘sold in’, often in bulk, prior to the promotion commencing. When the promotion finishes unsold product must be sold bearing the out
of date promotion artwork. These factors combined may make retailers less willing to participate in the promotion, particularly if additional ‘Point-of-Sale’ material is required. One fulfilment company made the comment, “...point of sale material is difficult to get into the store.”

Retailers complain that promotions such as price reductions, bonus products, or coupons reduce the purchase price and thus their revenue. Additionally, in the case of coupons, the retailer must claim back the discount from the manufacturer. This requires retailers to have systems and resources available to track and claim the refund.

It was because of complaints like these that, according to one fulfilment company, “…companies began offering the discounts direct to the consumer by way of cashback promotions.” Rebate promotions do not require special packaging or bulk shipments, they can be applied to existing stock and can be turned on/off as required, making them quick to setup and cheap to run.

**Price Discrimination**

Price discrimination is the ability to charge different prices to different customers in the same market for the same item. For example, Figure 14 shows that at price $P_0$ the firm sells quantity $Q_0$ with revenue equal to $P_0Q_0$. If the firm can segment the market and charge a lower $P_1$ to attract additional customers, the quantity sold at $P_1$ will be $Q_1-Q_0$ with additional revenue of $P_1(Q_1-Q_0)$.

**Figure 14: Gains from Price Discrimination**

The attraction of price discrimination is that manufacturers can increase sales to $Q_1$ without losing the revenue from those willing to pay the higher $P_0$. The difficulty lies in
An Analysis of Buyer Behaviour in Response to Rebate Promotions

segregating the two markets such that those consumers willing to pay the higher \( P_0 \) will continue to do so when the lower \( P_1 \) is offered.

Rebates and Price Discrimination

In practice, however, firms may not know which consumers will pay \( P_1 \). Rebates represent an effective price discrimination technique, as they do not require a reduction in the normal retail price (\( P_0 \)). In effect, they allow the manufacturer to sell the same product at two different prices. Consumers willing to pay \( P_0 \), will continue to do so, and may or may not redeem the rebate (\( R \)). Consumers unwilling to pay \( P_0 \) may be enticed into the market by the reduced price \( P_1 = P_0 - R \) (Gerstner and Hess, 1991a).

Therefore, compared to price reductions rebates offer a more efficient method of price discrimination and an opportunity for the seller to obtain a substantial portion of the consumer surplus. Coupons on the other hand provide greater control over who receives the offer (Lu and Moorthy, 2007, Soman, 1998).

Chen et al. (2005) suggest rebates act as a price discrimination tool among consumers’ differing levels of marginal utility for income at a particular time. Those with high marginal utility of income at the time of redemption are more likely to redeem than those with a low marginal utility. Redemption costs influence the consumer’s likelihood of redeeming in that they reduce the difference between the varying utilities of income generated by the future price reduction. Manufacturers can extract more consumer surplus through rebates than coupons because rebates add a level of discrimination within the group of consumers who make a purchase: those that redeem and those that do not (Lu and Moorthy, 2007, Chen et al., 2005).

Price Discrimination: Informed vs. Uninformed Consumers

When it comes to information gathering, individuals vary in their ability to search, in their costs of search, and in their cognitive capacity. As such, for any given product, consumers’ level of knowledge can range from ‘uninformed’ to ‘informed’. In theoretical work Salop and Stiglitz (1977) show prices will be lower the greater the proportion of informed consumers in the marketplace. Informed consumers, they argue, act as a natural restraint on a firm's ability to charge high prices.

Varian (1980) developed a model to explain how sellers can maximise profits by holding prices high for the uninformed buyer, whilst promoting to the informed buyer. It is assumed that uninformed buyers chose a store at random, or, at least without
knowledge of their product pricing. If product price \( p \) is less than their reference price \( r \) (i.e., \( p < r \)) they will make a purchase. On the other hand, informed buyers are aware of all prices in the marketplace and choose to shop where the cost is lowest.

For example - if Store A advertises a sale, and succeeds in having the cheapest price at that time, they will attract both the uninformed \( (U) \) and informed \( (I) \) buyers (i.e., \( U + I \)). If not they will get only their share of the \( U \) consumers.

Obtaining price information usually requires an allocation of time by the consumer, e.g. reading the newspaper. If the cost of obtaining that information is high, consumers might choose to remain uninformed. That is, for high search cost consumers the costs associated with search may outweigh the savings available from being informed.

As mentioned, one method by which consumers become informed is through searching newspapers for advertising and/or coupons. Narasimhan (1984) developed a theoretical price model to show how coupons can be used as a price discrimination tool. The model starts from the premise that individuals have different costs of time, and as such different costs of search. Education, however, may mitigate these higher costs through increased search efficiency.

The model lead to several implications. Firstly, as search costs decrease, coupon usage increases. Secondly, coupon users are more price elastic than non-coupon users. As such, they would be more responsive to the discount offered via coupons. Finally, high price brands will offer large coupon savings.

In a more recent related study, Murthi and Rao (2012) argue consumer price knowledge is limited and suggest purchase decisions are made, in part, using expectation of brand price rather than the posted shelf price. Using scanner data they find this to be true for between 40% and 50% of purchases. Further, consumers appear to restrict their product evaluation to those products on promotion. And, promotions have a greater affect on the price expectations of the informed consumer.

These findings have implications for both consumers and retailers. From the consumer viewpoint - if price cuts were a regular part of promotions, they would be wise to evaluate only the promoted brands, to enjoy lower prices and lower search costs. From a retailers viewpoint, not all promotions involve price cuts, e.g. new product releases, feature displays, and competitions. If the majority of the consumers who only evaluate promotions are in the price aware segment, these types of promotions will not be
An Analysis of Buyer Behaviour in Response to Rebate Promotions

attractive. Therefore, there would be no incentive for retailers to run non-price promotions.

**Price Discrimination: Loyal Customers vs. Switchers**

In a similar way to how firms discriminate between informed and uninformed consumers, Narasimhan (1988) shows it is also possible, and profitable, to discriminate between loyal and switchers (disloyal) consumers. Firms whose customer base is comprised primarily of loyal customers should not regularly promote as they are reducing their price, and margin, to their regular customers. Conversely, firms who have few loyal customers must promote more frequently to attract switchers – those chasing the cheapest price.

The implication is that firms with more loyal customers will have higher prices than those with few loyal customers. Further, the more loyal customers a firm has the fewer promotions they will undertake. Importantly though, the model shows there is no set of prices that result in an equilibrium. If one firm was to fix prices, there is an incentive for other firms to reduce theirs and steal the switchers. As a result, the optimum strategy is to continually ‘randomise’ pricing.

Another implication arises from a model developed by Lal (1990) – in the absence of low loyalty brands, there is no need for high loyalty brands to promote. To do so would only result is loss of margin. Further, where there are few low loyalty brands in a market, the high loyalty brands will defend their market share by promoting in alternative weeks, or at least not at the same time. In a form of implicit collusion, the large brands effectively share the costs of promoting against the smaller brands.

Similarly, a model developed by Raju et al. (1990) predicts the equilibrium pricing strategy in markets consisting of only brand loyal firms, is to always charge a fixed price (i.e., no promotion). With the introduction of weaker brands, price promotions become an appropriate strategy. A brand's likelihood of using price promotions is higher in markets with a larger number of brands. The model extends the analysis further by suggesting that as weaker brands gain loyal customers they are less likely to promote and that by extension so then are the stronger brands.

Whilst these theoretical models offer interesting insights, they ignore an important facet of market interactions – the retailer. The retailer’s aim is to maximise store traffic, and promoting strong brands is more likely to achieve this goal. Therefore, whilst the
manufacturers of weaker brands may promote more often, retailers may not pass these promotions through to consumers. Conversely, when manufacturers of strong brands promote, they are more likely to be passed through (Blattberg and Neslin, 1990).

**Price Discrimination: Heavy vs. Light Users**

Another avenue by which firms can potentially price discriminate is by promoting to individuals with different intensities of demand and relative holding costs. Blattberg et al. (1981) argue purchase acceleration is the result of transferring holding costs from the retailer to the consumer. Consumers with lower inventory holding costs take advantage of promotions and stock up by either buying more or buying earlier. Retailers, on the other hand, by promoting, incur the cost of selling the product at a discount but save on inventory costs. The existence therefore of a low holding cost household segment makes the promotion mutually beneficial.

Jeuland and Narasimhan (1985) developed a theoretical model that shows individuals with lower holding costs will stockpile when products are on promotion, while others will not. Further, they posit consumers who buy on deal are less likely to buy at regular prices. Whilst holding costs are central to their model, the impetus for promoting differs to Blattberg et al. (1981) (i.e., price discrimination versus shifting holding costs).

In a study examining the influence of demographics on households’ propensity to accelerate purchase due to promotion, Vakratsas (1998) found three demographic variables with a significant effect: household size, household income, and female head employment status. They conclude that low-income households and households with a full time employed female head are both more likely to accelerate purchases and stockpile. **Non-Price Discrimination**

**Forecast Error**

Imagine a new product is released to the market, how many should a seller stock? What price should they charge? What is the customers’ reservation price? Whether or not a seller will be able to restock during a given period affects whether they need to make inventory up front, or whether they will have access to additional units during the season. This type of uncertainty is common in many industries.

In the fashion industry, for example, retailers will charge higher prices for all size/colour/style combinations early in the season. Where this price is below the
An Analysis of Buyer Behaviour in Response to Rebate Promotions

customers’ reservation price, the units will sell quickly. Towards the end of the season, the remaining size/colour/style combinations are marked down to clear.

These ‘clearance’ promotions are offered after the retailer has experimented with high initial prices and determined which styles consumers are willing to pay more for; prices are higher early in the season, and lower at the end. That the lower priced items sell at the end of the season suggests they are imperfect substitutes for the units sold at the beginning of the season. If this were not the case, consumers would simply wait until later in the season when the prices have dropped (Pashigian and Bowen, 1991).

The preceding example could just as easily illustrate a form of price discrimination. For example, early in the season consumers want to be seen in the latest fashions and therefore have more inelastic demand. Later in the season when only the less ‘fashionable’ size/colour/style combinations remain, consumers are more price sensitive and demand lower prices. Firms are able to charge higher prices to the fashion conscious, and must lower prices for the less fashion conscious.

What differentiates the two examples is the nature of the industry. Fashion has a large percentage of imported content ordered months in advance of the season. Invariably some size/colour/style combinations will not be popular. More importantly though, fashion is a highly competitive industry, with a large number of players. Furthermore, entry into and exit from the industry is easy, with minimal cost. In fact, given the ubiquitous nature of the internet, and the ease of setting up online stores, new players could come and go daily. In this environment, practicing price discrimination would be difficult.

Product Trialling

Store brands, also called private labels, are goods branded and sold by a retailer. For example, Australia’s two largest grocery chains, Woolworths and Coles, each have a store brand: ‘Homebrand’ & ‘Coles’ respectively. Retailers suggest store brands provide them with several advantages: a method of differentiation, increased unit sales and profits, enhanced quality image, and greater choice for their customers (Chen et al., 2012)

Perceived quality is a significant factor in the success of store brands. In a study of 180 product categories DelVecchio et al. (2007) found quality was positively related to store brand market share. Similarly, Yi and Yoo (2011) demonstrated that consumers’
An Analysis of Buyer Behaviour in Response to Rebate Promotions

intentions to purchase store brands were more highly correlated with perceived quality than value.

Compared to national brands, however, consumers often rate them lower in quality (DelVecchio et al., 2007, Yi and Yoo, 2011). This presents retailers with a dilemma, store brands appeal to the price conscious consumer but not the quality conscious (Ailawadi et al., 2001). To grow their volume of store brands retailers need to raise their perceived quality without raising the product cost. To do so would alienate the price conscious consumer. As such, strategies that increase the retailer’s cost structure, such as increased advertising or, higher quality ingredients, may not be feasible.

Product trialling, or ‘Sampling’, represents a relatively low cost means of enhancing perceived quality and store brand equity, converting samplers to store brands, increasing goodwill, and potentially attracting quality-conscious shoppers who typically avoid store brands (Ailawadi et al. 2001).

In a theoretical model Freimer and Horsky (2008) examine whether it is optimal for firms to stimulate trialling by non-users through periodic promotions. They argue non-users may learn about the characteristics of the product and continue purchasing after the promotion has ended. That is to say, through trialling and learning, promotions are a positive carryover that sees non-users become users.

In the first iteration of their model, the case of the monopolist, they find product promotion increases demand, and due to learning so does the probability of repurchase. If the magnitude of this learning is sufficiently high, the monopolist can recoup the profit lost during the promotion through raising prices, to its now larger customer base, in the non-promotion period.

In a second iteration, the case of monopolistic competition, they find it optimal for brands to promote in different periods. Furthermore, the magnitude of ‘learning’ required to induce the consumer to switch is larger, as is the level of discount required to induce trialling. Finally, due to the reduced power of competitors in a monopolistic market, the opportunity to recover the promotion costs through raising price is diminished.

In two studies comparing two grocery products, a fruit drink and a household cleaner, Darke and Chung (2005) investigate whether sampling of store brands improved their quality perception vis-à-vis better known, higher quality national brands. They asked
An Analysis of Buyer Behaviour in Response to Rebate Promotions

two groups to rate the quality of the products: one group (base-line) based their rating on the packaging alone, the second group after sampling the products.

Study 1 compared a store brand and a national brand of similar quality. Results reveal that quality appraisals for the national brands were only slightly improved after sampling. This suggests respondents gained little additional insight from sampling beyond what exists from brand perceptions alone. Conversely, both store brands showed substantially higher quality evaluations in the groups who sampled. Their evaluations were over 30% higher than the base line groups (Figure 15).

It is worth noting that the base line respondents rated the national brands (NB) highly (M_{NB}=5.57_{HC} & 5.85_{FD} on a 7-point scale), thus allowing less room for improvement after sampling (M_{NB}=6.06_{HC} & 6.03_{FD}). Conversely the store brands (SB) were rated substantially lower by the base line group (M_{SB} =3.84_{HC} & 4.69_{FD}) allowing scope for a large increase (M_{SB} =5.36_{HC} & 6.18_{FD}). Notwithstanding this observation, the improvement by store brands is significant. Particularly significant, is that the store brand fruit drink (FD) was rated as highly as the national brand after sampling (M_{FD} =6.03_{NB} & 6.18_{SB}, p=0.6).

Study 2 offered one product for comparison, orange juice, and compared two national brands and a lesser-known store brand. Respondents were again asked to rate the perceived quality of the brands based on the packaging alone. As with study 1, both national brands were rated as substantially superior to the store brand, a reflection of their greater brand equity (Figure 16).
For the sampling group the authors introduced a clever manipulation to control for the effects of any actual quality differences. Instead of sampling the three brands presented, they introduced a fourth ‘blind’ brand that, unbeknown to the respondents, was used as the sample for all three brands. They also introduced a low and high quality version of the sample. The low quality version had more water added, the high quality version was full strength.

After sampling the low quality (watered down) version respondents rated all three brands lower quality than base line sample. Whilst the store brand rated lower than the two national brands, the strength of the effect was diminished. When the high quality (non-watered down) version was sampled, the quality ratings increase substantially, with the national brands being significantly more favourable than the store brand.

The significance of this result lies in the finding that after sampling the quality perception of the store brand was greater than the base line rating (M=4.78 vs. 4.10). This was not the case with the national brands where the difference was not significant. As such high quality store brands benefited greatly from sampling vis-à-vis the base line group whose evaluations were based on branding alone.

### 6.2 How Sales Promotions Affect Sales

#### Brand Switching

Blattberg and Neslin (1990) identify two types of brand switching: aggressive and defensive. Aggressive switching occurs when a promotion induces a consumer to purchase the brand on promotion, say Brand A, rather than their normal brand, say
Brand B. Defensive switching occurs when the promotion of Brand A causes the consumer to re-purchase Brand A instead of another brand (i.e., to maintain loyalty).

It is noteworthy that effects are asymmetric, what Brand A takes from Brand B is not the same as what Brand B takes from Brand A. For example, a consumer who normally buys a low cost brand of soap – perhaps a store brand – may switch to a premium brand when it is on sale. When the low cost brand is on promotion, however, the premium brand users are less likely to switch.

This asymmetric effect was noted by Chintagunta (1993) when investigating yoghurt sales. They noted that when promoted the large brands (Yoplait and Dannon) gained more market share from the smaller brands, (Hiland and Weight Watchers) than from one another. On the other hand, the smaller brands drew more from one another than from either of the large brands.

In another example, Gönül and Srinivasan (1997), when investigating price cuts and coupon use in disposable diaper promotions, discovered a similar pattern. In their study Brands A&C experienced strong brand switching, yet brands B&C faced only minor switching. Furthermore, they found high-income households were more likely to stay loyal than were middle or lower income households.

One theoretical explanation for brand switching is given by the linear attitude model (Blattberg and Neslin, 1990). By offering a price discount, promotions increase the consumer’s overall attitude toward buying the brand. The extent to which this occurs depends on the size of the discount and the importance the consumer assigns to low price.

Similarly, utility theory suggests a price cut changes the nature of the budget constraint faced by the consumer. This change has two possible effects. Firstly, it allows the consumer to consider a more expensive brand than they otherwise would (substitution effect). Secondly, the reduction in price allows the consumer to not only buy the promoted product, but to also purchase other items in addition to the promoted brand (income effect) (Blattberg and Neslin, 1990, Neslin, 2002). In both cases, the consumer’s utility is increased due to buying on promotion. The higher the economic value of the deal, the greater the utility increase, and thus the greater the likelihood of switching (Dodson et al., 1978)
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Whilst the above theories offer insight into brand switching for price promotions, they do not explain behaviour when non-price promotions (e.g., features and displays) are in effect. On the other hand, the theory of Classical Conditioning suggests features and displays serve as conditioned stimuli that may induce switching. That is, consumers have been "trained" to associate features and displays with price reductions, and so respond even if a price reduction is not present (Blattberg and Neslin, 1990).

Price perception theories would suggest elements of non-price promotions can effect brand switching in different ways. For example, an important factor in the effectiveness of price discounts is the extent to which consumers are persuaded that the price discount is substantial. The use of ‘Sale’ signs and other point-of-purchase materials is a way of providing special prices in a way that maximises the ‘gap’ between the promotion price and the higher reference price (Blattberg and Neslin, 1990). Further, the use of words such as "sale" or "special" can mitigate any effect on reference prices by leading consumers to believe that the discount is temporary (Grewal et al., 1998).

The drawback of a suggested reference price is they are not always believable and under some conditions are not effective at increasing demand. Coupons, on the other hand, distributed by either the manufacturer or retailer, are very strongly associated with brand switching (Johnson, 1984). Where suggested reference prices run the risk of hurting a promotion’s success, coupons may be the better option given their stronger association with brand switching (Dodson et al., 1978).

**Stockpiling**

Consumers can respond to promotions by purchasing more or purchasing sooner. Collectively these responses are known as stockpiling. Blattberg et al. (1981) suggest stockpiling occurs due to consumers’ need to minimise their total cost (i.e., purchase and holding costs). Furthermore, manufacturers have higher holding costs than consumers, so it may be in their interest to accept reduced margin if the consumer will stockpile.

In developing a model for coupon promotion effectiveness, Neslin and Shoemaker (1983) found that whilst retailer promotions resulted in a tripling of sales, 50% was due to purchase acceleration. Further, in the weeks following the promotion, sales were lower than in the week preceding the promotion.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In an analysis of scanner panel data, Neslin et al. (1985) found consumers were more likely to increase purchase quantities than accelerating purchases. Further, coupons, local retailer advertising, price cuts, and advertised price cuts all lead to an increase in purchase quantity.

Conversely, advertised price was the most effective tool for accelerating purchases, and heavy users were the group most likely to bring purchases forward. This implies that manufacturers interested in inducing purchase acceleration should target heavy users, and compel retailers to pass through their trade promotions.

Assunção and Meyer (1993) showed that consumption increases with inventory, not only because of the stock pressure from inventory holding costs, but also because inventories give consumers a buffer against high prices. During periods of high prices, households with inventories can consume in a relatively unconstrained manner, while consumption among low inventory households is constrained by the short term cost of replenishing inventory.

The fact that consumers stockpile on promotion suggests that there should be a post promotion sales dip. This makes intuitive sense, consumers need time to work through their stockpile before re-purchasing. Neslin and Shoemaker (1983) demonstrate this effect through their model simulating the effect of coupon promotions on sales. They show that because of switching and acceleration effects, retail promotions have an immediate impact on market share. Further purchase acceleration is the dominant factor in the increase. Due to purchase acceleration, the period immediately following the promotion is characterised by a decrease in sales. Finally, as a result of switchers repurchasing there is a small increase in subsequent periods (Figure 17). The net increase in sales is the average of the spikes and dips.

Researchers, however, often do not find these dips either at the category or brand level (Neslin, 2002, Blattberg and Neslin, 1990). Neslin and Stone (1996) argue several reasons for the lack of a post-promotion sales dip. These included competitive promotions, retailers extending promotions, the mixing acceleration and quantity effects, a lack of consumer inventory sensitivity, and an increase in consumption. For example, consumers with higher inventories, may increase consumption in two ways: fewer stock outs and an increased usage rate during non-stock out periods (i.e., when usage would normally be zero).
The managerial implication of stockpiling then, is that when a promotion generates an increase in sales, these increased purchases are not necessarily future sales brought forward at a lower price. Because of stock pressure, units stockpiled at a lower price may be consumed at a higher rate, implying that price promotions not only increase short-term sales, but long-term consumption as well.

**Store switching**

Store switching is the analogue of brand switching, but instead of inducing a consumer to purchase a different brand, promotions induce consumers to switch stores. For example, a consumer sees a product on promotion at Store B and shops there instead of Store A; a direct effect. Another example, a consumer usually shops at Stores A & B, and having seen the product on sale at Store B, buys it; an indirect effect (Neslin, 2002). Whilst consumers may have a ‘regular’ store, they frequent other stores for different reasons. Their basket of goods for a particular shopping trip may influence their store choice; not all stores offer the same range of goods. Price-sensitive and promotion-sensitive consumers are likely to shop at different stores to minimise their expenditure. Consumers may make fill-up trips to a smaller, nearby store, while making regular trips to a different store.

In a study using scanner panel data, Leszczyc and Timmermans (1997) found that socio-demographic segments differ in their shopping behaviour. Because double income households are time poor they concentrate their shopping activity in a single store. They are the most loyal, shop the least, and spend the most per trip. Conversely, single income households represent the heaviest shopper segment. They make the most fill-in trips and are the least loyal. These consumers have more time for shopping, tend to shop around, and spend the least per shopping trip.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

This suggests price promotions and loss leaders may be most effective when directed toward single income households, while additional services that reduce the shopping time will be most effective for the double income households.

Grewal et al. (1998) argue store image has a direct, positive relationship with purchase intention. Consumers' intentions to purchase a product can be influenced by the store in which the product is sold. Thus, consumers may derive some amount of "added value" from the image of the store. Further, low knowledge consumers’ purchase intentions are influenced more by store image than the high knowledge respondents'.

Taking a slightly different tangent, Sloot and Verhoef (2008) investigate the effect of a large manufacturer being delisted by a retailer. For example, a retailer boycotts a specific brand or delists a brand to extend the space available for its own private-label range. If store-switching effects are strong, consumers will visit another store to buy the delisted brand, and retailers will suffer negative consequences in terms of store sales and store profit. If on the other hand store loyalty is strong then manufacturers will lose out.

In an online study of beer sales, they find that many consumers tend to stay brand loyal and that a small percentage of consumers would stop buying at the store if their preferred brand were delisted. This finding implies a loss of category level sales and, in some cases, a loss of consumers’ total shopping basket. Furthermore, delisting high market share brands has both absolutely and relatively, stronger negative effects on category sales than does delisting low market share brands.

Repeat Purchasing

Repeat purchase is a positive outcome, and even the goal, of sales promotion and occurs due to two effects. Firstly, the act of purchasing a brand leads the consumer to form a habit toward purchasing it again; the purchase effect. The next time the consumer visits a store they are more likely to buy the brand again, because they bought it last time, than if they had not bought the brand at all. The second effect is a change in probability of purchase due to the item being on promotion; the promotion effect. Consumers can develop a negative attitude towards a brand after buying it on promotion (Blattberg and Neslin, 1990).

These effects are not mutually exclusive and can occur simultaneously. Importantly though purchase effect takes place simply because the brand is purchased, while the
promotion effect takes place because the brand is purchased on promotion. For example, having purchased brand A on promotion a consumer may purchase it again simply because they bought it last time (i.e., due to habit). The probability of repurchase, however, may be lower than it otherwise would be because the promotion has lessened the brand image.

There is theoretical support for repeat purchasing. Behavioural learning theory says promotions facilitate learning/habit formation by rewarding the consumer for purchasing a brand. By inducing the consumer to purchase brand A, a promotion is helping the customer take the first step towards establishing a habit. By keeping an existing consumer from purchasing a competing brand, the promotion is helping to sustain a habit.

The key is to structure the promotion reward so that it is strong enough encouragement and reinforce the consumer’s needs to form the habit, without being so strong that the consumer forms a promotion seeking habit. This promotion seeking behaviour can also arise if the brand is not the primary reinforcer. For example, if the brand is low quality, or is insufficiently differentiated from other brands (Neslin, 2002)

On the other hand, Attribution theory considers how consumers explain the causes of events, such as making a purchase. Attributions result in a change in attitude rather than a change in behaviour. The concern is that when promotions induce a purchase, these judgments may be negative. For example, the consumer may think, "I must have bought this brand because it was on promotion". Once the promotion is over, in the customer’s mind, the reason for the purchase is gone, and there is no intent to repurchase.

Another risk is the customer attributes the low promoted price with low product quality. This negative attribute can lead to a lower probability of future purchases. Further, this negative attribution can result in a self-fulfilling prophesy, whereby the consumer looks for signs of poor quality once the product is consumed (Blattberg and Neslin, 1990). Grewal et al. (1998) found no negative quality effects in their study of durable goods. They did instead suggest that only frequent price promotions would adversely affect a brand's perceived quality.

The two theories provide support for the purchase and promotion effects. Whilst the purchase effect is expected to be positive, there is less agreement on the impact of the promotion effect - positive or negative. The implication of a negative promotion effect
An Analysis of Buyer Behaviour in Response to Rebate Promotions

is that the purchase effect must be equally positive, or the overall effect on repeat purchasing will be negative.

Interestingly though, it is possible that neither effect is present. Where a purchase entails a high level of involvement and consumers know a great deal about the alternative brands available, the purchase effect may not exist. Similarly, consumers may be objective about evaluating the consumption experience, and the fact that the brand was bought on promotion may not influence their decision-making; no promotion effect is present.

The evidence on promotion effect is less clear; the existence and direction has not been resolved. Shoemaker and Shoaf (1977) found, for example, that if the previous purchase of brand A was on promotion, the probability of making a repeat purchase was less than if the previous purchase was not on promotion. Conversely, Bawa and Shoemaker (1987b) found that market share among users decreased slightly after redemption, whereas share among non-users almost doubled. And finally, Ehrenberg et al. (1994) found no change in purchase rate before and after the promotion; it was as if the promotion had not occurred.

Summary of Empirical Evidence

In real-world marketplaces, it is likely that all the sales promotion reactions in the preceding sections occur simultaneously. For example, whilst a manufacturer is concerned with the purchase of his brand versus another, the retailer is concerned with traffic through his store over another. All the while, a consumer in response to a promotion may switch brands. Having done so they find that their ‘usual’ store does not carry the brand, so they switch to a different store. Similarly, a decision to switch stores might also cause the consumer to switch brands, because the new store represents a different purchase environment.

In an investigation of coffee purchases, Gupta (1988) found that more than 84% of the sales increase resulting from promotions came from brand switching. The remaining 16% was comprised of purchase acceleration (14%) and stockpiling (2%). In a similar study on yoghurt sales, Bucklin et al. (1998) found the impact of price across these three behaviours varied by segment. In the two largest segments (79% of households, 63% of volume), price discounts induced switching and acceleration, but have little effect on their stockpiling behaviour. In two of the smaller segments (10% of households, 20% of volume), price had a smaller impact switching and acceleration but a greater effect on
An Analysis of Buyer Behaviour in Response to Rebate Promotions

stockpiling. A fifth segment (11% of households, 17% of volume) had a low overall level of price sensitivity.

In a more extensive study of 173 brands across 13 product categories, Bell et al. (1999) reports 25% of the elasticity is due to purchase acceleration and 75% to brand switching. Whilst they find a significant brand switching effect from promotions, they note it varies systematically across the 13 categories. For example, storable products have a proportionally greater stockpiling effect than non-storable products. In fact, their findings show that while most storable products experience an increase in demand, the time between purchases increases as well. There is no apparent increase in total consumption.

The significance of understanding the difference in elasticity between these effects is not trivial. For example, take coffee brand A, where 47% of the price effects are due to purchase acceleration. Now coffee brand A runs a promotion and sales increase due to purchase acceleration. After the promotion they fall, resulting in no net increase in sales. This may, at first glance, appear as a waste of time and money. However, purchase acceleration means the consumer with a pantry full of brand A and has no need to buy brand B.

Narasimhan et al. (1996) studied the relationships between product category characteristics and the sales increase resulting from promotions. Using store-level data they measure the effects of different types of promotions on brand switching, store switching, category expansion, and purchase acceleration. They found promotions for brands in easily stockpiled, high-penetration categories with short inter-purchase times should produce large sales increases. Further, in store signage appears to be especially effective for low-priced categories with short inter-purchase times.

Vilcassim and Jain (1991) analysed brand switching and purchase timing decisions of households within a single framework. Their results show that whilst promotions do impact purchase-timing and brand-switching decisions, they had a greater effect on the rate of brand switching than repeat purchase. Further, the rate of switching is greater for low share brands.

The components of the promotional ‘bump’ that are incremental for the retailer are different from the ones that are incremental for the manufacturer. In particular, while both parties benefit from promotion induced increases in consumption, manufacturers do not benefit from store-switching and retailers do not benefit from brand switching.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

(with the exception of any margin differences). Data from a U.S.A drug store chain shows 45% of the bump is due to switching within the store, 10% is due to accelerating, and 45% is incremental sales for the retailer (Ailawadi et al., 2009).

During interviews with fulfilment houses, respondents showed a general lack of willingness to share results of the rebate promotions they facilitated. Some commented they didn’t know whether the promotions were successful, other cited reasons of confidentiality. It was possible, however, to secure four examples of effective rebate promotion,

**Example 1:** a leader in computer hardware, offered $20 cash back on an item worth approximately $200, for a period of three months. Result: Gross sales were up over 12% versus the previous quarter, redemption rate was 5%.

**Example 2:** a leader in office equipment, offered $25/$50/$75 cash back on various products priced from $250 - $750 over a period of six months, with monthly flyer advertising. Results were “above expectations”, with a redemption rate of 8%.

**Example 3:** a leader in personal care products offered a $2 rebate on a shampoo product worth approximately $7, for a period of three months. The offer was advertised in supermarket and mass merchandiser weekly flyers and used tear pads at store level. Results: Gross sales up over 10% versus the previous quarter and a redemption rate of 15%.

**Example 4:** a leader in soft drinks offered a $5 rebate on various multi-pack products priced from $5-$10 over a period of one month. The packaging carried a cash rebate offer. Results were “above expectations” and had a redemption rate of 10%.

6.3  **Marketing Impact**

It has been argued (Moorthy and Soman, 2005) that the conditions under which the purchasing decision is made are significantly different to those that exist when rebate redemption occurs. The in-store environment is designed to elicit a sale and undoubtedly, the positives of the rebate are highlighted to the consumer. Post sale, there is no one reminding the consumer to redeem and more pressing activities often foster forgetfulness and procrastination. Importantly, they suggest that the design of the rebate promotion can take advantage of these differences in order to maximise the return to the seller.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In developing an analytical model, the authors argue that the rational consumer will, based on future costs and benefits, fully anticipate their likelihood of redeeming (or not) when making their purchasing decision. Furthermore, they are aware that they may forget and that their future redemption costs are uncertain; their cost of time may increase or decrease in future periods. Once these factors are weighed, the rational consumer will purchase the deal provided the price (p) is less than their reference price (R) (i.e., ‘p < R’), and, the discount (D) is greater than their cost (C) of redeeming (i.e., ‘D > C’).

Moorthy and Soman (2005) suggest, however, that consumers are not necessarily rational and that rebate marketing can induce perceptual distortions. These distortions make the rebate discount (D) appear larger at future time ‘t’ (i.e., ‘Dt > D0’), and the cost (C) of redeeming appear smaller (i.e., ‘Ct < C0’). As a result, the consumer overestimates their likelihood of redeeming and the rebate deal appears attractive. When redeeming at time ‘t’, however, ‘Dt and Ct’ are no longer distorted, instead returning to ‘D’ and ‘C’. If ‘D < C’, the consumer may not redeem, even though at the time of purchase s/he thought s/he would.

A similar distortion occurs for both the likelihood of remembering to redeem and the discount factor used on future cost (C) and discount (D). The probability of remembering is an increasing function of the attractiveness of the deal (i.e., consumers are less likely to forget an attractive deal). Marketing acts to distort this probability upwards, such that the consumer feels more certain they will remember to redeem at ‘t’. Similarly, the discount factor is inflated, such that the future discount appears more salient, making the deal more attractive.

To validate their model a subsequent study using university students was undertaken. Participants were shown mock adverts for a series of product pairs, some of which had a promotion attached. If the promotion entailed a coupon or rebate, the participants had to complete the requirements in order to receive the benefit.

The effort and reward components of the adverts were either obvious or indistinct. For example, to highlight a reward an advert might emphasise the effective price after rebate. Equally, by giving minimal information on the redemption requirements the effort required to redeem was downplayed.

The results showed that highlighting the rebate benefit increased sales of the promoted product. Conversely highlighting the effort required to redeem the rebate decreased
An Analysis of Buyer Behaviour in Response to Rebate Promotions

sales. Furthermore, increasing the redemption effort had no sales effect. The amount of effort required to redeem the rebate, however, did effect the level of redemptions. High redemption effort produced a lower redemption rate. The profitability of each promotion pair was in line with these results. The most profitable promotion prominently highlighted the benefit, whilst not focusing on its high level of effort.

To summarise, marketing distorts the consumer’s perception of their future behaviour inducing them to buy on deal. It is possible that a consumer who, without these distortions, would not find the deal sufficiently attractive nevertheless buys. Moorthy and Soman (2005) therefore argue that promotion profitability can be increased by emphasising the reward and demarketing the effort.

This proposition has intuitive appeal. It also has some anecdotal support in the real world – after all, the conditions printed on adverts are nearly always in the smallest legible font possible. The reward mechanism used in the study, however, has the potential to distort the results.

Firstly, the students received a cash payment to participate, paid on the day of the study. Secondly, they had a budget with which to purchase the advertised goods. As an incentive to maximise their savings they received, in cash, the difference between the budget and their actual spend as a ‘bonus’. The rebate, however, had to be claimed after the study and was paid at a future date.

Given the ‘bonus’ was also paid in cash and upon completion of the study, it is possible the students were simply maximising their current day’s income rather than their total revenue. The point of the study was to test for distortions of future perceptions, yet the bulk of the reward was received in the present. By paying the participation fee, the bonus, and the rebate (if applicable) at a future date, the results may well have been different. Further, it would better approximate the real world where one is not paid to make a purchase, and has to wait for the refund.

6.4 CONSUMER BEHAVIOUR

Khouja et al. (2008b) developed a model to determine the optimal price and rebate value for a manufacturer. They determined consumers fell into two categories, rebate dependent and rebate independent.

Rebate-Independent (RI) consumers, unaffected by rebates, constitute the base sales level and do not redeem. This group is similar in some respects to the product-involved
consumer. The presence of rebate has no effect on their decision to purchase, they do not intend to redeem, and they would purchase with or without a rebate.

It is, however, problematic to assume this group will never redeem. Certainly, the rebate may not affect their decision-making, but if faced with a post-purchase opportunity to redeem they could still choose to do so. Perhaps they are encouraged to do so by family/friends. Perhaps they stumble across the rebate form during a time of relative inactivity. Perhaps they are unhappy with the purchase experience and want to exact some measure of revenge (i.e., a backlash effect). Perhaps they lose their job, increasing their marginal utility for money – they may elect to redeem. Whatever the impetus, nothing prevents the RI consumer from redeeming.

Rebate-Dependent consumers, on the other hand, are similar to the purchase involved consumer and can be either fully or partially rebate-dependent. Fully Rebate-Dependent (FRD) consumers are price sensitive and will always redeem. Partially Rebate-Dependent (PRD) consumers are most likely to be enticed by a rebate to purchase but their redemption rate is less certain than FRD consumers.

Khouja et al. (2008b) model makes three predictions. Firstly, for PRD consumers the larger the gap between the rebate value and the time/effort cost the more profitable the rebate programme will be. This is because the more attractive the differential appears the more PRD consumers will be enticed to buy, and the more likely breakage occurs.

Secondly, the greater the rebate attractiveness (defined as the increased demand from a $1.00 increase in rebate value versus the increased demand from a $1.00 decrease in price) the greater the increase in profit. Finally, the larger the proportion of consumers in the PRD group the larger the programme’s potential profit.
Chapter 7. REBATES AND THE DEAL PRONE CONSUMER

Marketing managers are interested in identifying the deal-prone household on the basis of available demographic data (Blattberg et al., 1978). If deal prone consumers can be identified, marketing strategies can be designed to appeal directly to these households. For example, demographic information is available from census data, if certain demographic groups are more deal prone, rebate distribution could be targeted at those areas these consumers reside. Similarly, more accurate identification of deal prone households would increase the marketer's ability to match deal prone households and media audience characteristics, thus increasing the efficiency of media distribution for marketing campaigns.

In this chapter, the literature of deal proneness is examined. Past literature indicates that consumers have different information search behaviours and deal proneness based on demographics such as age, income, education, and gender (Bawa and Shoemaker, 1987a, Blattberg et al., 1978 & Sen, 1978, Narasimhan, 1984). There is much research on deal prone consumers in the coupon literature (Blattberg et al., 1978, Bawa and Shoemaker, 1987a, Bawa et al., 1997, Lichtenstein and Burton, 1997), but very little examining rebate use and the deal prone consumer. Given coupons and rebates are both price promotions, albeit with different discount mechanisms, the coupon literature provides a sound starting point from which to examine rebate deal proneness.

In a two-part study McCall et al., (2009) attempt to link consumer’s rebate proneness to their actual and intended use of rebates, their attitude towards the use of rebates to trial products, and their tendency to complete the redemption process.

They developed an eight item rebate proneness scale in part based on the Lichtenstein et al. (1990) work on coupon proneness. An additional four questions probed previous rebate use, future rebate intentions, attitudes towards rebates as a method of stimulating product trial, and their history of completing redemptions.

Participants of Study 1 comprised 106 university students. McCall et al., (2009) contend the eight item scale represents a valid measure of rebate proneness. The results of their study showed rebate proneness to be significantly related to the number of products purchased in rebate promotions in the prior 12 months. Furthermore, their scale was positively related to the behavioural, attitudinal, and intentional usage of rebate offers.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In an attempt to inject a measure of realism into the analysis, Study 2 was undertaken in a shopping mall where 30 respondents completed the survey. It should be noted that the respondents were randomly selected, and not because they had been exposed to a rebate offer. The authors conclude that respondents who rated themselves as rebate prone are more likely to use rebates, particularly for trialling new product.

In essence, the scale suggests that consumers who have used rebates in the past are more rebate prone. Further, if they have used them in the past they are more likely to use them in the future. Whilst McCall et al., (2009) find support for their proposed rebate proneness scale, they offer little guidance as to what implications it may have for marketers, or, how it might be used. For example, how does one identify a rebate prone consumer? Finally, they conclude that rebate proneness is a significant predictor of transactional completion, (i.e., people actually redeeming the rebate). This runs against industry experience, which shows most people, in fact, do not redeem the rebate, even when the rebate is influential in the purchase decision.

In a related study Brown (1999) looked to identify market segments within rebate users defined by their motives for utilising rebates. Drawing on previous work, the author isolated eighteen reasons consumers utilise rebate offers. These were reduced to three factors labelled, ‘satisfaction with the deal’, ‘consumer-orientation of manufacturers’, and ‘rebates are not an aggravation to redeem’.

Consumers’ purchasing behaviour and attitude towards the rebated product were categorised as either behavioural or affective. The behavioural measure included the use of rebates to trial product, whether the consumer would wait for a rebate before purchasing, to what extent the consumers collected rebate offers, and whether they completed the redemption process. The affective measure evaluated the influence of the rebate advertising and to what extent their interest in purchasing the product changed.

A random sample of 475 shoppers was asked to consider their most recent rebate related purchase. The affective influences were positively related to the ‘satisfaction with the deal’ segments. Of the behavioural measures, product trial and purchase postponement were also positively related to ‘satisfaction with the deal’. Conversely, the behavioural measure of rebate use was negatively related to the ‘rebates are not an aggravation to redeem’ segment.

Brown (1999) concludes that rebates are a viable marketing tool to stimulate product trial, or for products early in their lifecycle. Heavy and long-term rebate users have
negative perceptions of the time and effort involved in using rebates. As such, manufacturers should attempt to simplify the redemption process for this group.

7.1 **Gender**

There is some evidence that women are more likely to utilise coupons whilst men prefer rebates (Harmon and Hill, 2003, Hill and Harmon, 2009, Kyoung-Nan and Yoo Jin, 2007, Lichtenstein et al., 1995). This may be a result of women traditionally having a greater role in the household purchases with which coupons are associated. Conversely, men have been found to be more influenced by the acquisition value of a purchase than the transactional value. It follows, therefore, that they may be less affected by the delayed nature of the rebate payment (Kyoung-Nan and Yoo Jin, 2007). It may also explain why men are more likely to view the savings from coupons as not worth the effort involved (Hill and Harmon, 2009).

Similarly it has been argued (Mazumdar and Papatla, 1995) that men are less prone to coupons and more receptive to shelf prices because they spend less time planning their purchase activities. Women on the other hand tend to enjoy the shopping experience and spend more time planning (e.g., searching for specials or coupons) (Park and Gomez, 2004) and are less swayed by in store promotions. Further, Hill and Harmon (2009) found women are likely to enjoy the process of collecting and using coupons, are more flexible in their shopping patterns when using coupons, and are more price sensitive.

Others (Harmon and Hill, 2003) have suggested differences in coupon use between genders can be attributed to the type of product being purchased. Men, for example, are more likely to use coupons for electronic/computer purchasers. They found no significant difference in the frequency of use between age groups for men, yet older women were more likely to use coupons than younger women. Overall, they found women reported using coupons more frequently.

7.2 **Income**

For a number of reasons it seems rational to suggest that those on lower incomes should be more prone to rebate behaviour. Firstly, the marginal benefit of rebates decreases as income increases – they are negatively related – so those on lower incomes gain relatively more from a discount (Clark, 2001). Secondly, gaining a benefit from a price deal, coupon or rebate, requires the consumer to expend a given amount of time, the
An Analysis of Buyer Behaviour in Response to Rebate Promotions

opportunity cost of which is greater as income increases. Thirdly, high income individuals are more interested in quality, or the perception of quality, and as such they are less likely to be drawn to promotions based on price alone (Kyoung-Nan and Yoo Jin, 2007). Finally, basic economic theory suggests that lower income individuals will be more price sensitive and thus more likely to use coupons – a view which has empirical support. Jones et al. (1994) determined lower income individuals were more demand elastic, with the purchases guided by their income and product prices. Kalyanam and Putler (1997) similarly showed a negative relationship exists between income and price sensitivity. Lichtenstein et al. (1991) found coupon use was significantly related to income, with low income groups being more coupon prone than high income groups. Similarly, Cronovich et al. (1997) found higher income households (> $75,000 pa) were significantly less likely to use coupons.

It should not be assumed, however, that higher income individuals are immune to price deals. Research on human capital in consumption found a significant positive relationship between income and rebate use (Kyoung-Nan and Yoo Jin, 2007). The authors argue that high income individuals are more likely to respond to sales promotions because they have more opportunity to shop and therefore develop more honed consumption skills.

Blattberg et al. (1978) found, contrary to expectations, that higher income households were more deal prone than low income households. They argue that these households are more likely to buy ‘capital’ goods and are more able to take advantage of deals as they arise. When they controlled for the presence of these ‘capital’ goods, high income households were found not to be more deal prone. In fact, one group of low income households – those that owned their homes – were found to be more deal prone.

Others (Teel et al., 1980) found that those more likely to be ‘susceptible’ to coupons were younger, part of a large family, had higher family incomes, and were concerned with maximising value for money. Similarly, Bawa and Shoemaker (1987a) found deal prone households tended to be younger, larger, more educated, and have higher incomes.

Another stream of research suggests that the relationship between income and the use of coupons is U-shaped. It initially increases with income until a critical level, after which it decreases (Narasimhan, 1984). A similar relationship is seen for online coupons where households with medium incomes are more likely to be users (Park and Gomez,
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Jolson et al. (1987) in a study of rebate users reported light users where in a higher income bracket than heavy users. Heavy users were, in turn, in a higher income bracket than non-users.

There is some evidence that the level of discount is greater for rebates than coupons because companies expect to pay out on a smaller percentage of purchases. A substantial cost in claiming a rebate payment is the time cost. It is reasonable to suggest that those with a lower opportunity cost of time stand to gain the most from redeeming. This includes those on lower incomes, the unemployed, stay-at-home mums, and the retired. Unsurprisingly, several of these groups also have the requisite free time with which to complete the redemption process.

The evidence of a relationship between income and promotion responsiveness, as summarised in Table 9, is inconclusive.

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>Bawa and Shoemaker (1987a)</td>
</tr>
<tr>
<td></td>
<td>Kyoung-Nan and Yoo Jin (2007)</td>
</tr>
<tr>
<td></td>
<td>Blattberg et al. (1978)</td>
</tr>
<tr>
<td>Negative</td>
<td>Jones et al. (1994)</td>
</tr>
<tr>
<td></td>
<td>Kalyanam and Putler (1997)</td>
</tr>
<tr>
<td></td>
<td>Lichtenstein et al. (1991)</td>
</tr>
<tr>
<td></td>
<td>Cronovich et al. (1997)</td>
</tr>
<tr>
<td>U-Shaped</td>
<td>Narasimhan (1984)</td>
</tr>
<tr>
<td></td>
<td>Park and Gomez (2004)</td>
</tr>
<tr>
<td></td>
<td>Jolson et al. (1987)</td>
</tr>
</tbody>
</table>

7.3 **Age**

A number of researchers have investigated age and coupon use. Some have found no statistically significant relationship between age and coupon proneness (Lichtenstein et al. 1995). Cronovich et al. (1997) found a similar result for most age groups. Those over 65, however, were more likely to use coupons. Hill and Harmon (2009) found older females the most likely to use coupons. Younger women are more likely to use on shelf coupons than to cut them from the paper (Park and Gomez, 2004).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In a departure from previous studies Lichtenstein and Burton (1997) examined demographics across a range of promotion types (e.g., coupons, rebates, cents-off etc.) to assess whether consumers were prone to one type of promotion, or, promotions in general. They found no significant relationship between deal proneness, income, and gender, but significant relationships between deal proneness, age, and education.

In a study on impulse purchasing, Bellenger et al. (1978) suggested that the age distribution of impulse purchasers is bimodal. That is, both young and old adults have shown a tendency to purchase on impulse.

Summary

In summary, previous research has produced no clear relationship between demographic variables and deal proneness. This could be due to differences in research design, such as differing scales for income, age, education etc. Additionally, it is likely that different products would not have the same demographic profile. For example, it is reasonable to expect users’ demographics to be different between users of lawn mowers and sewing machines. This is not to say a relationship between demographics and rebate redemption does not exist, only that the nature of the relationship will be contingent on the type of product contained in the offer.

Study 3 examines a rebate promotion undertaken by a leading manufacturer of household durable goods. Because the manufacturer has requested confidentiality, the exact characteristics of the product are not discussed. The nature of the product, however, suggests males will be influenced more by the promotion than females. Furthermore, according to the manufacturer, the promoted product is more likely to appeal to an older demographic.
Chapter 8. Study 3: The Characteristics of Rebate Redeemers

The literature review presented in Chapter 4 suggests the effort to redeem a rebate influences, directly and indirectly, the redemption rate. Further, in it was shown that the onerousness of rebate requirements has a significant effect on intention to redeem. The larger the effort, and the opportunity cost of time, the less likely consumers will complete the redemption process; they either do not commence or give up before completion.

In response to calls for research of simplifying the rebate process (Khouja et al., 2008b, Jolson et al., 1987, Tat and Lee, 1993), and the impact of increased redemption rates on firms’ profitability (Tat and Lee, 1993), this study examines if including an online redemption option effects redemption behaviour. In particular, if a simpler redemption process leads to more redemptions being received. Tat and Schwepker Jr (1998) in arguing for simpler redemption processes acknowledged that they may result in higher redemption rates, and increased costs for the manufacturer. Online redemption could simplify the process through reducing the onus of proof, streamlining the application form, and increasing the visibility of the program conditions. By comparison, a mail-in redemption process has more laborious compliance requirements.

This study will examine Hypothesis H1 developed in Chapter 4;

H1: A rebate promotion offering two paths to redemption, each with different levels of onerousness, will not see a preference for the simpler path.

In addition to examining H1, this study collects valuable demographic data on rebate redeemers. Given this chapter reports on a field study conducted in conjunction with a durable goods producer, it was not possible to utilise the full deal proneness eight item scale developed by Lichtenstein et al. (1990). The demographic data collected, however, did, prompt the following research question (RQ);

RQ1: What are the demographic differences between online and mail-in redeemers?

8.1 Methodology

This study reports on the results of a rebate sales promotion conducted in conjunction with an Australian manufacturer of household durable goods (AHDG). For reasons of confidentially the manufacturer requested anonymity. The products involved in the promotion were high end solar water heaters, with a retail price of A$2,000-3,000.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Whilst water heaters are common to every household, due to their high price, technical complexity, and low market penetration solar water heaters are considered a niche market.

The promotion of an after purchase rebate of A$200 was advertised in the national press over five weeks, and allowed both online and offline redemption. This promotion had many similarities with past rebate offers by AHDG. The rebate values, national advertising, promotion period, redemption period, and mail-in redemption process were extensively comparable. They had not, however, offered an online redemption path with previous rebate promotions.

Consistent with the literature on channel co-ordination (Gerstner and Hess, 1991a) and the advantages of making consumers aware of the price discount (Jolson et al., 1987, Tat et al., 1988), the rebate offer featured prominently in all advertising artwork. This aspect was consistent with AHDG’s previous rebate promotions.

The promotion ran for 35 days and had a fixed redemption expiry date 50 days from the promotion commencement date. Consumers learned the redemption requirements and received the necessary forms at the point of purchase. They subsequently chose their preferred redemption method independent of the sale. The mail-in redemption form carried a prominently displayed advice that an online method was available, along with the direct website address.

Mail-in redemption required consumers to mail a form with product information and a copy of the purchase receipt, to the manufacturer. The online option required the consumer to enter the product information via the manufacturer’s website, without the requirement for a copy of the receipt or the need to mail.

Independent Variables

Time Taken To Redeem (TTR)

When the rebate applications were received, the envelope postmark date was recorded. The postmark provides an accurate estimate of the date the application was mailed, and removes the need to adjust for varying shipping times. Comparing the postmark to the date of purchase listed on the receipt yields an accurate estimate of the TTRM.

In contrast, the online process required the completion of the same form via the AHDG website, without the requirement for signatures or proof of purchase. It was envisaged that by removing the proof of purchase requirements the online method would represent
An Analysis of Buyer Behaviour in Response to Rebate Promotions

A less onerous path to redemption for most people. AHDG undertook to verify the proof of purchase details with the reseller directly. Therefore the onus of proof was not removed it was merely transferred up the value chain.

The TTR0 was estimated by comparing the date the form was submitted to the date of purchase.

Promotion Awareness and Influence

The second section of the questionnaire comprised two questions associated with the rebate promotion. The first asked if the respondent was aware of the rebate offer prior to contacting the retailer: ‘Yes’ or ‘No’

The second gauged the rebate’s influence on the purchase decision via a five-point Likert-type scale, ranging from "None" to "Extremely Influential".

Covariate Variables

Demographics

Both methods included a two-part questionnaire as part of the compliance requirement. The first section comprised questions to collect product purchase information (e.g., store name, location etc.) and the respondents age and gender. See Table 10.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Age 0-20</td>
</tr>
<tr>
<td></td>
<td>Age 21-30</td>
</tr>
<tr>
<td></td>
<td>Age 31-40</td>
</tr>
<tr>
<td></td>
<td>Age 41-50</td>
</tr>
<tr>
<td></td>
<td>Age 51-60</td>
</tr>
<tr>
<td></td>
<td>Age 60+</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
</tbody>
</table>

Dependent Variable

Redemption Method

The dependant variable in this study is the method of redemption, either mail-in or online.
8.2 RESULTS

Comparison Between Online and Offline Redemptions

For confidentiality reasons, actual sales data are not reported, however, n > 350 redemptions arrived, which, the manufacture advises, is a response rate of about 20%. Further, this response rate is typical of similar rebate promotions run by this manufacturer without an online redemption option. As such, it is reasonable to conclude that the inclusion of an online path for redemption did not produce significant additional redemption claims.

Of the redemptions received, Mail-in = 89% and Online = 11%. An ANOVA on the mean TTR produced a mean $TTR_{M} = 19.90$ days with a STD $= 28.98$ days, and a mean $TTR_{O} = 12.43$ days with a STD $= 10.281$ days. A $p = .121$ suggests the difference in TTR between the alternate paths is not significant. This further supports the acceptance of H1.

Therefore, given redemption claims were within the manufacturer’s expectations, Online redemptions were low (11%), and Online redemptions were not completed quicker than Mail-in, H1 is accepted.

Demographics of Redeemers

RQ1: What are the demographic differences between online and mail-in redeemers?

The respondents comprised 27% Female and 73% Male. A binomial test was used to examine if the proportion of participants that redeemed differed by gender. The test statistic $z = 261.00$ (p < .001) shows there is a significant relationship between rebate redemption and gender.

At 38%, the largest group of redeemers was 61+ years of age (Table 11) and 61% of respondents were aged 51+. It should also be noted that for each successively higher age group the percentage of respondents increased. A chi-square statistic was calculated to examine if the proportion of participants that redeemed differed by age group. The test statistic $\chi^2(4) = 108.89$ (p < .001) shows there is a significant relationship between rebate redemption and age.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Table 11: Redemptions by Age Group, Gender, and Method

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21-30</td>
<td>31-40</td>
<td>41-50</td>
<td>51-60</td>
<td>61+</td>
<td>Total</td>
</tr>
<tr>
<td>Female Method</td>
<td>Mail-In</td>
<td>2.59%</td>
<td>2.59%</td>
<td>4.90%</td>
<td>5.76%</td>
<td>8.36%</td>
</tr>
<tr>
<td></td>
<td>Online</td>
<td>0.00%</td>
<td>0.86%</td>
<td>0.58%</td>
<td>0.58%</td>
<td>0.86%</td>
</tr>
<tr>
<td>Total</td>
<td>2.59%</td>
<td>3.46%</td>
<td>5.48%</td>
<td>6.34%</td>
<td>9.22%</td>
<td>27.09%</td>
</tr>
<tr>
<td>Male</td>
<td>Mail-In</td>
<td>2.88%</td>
<td>6.34%</td>
<td>13.83%</td>
<td>14.70%</td>
<td>27.38%</td>
</tr>
<tr>
<td></td>
<td>Online</td>
<td>0.86%</td>
<td>0.58%</td>
<td>2.88%</td>
<td>1.73%</td>
<td>1.73%</td>
</tr>
<tr>
<td>Total</td>
<td>3.75%</td>
<td>6.92%</td>
<td>16.71%</td>
<td>16.43%</td>
<td>29.11%</td>
<td>72.91%</td>
</tr>
<tr>
<td>Total</td>
<td>Mail-In</td>
<td>5.48%</td>
<td>8.93%</td>
<td>18.73%</td>
<td>20.46%</td>
<td>35.73%</td>
</tr>
<tr>
<td></td>
<td>Online</td>
<td>0.86%</td>
<td>1.44%</td>
<td>3.46%</td>
<td>2.31%</td>
<td>2.59%</td>
</tr>
<tr>
<td>Total</td>
<td>6.34%</td>
<td>10.37%</td>
<td>22.19%</td>
<td>22.77%</td>
<td>38.33%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Chi-square statistics were calculated to examine if the proportion of participants that redeemed via mail versus online differed by gender and age group. The test statistics $\chi^2(1) = 0.006$ (p < .001) for gender shows there is a significant relationship between redemption method and gender. The test statistics $\chi^2(4) = 4.698$ (p < .001) for age groups shows there is a significant relationship between redemption method and age.

Rebate Awareness and Influence

To gauge the impact of advertising the rebate, the redemption form asked about their rebate awareness prior to visiting a retailer. Most respondents, 83%, reported that they were unaware of the rebate promotion.

To gauge the rebate's influence on purchasing, a question asked “how influential was the offer to your decision to purchase?” – 59% of the respondents reported the offer had no influence in their decision to purchase. Only 6% of respondents said the rebate was ‘Very’ or ‘Extremely’ influential in their purchase decision (Table 12).

A cross tabulation of ‘Rebate Awareness’ and ‘Rebate Influence’ (Table 12) reveals that 21% of consumers who were aware of the rebate prior to visiting a distributor, reported it as ‘Very’ or ‘Extremely’ influential compared to 3% for the ‘unaware’ group. Similarly, the percentage of the aware group for whom the offer had no influence was lower at 19% than for the unaware group at 68%.

A Chi-square test was conducted on ‘Rebate Awareness’ and ‘Influence of Rebate’. All expected frequencies were greater than five. The test statistic $\chi^2(4) = 58.57$ (p < .001)
shows that there is a significant relationship between being aware of the rebate promotion prior to visiting the store and its influence on the purchase decision.

### Table 12: Rebate Awareness and Purchasing Decision Influence

<table>
<thead>
<tr>
<th>Influence of Rebate</th>
<th>Aware of Rebate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>* None</td>
<td>68%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>18%</td>
</tr>
<tr>
<td>* Influential</td>
<td>11%</td>
</tr>
<tr>
<td>* Very Influential</td>
<td>2%</td>
</tr>
<tr>
<td>* Extremely Influential</td>
<td>1%</td>
</tr>
</tbody>
</table>

An ‘*’ denotes a subset of Preferred Offer categories whose column proportions differ significantly from each other at the adjusted $p=0.025$ level.

Pairwise comparison with Bonferroni adjustment ($p=0.025$) revealed four of the five rebate influence categories had significantly different group proportions. In Table 12 these are denoted by an ‘*’. Statistical significance was accepted at the adjusted $p=0.025$ level. Table 12 reveals that 72% of respondents who were aware of the rebate prior to purchase rated it as ‘Somewhat’ to ‘Extremely’ influential in their decision to purchase. This compares to only 32% for the group who were not aware of the promotion.

One implication for marketers is that prior knowledge of a rebate offer increases its positive effect on the purchasing decision. When respondents were aware of the rebate promotion prior to making the purchase it has a greater influence on their decision to purchase.

8.3 DISCUSSION

The fact that this study compared online and mail-in redemption options via a field study introduces limitations. Firstly, the choice of variables was constrained to single-item measures. Secondly, the fact that all respondents redeemed introduces a potential self-selection bias; they may be predisposed to rebate redemption. Understanding the non-redeemer choices, rebate awareness, rebate’s influence, and demographics, would add depth to rebate research.

The results show reducing redemption requirements via an online process does not produce higher redemptions; the vast majority of redeemers in this study (89%) were mail-in. The manufacturer confirmed that the redemption rate for this promotion was in
An Analysis of Buyer Behaviour in Response to Rebate Promotions

line with previous promotions, and in fact was lower than some other promotions they had run (with mail-in only redemption).

One explanation for this result may be that 38% of mail-in redeemers were 61+ years old. If the cost of redeeming is a function of the opportunity cost of time (Gerstner and Hess, 1991b), the cost could be low for this elderly redeemer group. Further, they may simply have more time available to complete the required documentation. It is also possible that whilst they have Internet access, they lack the confidence, or skill, to complete an online form. For some, going online is itself a substantial hurdle. Finally, a $200 rebate may represent a greater proportion of the household income for this age group than it does for other groups, making the reward/effort equation more appealing.

Khouja et al. (2008b) suggest that rebate independent (RI) consumers are unaffected by the rebate and do not redeem. In this study, almost 60% of those that redeemed said the rebate had ‘no influence’ on their decision to purchase, yet they made the effort to complete a claim. The percentage result rises to 79% with the inclusion of the ‘somewhat influential’ group. This result could be a backlash effect, or, it could highlight a possible subset of the RI consumer, ‘opportunists’, that redeem simply because the offer is available.

The high number of respondents (83%) unaware of the rebate prior to visiting a retailer suggests the advertising was ineffective in promoting the rebate. This could be due to poor creative, incorrect media selection, or both. Further research in this field should include varying creative and media by location, to examine the relationship between message, medium, and rebate awareness. This research is particularly important given the relationship between rebate awareness and influence previously identified.
An Analysis of Buyer Behaviour in Response to Rebate Promotions
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Chapter 9. CONSUMER BEHAVIOUR THEORIES APPLIED TO CONSUMER RESPONSES TO REBATE PROMOTIONS

9.1 INVOLVEMENT THEORY

Early consumer behaviour research proposed that consumers actively seek information in order to make informed, reasoned purchasing decisions. They viewed consumers as rational, problem solving individuals, who weighed information available to them before making an intelligent decision (Zaichkowsky, 1985). Many consumers, however, make many purchasing decisions without extensive information gathering or product comparison. Each day they make many routine decisions that require very little thought, suggesting active information processing cannot be assumed for all decisions.

An alternate framework to explain this behaviour is involvement, specifically low versus high involvement. Zaichkowsky (1985 p.342) defines involvement as “a person’s perceived relevance of the object based on inherent needs, value, and interests.” Michaelidou and Dibb (2008 p.83) as “…an individual difference variable found to influence consumers’ decision making and communication behaviours.” And Rothschild and Houston (1980 p.655) as, “…at a general level, involvement refers to the overall level of interest in some issue or object...” It comprises the effort, time, thought, interest, and resources people put into the purchase process (George and Edward, 2009). Involvement with an object influences ones attitudes and behaviours concerning the object (Slama and Tashchian, 1985). The term involvement tends not to be used in isolation, but rather with a qualifier to distinguish the type of involvement. Houston and Rothschild (1977) make the distinction between enduring and situation involvement, Mittal and Lee (1989) between product and purchase-decision involvement.

Product (Enduring) Involvement

Enduring involvement stems from a person’s ongoing concern for the object’s relevance to their needs, values, ego, or identity (Zaichkowsky, 1985). Consumers who are product involved are looking for a product with the best features to meet a particular group of needs, or complement a set of values. Central to product involvement are the feelings of interest, enthusiasm, and excitement consumers have about a specific product category (Lockshin et al., 1997).

Product involvement is a psychological attachment with an object that is enduring and stable over time, the strength of which is determined by the perceived self-relevance
An Analysis of Buyer Behaviour in Response to Rebate Promotions

(Michaelidou and Dibb, 2008). Conversely, being confronted by an object for the first time does not engender high enduring involvement (Arora, 1982). Because their focus is on product features these consumers are more likely to pay market price, and as such price discounts are not prominent in the initial purchase decision. This is evidenced, anecdotally at least, in the buying frenzy that accompanies the latest electronics releases (e.g., the iPhone™, iPad™). Whilst product involvement is not related to rebate usage, being a product-involved consumer should not prevent an individual from using, and gaining satisfaction from, a rebate deal. Having made a purchase decision based on product attributes, the presence of a rebate provides the opportunity to purchase that product at a reduced price.

**Purchase Decision (Situation) Involvement**

Involvement with the purchase decision is derived from the need to make a considered purchase based on information search, necessitating longer decision times (Zaichkowsky, 1985). Mittal (1989 p.150) defines purchase-decision involvement as “...the extent of interest and concern that a consumer brings to bear upon a purchase-decision task.” It is an individual variable and can vary across consumers for the same purchase.

Kassarjian (1981) suggests that some people may be intrinsically more involved regardless of the product or situation. Slama and Tashchian (1985) take it further concluding that purchasing involvement is related to demographics in predictable ways. They found involved people tended to be women, with children, of moderate incomes, and relatively high education.

Situation involvement relates to concern with specific situations (e.g., the purchase occasion) and with the consequences of an incorrect choice (Mittal, 1989). The involvement is temporary and heightened when there is perceived risk – particularly when the consequences of an incorrect decision are dire (Laurent and Kapferer, 1985, Monle and Tuen-Ho, 2003, Rothschild and Houston, 1980). It is a temporary situational concern bought about in response to a given stimulus object. The emphasis is on the transitory nature of the involvement; once the situation has been resolved, the level of involvement subsides. High situation involvement individuals may be more likely to search media sources, such as consumer reports, catalogues, consultants etc., seek personal recommendations, and thoroughly read advertising. Further, they may be more
An Analysis of Buyer Behaviour in Response to Rebate Promotions

aware of differences in product attributes and quality between brands, and exhibit greater price consciousness (Kassarjian, 1981, George and Edward, 2009).

It has been argued (Mittal and Lee, 1989) that purchase decision involvement is affected by the purchase situation and may affect the extent to which the consumer is motivated to make the right choice. The purchase of everyday items may carry a low motivation, whereas the same product purchased as a gift carries a higher motivation. Similarly Arora (1982) posits that the presence of others at the time of consumption heightens the level of situational involvement.

The concept of ‘market mavens’ (Feick and Price, 1987) encompasses those individuals who have general marketplace expertise. They are information seekers with knowledge across markets and brands, who generally seek and provide personal recommendations. They enjoy shopping and are attentive to advertising. That is, they are involved in the purchase decision. Market mavens are also price conscious shoppers with a greater level of coupon use. It is reasonable to assume that they would be more likely to notice and possibly to take advantage of, a rebate promotion.

**Brand Decision Involvement**

Brand decision involvement is the interest shown in selecting a product brand. Whilst high product involvement is not necessarily an antecedent to brand decision involvement, some level of product involvement is (Mittal and Lee, 1989). Lockshin et al. (1997) distinguish four interactions between brand decision and product involvement – high product and brand involved, low product and high brand involved, both low product and brand involved, and high product and low brand involved.

It has been argued (Lockshin et al., 1997) that brand involvement would be useful in predicting responses to marketing activities. Brand involved consumers may be more likely to respond to brand advertising or information on making better brand decisions. Consumers with low brand involvement and high product involvement are more likely to brand switch or be more responsive to price promotions.

**Interaction**

Decisions that require information processing, problem solving, and information search to assist an individual make a reasoned decision, necessitate a level of involvement. The degree of involvement arises from the antecedent conditions that produced the need to make a decision; recognising them helps clarify the consumer’s subjective situation.
Five antecedent conditions have been identified in the product decision – the importance of the product, the perceived consequences of making a wrong decision, the perceived probability of making a wrong decision, the hedonic value, and the perceived sign value (Kassarjian, 1981, Laurent and Kapferer, 1985, Bauer et al., 2006).

Laurent and Kapferer (1985) found no single factor could totally explain involvement behaviour. They all contribute something to the explanation. Furthermore, whilst there is correlation between factors, they each contribute some specific information. Thus knowing the involvement level of one factor is insufficient to predict the consequence of involvement.

Importantly, products or stimuli in and of themselves are neither involving nor uninvolving. It is only people that can be involved, and consumers will have different responses to the same stimuli. The significance of this point lies in its application to segmentation and the ability of marketing strategies to target different consumer segments (Traylor and Joseph, 1984). Depending on their level of involvement, consumers undertake different levels of information search, are more or less receptive to advertising messages, and exhibit different decision making processes (Laurent and Kapferer, 1985). Armed with an understanding of a segment’s involvement profile and antecedent conditions, marketing messages can be better tailored to invoke involvement.

Involvement and Rebate Behaviour

In a role-playing study utilising university students, Hunt et al. (1995) investigated the relationship between involvement, rebate behaviour, satisfaction, and consumer loyalty. They argue that because product involved consumers have a greater focus on product features they will be less interested in price, less susceptible to price promotions, and thus exhibit less rebate behaviour. Conversely, purchasing involved consumers who are acutely price conscious, will exhibit greater rebate behaviour.

Once the purchase is made, however, Hunt et al. (1995) contend product involved consumers will gain satisfaction from knowing they have saved money on their preferred product. For them the rebate deal influences post-purchase satisfaction rather than pre-purchase decision-making. They contend that in the presence of a rebate highly involved consumers are thus more likely to be satisfied with the shopping experience than are low involved consumers. Whilst they found a relationship between rebate behaviour and consumer loyalty, measured by the likelihood of engaging in positive word of mouth and repeat purchase activities, it was weak. A larger effect on consumer
An Analysis of Buyer Behaviour in Response to Rebate Promotions

loyalty came from the satisfaction with the overall shopping experience, which as mentioned previously is greater for the highly involved.

Whilst they found support for these positions, it is noteworthy that the methodology employed does not measure actual rebate behaviour, but rather a disposition towards rebate behaviour. Participants were engaged in role-plays whereby they received one of seven product purchase/rebate situations. After reading the allocated scenario, they completed a questionnaire to determine their type of involvement and their likely rebate behaviour.

They did not actually purchase the product, engage with a shop salesperson, receive redemption conditions/tasks, face a waiting period, nor have to choose between product options. Arguably these are the very things that define the rebate experience. Furthermore, as has been argued by others (Khouja et al., 2008b, Jolson et al., 1987, Tat and Lee, 1993) simplifying the rebate process may itself increase customer satisfaction and customer loyalty. Conversely, many have argued that rebates can decrease purchase satisfaction (Arar, 2007, Barlyn, 2007, Ewoldt, 2009, Mies, 2009, Moses, 2009, Ploskina, 2008). It is therefore difficult to see how Hunt et al. (1995) get an accurate picture of the rebate interaction without these key aspects.

9.2 PROSPECT THEORY
Prospect theory has its origins in the theory of expected utility, which posits that as rational beings individuals choose outcomes that maximise their expected utility. In the presence of risk, individuals weigh outcomes based on their known probability and choose the outcome with the highest weighted sum. An individual’s attitude to risk is reflected in the shape of the utility function. Risk averse individuals have a concave utility function, and when faced with two options yielding equal utility will favour the certain outcome over the risky outcome. Conversely, risk-accepting individuals have a convex utility curve and choose the risky over the certain outcome.

Kahneman and Tversky (1979) noted, however, that choices made in the presence of risk were not always as predicted by expected utility theory. For example, utility theory assumes the psychological value of money (like most goods) exhibits a diminishing marginal utility. This notion is, however, inconsistent with activities such as gambling and lotteries, where individuals wager a small amount in the hope of winning a larger amount (Levy, 1992).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In laboratory experiments Kahneman and Tversky (1979) presented respondents with a series of hypothetical problems involving a choice between monetary and non-monetary outcomes, both positive and negative. The choices made consistently violated those predicted by expected utility theory. This lead Kahneman and Tversky to propose an alternative to utility theory – Prospect Theory – as a means of explaining choice in the presence of risk.

Prospect theory differs from expected utility theory in a number of important aspects. For the purposes of this research, three are more noteworthy. Firstly, in expected utility theory individuals are attempting to maximise their total wealth. Alternatively, in prospect theory people perceive outcomes in terms of gains and losses. Whilst gains and losses are relative to a reference point, transactions are evaluated one at a time, rather than as part of the whole, final position.

In prospect theory the reference point is defined by the origin point of the value function (Figure 18) and preferences are highly sensitive to changes in the reference point. Therefore, in prospect theory, the choice of reference point becomes particularly significant. Conversely the invariance principle in utility theory states that an individual’s preference for an outcome should not depend on how the outcome is described (Berger and Smith, 1998).

Prospect theory, on the other hand, argues that differences in how individuals ‘perceive’ a problem have a significant impact on the reference point chosen. This ‘perception’ can be influenced by how the problem is framed. For example, separating outcomes into their risky and riskless components, or, by labelling the outcomes in either positive or negative terms. To illustrate alternative framing approaches – a credit card surcharge could be presented as a charge (i.e., a negative frame) or as a discount for cash (i.e., a positive frame) (Tversky and Kahneman, 1986).

Secondly, individuals treat gains and losses differently. More specifically, they are risk averse with respect to gains, and risk accepting with respect to losses. This suggests that individual utility functions are concave with respect to gains and convex with respect to losses. This contrasts with expected utility theory which argues utility functions are either strictly convex or concave.

Thirdly, losses loom larger than gains of equal magnitude; it hurts more to lose $100 than to gain $100. Further, the marginal utility of gains and losses diminish with
An Analysis of Buyer Behaviour in Response to Rebate Promotions

increases in value. For example, it hurts more to go from $0 to -$20, than -$100 to -$120, even though the value of the loss is the same.

These three observations give rise to an s-shape value function (Figure 18) that is concave in the domain of gains and convex in the domain of losses (Tversky and Kahneman, 1981). An s-shape value function has an added interpretation. Individuals tend to overweight outcomes that appear certain versus those which are only probable. Further, they overweight small probabilities compared to those with medium to high probability. Outcomes that are extremely likely, but uncertain, are treated as if they were certain. As a result changes in probability close to 0 or 1 have a greater impact than equal changes in the middle of the range.

**Figure 18: Typical Value Curve**

![Figure 18](image)

**Extensions to Prospect Theory**

The original Kahneman and Tversky (1979) theory frames choice scenarios in terms of two choice options: one riskless, one an all or nothing chance outcome. The positive frame presents both options as gains, the negative as losses. Since their original work there have been many subsequent studies attempting to replicate the choice reversal outcome. In the main where the problem has been framed as a set of risky choices, the choice reversal phenomena was evident (Levin et al., 1998).

When, however, the problem does not involve a straightforward choice between two options with a given probability, the results are less predictable. This is often the case with advertising and product evaluation (Chang, 2008). Sales advertising and promotion seek to elicit the purchase of product A instead of products B, C, D etc., based on anything but probability. Equally, public welfare campaigns such as anti-
smoking, safe driving etc., make emotive, intellectual, or graphic appeals for
behavioural change, rarely are they presented a choice between two risk based options.

Researchers have attempted to explain these variances by expanding the theory with the
inclusion of additional constructs, such as Attribute Framing, (Levin et al., 1998, Levin
and Gaeth, 1988, Levin et al., 1985), Goal Framing (Levin et al., 1998, Ganzach and
Karsahi, 1995), and coding of gains and losses (Thaler, 1985). It is this later construct
that is of particular interest in this study.

**Coding Gains and Losses**

Thaler (1985) extends basic Prospect Theory of single, one-dimensional outcomes to
include joint outcomes for gains \(x\) and losses \(y\). He argues joint outcomes \((x, y)\) can
be valued together, integration, \(v(x + y)\), or, separately, \(v(x) + v(y)\), and examines under
what conditions each will yield the greater utility. Integrating or segregating outcomes
produces four possible combinations: multiple gains, multiple loses, mixed gains, and
mixed losses.

He argues that a promotion framed as a gain has its benefits \((x)\) segregated from the
original purchase price \((y)\) (segregation), whereas the promotion framed as a loss will be
seen as merely reducing the initial purchase price (integration). Thaler (1985) presents
automobile rebates as an example where a promotion could be perceived as a separate
gain rather than a mere reduction of the purchase price. Thaler (1985) proposes that
individuals create a separate "mental account" for the rebate that separates it from the
initial sale. In comparison, an equal discount at the point of sale is seen as a reduced
loss rather than a gain.

In the case of mixed losses, where the individual faces a net loss, \(x < y\), the choice of
integration or segregation depends on the relative sizes of the gain and loss. Where the
gain and loss are of a similar size \((x=-40, y=-50)\) integration will be preferred because
the reduction in loss from $50 to $10 will be valued more than the saving of $40.
Conversely, small gains \((x=-40)\) should be segregated from larger losses \((y=-6000)\),
reducing the negative impact of the loss, a ‘Silver-Lining’. That is, a small gain
evaluated separately from a larger loss is perceived more positively than reducing the
loss by the same amount. In fact Thaler (1985) argues, “This is more likely the smaller \(x\)
is relative to \(y\).”
Rebate promotions are an example of the silver-lining effect – the rebate is coded as a separate gain that makes the larger loss associated with the purchase price seem less painful. For example, an air conditioning manufacturer sells their top of the range model for $11,200. To clear excess stock they decide to offer $1,200 off. If they reduce the ticket price from $11,200 to $10,000 (Point A in Figure 19) the consumer moves to the right along their value function by the distance $v(x) = v(-11,200) - v(-10,000)$. The change in value from a price reduction is shown at Point B (Figure 19).

If the manufacture instead offers a rebate of $1,200 received after purchase, the consumer has two separate events to reconcile on their value function. Firstly, the initial purchase yields $v(x) = v(-11,200)$. Secondly, when the consumer receives the rebate after purchase, it is interpreted as a separate gain and yields $v(x) = v(1,200)$ (Point C in Figure 19). The value of the rebate transaction is thus the sum of these two events, such that $v(x) = v(-11,200) + v(1,200)$. As can be seen in Figure 19 the reduction in loss is greater under the rebate promotion (Point D) than the straight point-of-sale discount (Point B).

**Prospect Theory and Rebates**

For marketers one implication of Prospect Theory is the question of how best to frame their communications transactions. Which aspects should be combined and which
An Analysis of Buyer Behaviour in Response to Rebate Promotions

should be separated? Sales promotions can be viewed as either a gain or loss. In effect, a discount can be viewed as a gain separate from the purchase, or, as reducing the loss associated with the purchase. Thaler (1985) argues that promotions framed as a gain will have benefits segregated from the original purchase price, whereas those framed as a loss will be seen as a reduction in the purchase price.

In a study of university students Chang (2008) argues that positively framed messages invoke higher levels of positive affect, contributing to higher ratings on advert believability, likability, and brand attitudes. Furthermore, positive messages lead to higher levels of message attention and cognitive response. The positive messages were more successful if they highlighted a psychological (e.g., improving self-confidence) compared to a functional attribute of the product.

In a study of households looking to reduce their energy use (Mayer, 1995) respondents were asked one of two questions relating to replacing their inefficient electric water heater with a high-efficiency heat pump water heater. One group were presented with a discount offer, the other with a rebate offer. Whilst the survey finds in favour of the rebate offer, and thus the predictions of prospect theory, the question format was unusual.

Rather than presenting the offer in terms of a discount or rebate, the discount respondents were asked to indicate a maximum price they would pay – thus inferring a discount from the listed retail price. Conversely, the rebate group were asked the minimum rebate they would accept to purchase the heater. Whilst the scales were the same in dollar terms, they were not the same in terms of the interpretation. The discount frame was working for $0 up to the retail price, whilst the rebate frame was working from the retail price down to $0. Thus, comparing the two groups is problematic.

Thaler (1985) argues that given the time period between the purchase and rebate receipt, rebate promotions effectively segregate the savings, leading to them being viewed as a gain, thereby producing a larger reduction in the negative effect of the purchase. Sovern (2006) extends the argument to suggest that by the time the consumer comes to complete the redemption process, the rebate appears more as a gain than a reduction of the loss associated with the initial purchase. Similarly, when investigating the effects of various promotion types on consumer price perceptions, Folkes and Wheat (1995) found that separating a saving from the purchase resulted in higher price perceptions. The loss and the gain were effectively segregated.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In a survey presenting hypothetical job scenarios (Jarnebrant et al., 2009), participants were presented with decisions requiring a choice between gains and losses of vacation days. Each scenario resulted in an equal net loss of vacation days, the choices, however, were presented as a small loss or a large loss/small gain. In a second survey Jarnebrant et al. (2009) present a series of mixed monetary gambles with a choice between a gain/loss presented separately or combined. The results of both surveys showed support for the existence of a silver lining effect. Respondents preferred the choices where the small gain was separate from the larger loss.

9.3 Construal Level Theory

Construal Level Theory (CLT) postulates that there is an asymmetry of available information between near and long-term events. As a result, events with differing time frames are understood at different levels of abstraction. That is, individuals interpret, or construe, future events differently to present events using abstract construals. Because the construals are defined from one’s own point of view, they have the same egocentric reference point across various distances; they are related to the same central premise. As psychological distance increases, construals become more abstract, however, the different distances similarly influence prediction, evaluation, and action, inasmuch as these outcomes are mediated by the construal (Trope and Liberman, 2000).

Distant future events are perceived via ‘high-level construals’, which are relatively simple, abstract, coherent, and superordinate mental representations; they relay the general essence of the event. Moving to these more abstract representations involves retaining central features and omitting features that by the very act of abstraction are deemed incidental. These high-level features relate to the event’s identity and how they align to the individual’s aspirations. As such, any changes in these features significantly affect the meaning of the event (Trope and Liberman, 2003).

Conversely, information that is more specific is available for near term events, thus people conceive them via their “low-level” concrete features (i.e., their task specific aspects). Low-level construals are more complex and contextual, and are thus richer and more detailed but less structured and parsimonious than high-level construals. Changes in these features lead to only minor changes in the events meaning.

For example, if one’s superordinate goal is to contact a friend, the near term representation of an object capable of meeting this object may be a “mobile phone”. Whereas in the future representation we are not so specific, such that a “communication
device” is relevant, and its size and shape are not. From the perspective of the goal the mobile phone could be replaced by a desktop computer with an Internet connection (Trope and Liberman, 2010).

Trope and Liberman (2010) suggest two related criteria to distinguish which features of an item or an event are more high level and which are more low level. The first criterion reflects centrality: Changing a high-level feature has a greater impact on the meaning of an object than does changing a low-level feature. The second criterion reflects subordination: The meaning of low-level features depends on high-level features more than vice versa.

Roehm and Roehm (2010) investigated the interaction between incentive face value and time frame in the context of CLT, using a bonus product promotion. In their experiment, respondents received a complimentary health club membership as a reward for opening a bank account. The face value of the membership, and the qualifying period (i.e., the length of time the account had to remain open before receiving the membership) were varied.

They argue that in the case of incentives received at or soon after purchase, CLT suggests the face value will carry more importance in the decision process because it is a more tangible feature. Therefore, incentives with a higher face value will be more appealing in the near term than those with lower face values. Alternatively, face value will carry less importance for incentives with a long redemption period. For these incentives alignment to personal goals would have more influence on the purchase decision (Roehm and Roehm, 2010).

The authors found support for this proposition by way of two laboratory experiments with university students. Participants chose between combinations of incentives with high/low face value, near/far time frames, and with/without goal congruence. Participants were indifferent to the value face of the incentive when the time frame was long and the incentive congruent with a personal goal.

They argue this finding could increase promotion profitability on two fronts. Firstly, lower face value incentives can be used where the time frame is elongated. Secondly, the probability that people will buy on deal increases. Firms are thus selling more products at full price, and paying out less in incentives.
The Roehm and Roehm (2010) experiments’ application of CLT is somewhat problematic in that there is a disconnect between the goal and reward. The central aim of the promotion was to increase the number of bank accounts opened. Presumably, the consumer’s goal in opening an account is related to personal savings, earning interest, income security etc., in effect a financial goal. The incentive, a health club membership, is more closely related to a fitness goal than a financial goal.

Whilst fitness may be a good fit to personal goals, it does require firms to have a deeper understanding of their potential customer base, and the ability to segment them based on said goals. Products with a heterogeneous customer base (e.g., a television brand) may find it more difficult to find an incentive product with universal appeal. Selecting a product that appeals to a narrow sub-section of their market may not result in a successful promotion.

In their experiment, Roehm and Roehm (2010) used university students. It is conceivable that this demographics’ fitness aspiration is higher than average, and as such a health club certificate would be appealing. It is debatable whether firms have this level of knowledge about their customers. The results would be more applicable had the incentive been finance related and therefore more congruent to the act of opening a bank account. Equally, if the promotion had been an incentive to sign up for a health club membership rather than to open a bank account.

CLT contends that people use increasingly higher levels of construal to represent an object as the psychological distance from the object increases. This is because high-level construals are more likely than low-level construals to remain unchanged as one gets closer to an object or farther away from it. From a temporal distant perspective, it is therefore more useful to construe the action in terms of the high-level goal rather than the low-level goal (Trope and Liberman, 2010).

9.4 SUMMARY

In Prospect Theory, a significant determinant of the ‘silver-lining’ effect is the position on the value curve $v$, where the transaction occurs. The loss on the relatively flat section and the gain on the relatively steep section. On the other hand where the loss and gain are of similar values, ($-100, 80$), the transaction will take place closer to the origin, where the gain ($80$) is valued less than the reduction in loss (from -$100$ to $-20$), approximating a case of cancellation.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In line with Prospect Theory one would therefore expect rebate promotions to be interpreted as a separate gain, with their benefits segregated from the original purchase price, and, discount promotions to be interpreted as reducing the loss. Moreover, Prospect Theory suggests that the smaller the discount relative to the purchase price the stronger the preference for rebate promotions.

Referring back to the air conditioning example presented in Figure 19 (page 119 above), would a consumer actually prefer to wait for a $1,200 discount instead of receiving it at the point of purchase? For two reasons the outcome suggested by the silver-lining effect seems counter-intuitive. Firstly, most individuals would likely prefer $1200 now to a $1200 payment sometime in the future. Secondly, most individuals would likely prefer a certain $1200 to a promise of $1200 if the promise contained any level of risk.

Extending Thaler’s (1985) argument that the silver lining effect, “…is more likely the smaller is $x$ relative to $y$” to the point of the ridiculous: assume the discount was $1 on the $11,200 air conditioner – would the consumer really prefer to redeem the $1 after purchase rather than paying $11,199 at the checkout? It seems unlikely. In fact, the customer would likely be indifferent to receiving the $1 discount at all when making their purchase decision.

There is some support for this argument in the literature. As earlier referenced the NPD (2005) study found 35% of respondents "prefer instant cash" to rebates. Similarly, Diamond and Johnson (1990) found, in a study comparing monetary and nonmonetary promotions, that respondents perceived monetary rebates as reduced losses rather than separate gains. They guessed this might be due to increasing familiarity with rebate promotions, or, the practice of expressing after-rebate prices. Taken together, these findings suggest that in practice the silver lining effect may not be applicable to rebate promotions as theorised by Thaler (1985).

In the case of sales promotion, this essay has argued the goal of the promoter is to influence the consumer’s preference for one brand, or product, over another. It can similarly be argued that a consumers goal is to get the best deal possible, or more simply, to pay the least amount possible. Thus, in terms of Construal Level Theory (CLT), ‘maximising savings’ becomes the consumer’s superordinate, high level goal.

In the near term, CLT suggests the consumer would be more interested in the mechanics/specifcs of saving. Should they clip, save, and use coupons? Is a two-for-
An Analysis of Buyer Behaviour in Response to Rebate Promotions

one special on a house brand make trialling an unknown brand attractive? Or, does the $50 mail-in rebate justify the redemption effort?

Earlier reference was made to a NPD (2005) survey that found the most commonly cited reason for dissatisfaction with rebate programs was "prefer instant cash" (35 percent), followed by "too much work for the money" (25 percent). The position arising from this discussion on CLT is that given the near-term choice between a $50 point of sale (POS) discount and a $50 mail-in rebate, consumers would choose the POS discount. This gives rise to the following hypothesis,

\[ \text{H1} \text{ When presented with POS and Rebate offers with equal dollar discounts, consumers are more likely to prefer the promotion that provides the more immediate discount.} \]

What of the case where the rebate promotion provides a larger discount than the POS promotion. For example, the consumer has the option to choose the $50 now, or, complete the redemption process after purchase and receive $100 sometime in the future.

CLT suggests that given the longer-term nature of the rebate redemption timeframe, consumers ignore the specifics of the redemption process (i.e., the redemption requirements) and focus instead on the superordinate goal of savings maximisation. As such, one would expect them to choose the larger rebate promotion (say $100) with the future payment over the smaller POS promotion (say $50) with the immediate discount.

\[ \text{H2} \text{ Given the choice between a discount received now, and a larger discount received in the future, consumers are more likely to prefer the promotion with the largest saving.} \]
Chapter 10. REBATE SALES PROMOTIONS

The industry-based audit of rebate promotions undertaken in Chapter 3 defined the characteristics of rebate promotions. Importantly it identified that rebates can be paid in two main ways; cash or cash equivalents (cheque, EFTPOS cards, store gift cards), and bonus products. In this chapter, this aspect of rebate promotion is investigated in greater depth. Existing literature is reviewed with a view to develop a testable hypothesis as to whether cash or bonus product rebate are preferred by consumers.

Chapter 6 includes a discussion on the ‘repeat purchasing’ effect of sales promotions (please review to Chapter 6.2). The act of purchasing a brand leads the consumer to form a habit toward purchasing it again. The probability of repurchase, however, may be lower than it otherwise would be if the promotion has lessened the brand image. Chapter 4 contains a detailed discussion of the many press reports of high consumer resentment and mistrust of rebate offers, along with calls for greater regulation. It follows that if the rebate redemption process leaves consumers with negative feelings towards the brand, they may be less inclined to repurchase. In this chapter consumer learning as applied to rebate promotions is examined and a testable hypothesis developed.

A central aspect of Prospect Theory (please see Chapter 9.2) is the concept that differences in how individuals ‘perceive’ a problem have a significant impact on the reference point chosen. This ‘perception’ can be influenced by how the problem is framed. At the conclusion of Chapter 2 it was noted that what has so far been missing from the rebate research is an examination of the factors influencing the net effectiveness of a rebate offer. More specifically, how do the characteristics of a rebate offer, such as the framing of the advert and the redemption requirements, influence the propensity of the consumer to purchase the product? In the last part of this chapter, research on rebate price framing is explored and a testable hypothesis as to the most effective rebate price framing method developed.

10.1 BONUS PRODUCT REBATE PROMOTIONS

One form of rebate promotion offers products instead of cash – see Figure 20. Referred to as bonus product rebate promotions, Study 1 identified 43.4% of rebate promotions were of this form. In interviews with fulfilment houses, respondents were unanimous in the assertion that manufacturers prefer cash to bonus product promotions. They cited logistics as a significant consideration: bonus products need to be stored, which incurs
warehousing costs, and then shipped to the claimant, which incurs freight costs. “With bonus product promotions, the postage is one of the biggest costs” was one comment.

**Figure 20: Bonus Product Promotion**

**Bosch Dishwasher Promotion**

**6 Months Free Finish & 90 Day Money Back Guarantee**

It appears that consumers also prefer cash. According to one respondent, “Bonus products have a lower uptake (redemption rate) than cash…” This observation, however, has had a paradoxical effect. Whereas firms prefer ‘cash’ rebates for logistics purposes, the lower redemption rate for ‘bonus product’ promotions has seen them, “…now used more frequently.”

It should be noted there are several advantages for bonus product rebate over cash rebate promotions. Firstly, they provide the manufacturer with the opportunity to cross-promote other products in their range. This could be with new products (trialling), excess stock, and/or, run-out ranges.

Secondly, bonus products have a perceived value substantially higher than the cost to the firm to produce them. Perceived value is an important aspect, as noted by another respondent, “Perceived value is the key. For example, (an) electronics company gave the option for $100 cashback, bonus product valued at $100, or extended warranty – most people took the extended warranty because it had a higher perceived value. It costs the manufacturer nothing until a product fails – which may be low.”

Lastly, making a rebate payment provides the manufacturer direct contact with the consumer. Along with the rebate payment, manufacturers can provide information on related products, special ‘loyalty’ discounts on future purchases, upgrade options, and incentives for referrals. In addition, “…by getting people to register or complete the application online companies save data entry costs. People are doing the work for them.”
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Campbell and Diamond (1990) argue that nonmonetary promotions, such as bonus packs, free samples etc, are perceived differently by consumers than monetary promotions with the same nominal value. Essentially because cash has many uses it is more valuable than the equivalent nonmonetary premium.

Diamond and Johnson (1990) extend the argument, suggesting that the process of evaluating tasks is more complex when different pieces of information about an alternative are in different units that may not be comparable. Further, it should be more difficult to integrate multiple attributes of purchases if these attributes are in different metrics. As such, savings presented as dollars off are easily integrated into the purchase price and should be interpreted as a reduced loss.

Alternatively, for offers presented in different units, such as bonus products, consumers may not expend the mental effort required to convert the bonus item’s value into the same units as the purchase price. As a result, the bonus products are not as easily integrated into the purchase price and will more often be seen as a separate gain. For example, Campbell and Diamond (1990) conclude that consumers tolerate large nonmonetary offers without suspicion because they do not readily compare the value of the bonus product to the regular purchase price.

In a study using a small sample size (n=40) Diamond and Johnson (1990) investigate whether consumers perceive promotion benefits differently when presented as monetary or nonmonetary rewards (e.g., premiums, bonus packs). Their results showed that not only could respondents discriminate between monetary and nonmonetary promotions in terms of promotion type, they also perceived differences in the time and effort required to utilise the promotions.

To examine how respondents viewed the promotions in terms of Prospect Theory’s gains and losses, they were asked to rate each promotion on a 7-point scale from ‘makes me feel that I am losing less than usual” to “makes me feel that I am getting something extra.” The results supported the predictions of Prospect Theory. Nonmonetary promotions were rated as separate gains and monetary promotions were rated as reduced losses.

In a related study on offer framing Diamond (1992) find that consumers view extra product promotions with a given nominal value equally attractive as discounts of the same size. Interestingly though, they note that extra product promotions where the discount was expressed as ‘xxx free ounces’ were rated lower than other forms of
promotions. They speculate this was due to people’s inability, or unwillingness, to convert the free ounces into a monetary value. That is to say, people either did not, or could not, make the necessary mental calculations to compare the offers in terms of cost per ounce.

In a three part study, Hardesty and Bearden (2003) examine the question of how consumers value price discount and bonus pack promotional benefits. Using relatively low value consumer products (e.g., as toothpaste and detergent) they find support for the inverted U shaped explanation of consumer information processing proposed by Grewal (1992). Specifically, when deal values are low or high, consumers spend less cognitive resources evaluating the offers leading to a preference for the simple to understand discount offers. Conversely, when deal values are moderate, consumers invest more cognitive power in evaluating the difference between offers.

In these previous bonus product studies, the bonus has been in the form of larger sizes for the same price (e.g., ‘50% more at no extra cost’). Bonus product rebate promotions are usually in the form of free complementary products. For example, ‘buy a washing machine and receive free washing powder’. There is no existing literature examining the type of bonus products used in rebate promotions. It is expected, however, that consumers will have the same difficulty comprehending different units in rebate promotions as they have in previous bonus pack research, and therefore the following hypothesis is proposed:

H3 Given the choice between a rebate promotion offering a bonus product and a POS dollar-off discount promotion, consumers will prefer the bonus product rebate promotion.

10.2 Consumer Learning and Rebates

Diamond and Johnson (1990) found individuals tended to rate rebates as reduced losses. They argue this could be due to increasing familiarity with rebates and the practice of advertising ‘after-rebate’ prices. Alternatively, it could be that their experiment design did not highlight the requirement for redemption, and thus respondents were not aware of the temporal distance issue. As such, participants could have simply rated the rebate promotion as a form of price promotion.

Furthermore, it could be argued that the effort required to complete the redemption would be viewed as a loss. Thus the greater the effort required relative to the rebate face
value, the more the loss will loom larger than the gain, and the less likely individuals will complete the redemption.

Evidence suggests that naïve consumers are more likely to overestimate their probability of redemption. Experienced consumers, aware of their previous redemption behaviour, are likely to value the rebate less because they have a good idea of the actual redemption costs. (Khouja et al., 2008a, Lu and Moorthy, 2007). Further, these consumers’ purchasing decisions are likely to be less effected by the rebate promotion (Khouja et al., 2008b).

Jolson (1987) found that frequent rebate users were more likely to understand the effort required and to follow through with a redemption. Similarly, Gilpatric (2009) argues that repeated instances of non-redeeming behaviour may lead consumers to become more self-aware. They may then not purchase products with rebates, or, employ measures to increase the likelihood of redemption (e.g., reminders). In both cases breakage and profitability of rebate offers will decrease.

It follows then that if rebates are offered infrequently on less commonly purchased products, the effect of learning from experience will be reduced and rebates will be more profitable. Conversely, over use of rebates on regularly purchased products can encourage learning and may lead to rebates becoming ineffectual as a demand stimulus tool (Khouja et al., 2008a).

Brown (1999) extends this work by suggesting longer term rebate users are more likely to have negative perceptions of redemption requirements. Newer rebate users are more accepting of the conditions, perhaps because they are yet to fully experience them.

The following hypothesis is therefore proposed:

**H4** Individuals with recent rebate promotion experience will prefer a POS discount to a cash back promotion.

### 10.3 Reference Prices and Rebates

As previously discussed (please see Chapter 6.2), reference prices provide the consumer with an internal standard against which observed prices are compared, and provide a base from which to judge the attractiveness of a promotion.

Reference price is an important construct from a managerial perspective. The timing of sales promotions, for example, can be greatly affected by reference prices. Consistent
price promotions lower reference prices so that each subsequent promotion is perceived less favourably, and, consumers may interpret the return to "normal" prices as a price increase (Kalyanaram and Winer, 1995).

Consumers form their reference prices as a result of both temporal and contextual cues. Temporal cues relate to the individual’s previous experience, such as previously observed prices and/or previously paid prices. On the other hand, contextual cues influence reference price via the price currently available in the market (Neslin, 2002). For example, consumers compare the price of brand A against the price of their reference brand. The reference brands price could be the previous price of the brand (temporal), or the current price of that brand (contextual), or a combination of both.

In general, studies where internal reference prices have been found to influence brand choice, have suggested that past purchase prices form the basis of internal reference price (Kalyanaram and Winer, 1995). Conversely, Grewal et al. (1998) found that for durable items, internal reference price is more heavily influenced by advertised prices and prevailing market prices (contextual) than previous experience (temporal).

Theoretical support for the reference price mechanism can be found in Adaptation-Level theory, which assumes stimuli are judged with respect to internal norms defined by the effects of present and past experience. Accordingly, past and present experience defines an adaptation level, or reference point, relative to which new stimuli are perceived and compared.

Additionally, Assimilation-Contrast theory, suggests consumers have a range of prices, called a latitude of acceptance, which are acceptable. If a consumer sees a price that is within the latitude of acceptance, the price is judged acceptable. Conversely, a price outside the range stands out and become more noticeable (Kalyanaram and Winer, 1995).

Prospect Theory (see Chapter 9.2 Prospect Theory) also supports the use of reference prices. The value function is derived from perceived gains and losses, defined as departures from a reference point. Consumers perceive prices above the reference price as losses, and prices below the reference price as gains. An important characteristic of the value function is that it is concave for gains and convex for losses, highlighting asymmetrical demand effects (Kahneman and Tversky, 1979).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In a study of scanner data for yoghurt products, Mayhew and Winer (1992) found internal reference prices are a significant factor in purchase decisions. In addition, they found support for Prospect Theory’s value function; losses have a greater effect on probabilities of purchase than do gains.

In a more direct test Putler (1992) integrates Prospect Theory into microeconomic theory of the consumer and examines consumer demand for eggs. He finds strong support for the premise that consumers experience and act on perceived gains and losses caused by comparing an internal reference price with the actual price of a product. The analysis of whether consumers react differently to gains and losses was mixed, but generally supportive of the notion that consumers exhibit loss aversion when confronted with perceived losses and gains.

Advertised Prices and Rebate Promotions

Using comparison prices in retail price advertisements to enhance consumers’ evaluations is a common tactic. The advertised reference price (ARP) is intended to serve as an anchor that increases the likelihood a consumer will evaluate a promoted product more favourably against the higher ARP than they would without one (Chandrashekaran, 2004).

In a content analysis of over eight hundred price promotions Chandrashekaran, Monroe, and Viswanathan (2003) found nineteen percent (19%) displayed a sale price by itself, seventy-three percent (73%) were combination adverts, and eight percent (8%) presented the sale price in conjunction with the savings offered without a comparison price.

In a related study (Hyeong Min, 2006) researchers investigated whether the format in which the rebate promotion is presented effects the purchase likelihood. They identified that most (80.8%) rebate adverts included a combination (CR) of the product price, the rebate, and the after rebate price. The remaining adverts displayed only the rebate, without price information (RO), or, the rebate and an after rebate price (AR).

They suggest that representing the price as a solely ‘after rebate’ price produces more negative affect and leads to lower purchase likelihood. Further, this effect on purchase likelihood is greater when the rebate value is large, and the consumer has low knowledge of the products price.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

The authors argue consumer’s find the ‘after rebate’ price deceptive which feeds lower purchase likelihood. It is, however, questionable whether the average consumer would, when viewing a rebate promotion advert, really interpret one format as being more deceptive than the other. It is possible that by asking respondents to rate ‘deceptiveness’ on two scales, the research design led respondents to think in terms of deception when they wouldn’t otherwise have done so. Having marked an advert as deceptive it follows they would then mark a low purchase likelihood.

Whilst the research on rebate offer framing is scant, its importance is not easily dismissed. As Hyeong Min (2006, pp. 309) notes, “…little research has examined the possible impact of price presentation formats on consumers’ evaluation of rebate offers”.

In Study 1, 267 rebate promotions were collected and analysed over a 12-month period. Contrary to Hyeong Min (2006), in only 8% was a regular product price mentioned. In 92% no price was listed, the rebate only (RO) was shown. Of the remaining 8% where a price was mentioned, the adverts were split between having ARP and rebate (SR) and combination format (CR) was almost equal at 45% and 55% respectively.

Following on from Chandrashekaran (2004), who found including an ARP increases the likelihood that a consumer will evaluate a promoted product more favourably against the higher ARP, the following hypothesis is proposed:

**H5** Consumers are more likely to choose a Rebate promotion when the Rebate offer is advertised with a price reference rather than without a price reference.
Chapter 11. Research Hypotheses

In Chapters 9 and 10 five testable research hypotheses were developed to investigate buyer responses to rebate promotions. Prospect Theory predicts that when given the choice between a rebate promotion framed as a future discount and a POS promotion with an immediate discount, consumers tend to prefer the rebate promotion. Construal Level Theory offers a different outcome and says that consumers tend to choose the promotion which best fits their super-ordinate goal, which is defined as savings maximisation (H1, H2). In addition, it is expected that consumers with recent rebate experience will be less likely to choose rebate offers over a POS discount (H4).

Based on research into promotion offer framing, it is expected that rebate promotions presented as ‘bonus products’ will be selected more often as offering the best deal (H3). Furthermore, rebate offers framed with an advertised reference price will generate higher offer preference than those without an Advertised Reference Price (H5).

Table 13 summarised the five hypotheses developed in Chapters 9 and 10.

<table>
<thead>
<tr>
<th>Summary of Research Hypotheses</th>
<th>Tested In</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROSPECT THEORY &amp; CONSTRUAL LEVEL THEORY</strong></td>
<td></td>
</tr>
<tr>
<td>H1 When presented with POS and Rebate offers with equal dollar discounts, consumers are more likely to prefer the promotion that provides the more immediate discount</td>
<td>CH 12</td>
</tr>
<tr>
<td>Given the choice between a discount received now, and a larger discount received in the future, consumers are more likely to prefer the promotion with the largest saving.</td>
<td>CH 13</td>
</tr>
</tbody>
</table>

| **BONUS PRODUCT REBATE PROMOTIONS** | |
| H3 Given the choice between a rebate promotion offering a bonus product and a POS dollar-off discount promotion, consumers will prefer the bonus product rebate promotion. | CH 13 |

| **CONSUMER LEARNING** | |
| H4 Individuals with recent rebate promotion experience will prefer a POS discount to a cash back promotion. | CH 13 |

| **ADVERTISED REFERENCE PRICES** | |
| H5 Consumers are more likely to choose a Rebate promotion when the Rebate offer is advertised with a price reference rather than without a price reference. | CH 13 |
An Analysis of Buyer Behaviour in Response to Rebate Promotions
Chapter 12. STUDY 4: COMPARING DISCOUNT & REBATE PROMOTIONS WITH EQUAL DISCOUNTS

The central premise of this study is the notion that both the size and timing of a promotion’s discount influences an individual’s preference for one promotion over another. The effect of rebate redemption requirements has been examined in previous sections (see Chapter 4 and 0), thus they are not explicitly explored in this study.

The aim of this study is to investigate theorised consumer preference between a promotion offering a point-of-sale (POS) dollar off discount and a rebate promotion offering an equal dollar discount by redemption. Specifically,

1. If there is a difference in offer preference between POS discount and rebate promotions, when the promotion benefit is equal,
2. Whether these differences hold when examining covariates, like product and price knowledge, and selected demographic characteristics.

12.1 METHODOLOGY

Before presenting the survey to respondents, a preamble explained several important concepts. The preamble clarified the difference between POS discounts and rebate promotions. In particular, that rebate redemption requires more effort than a POS discount, and that the rebate payment is received some time after purchase. In addition, the respondents were instructed to focus on the merits of the offers presented, and not, for example, to assess the artwork. The preamble concluded by presenting a shopping scenario to ‘set the scene’ for the purchase decision (see Appendix 2).

Comparison Advertisement Development

Based on the 267 rebate promotions collected in Study 1, a series of fourteen (14) product promotions were designed. Each promotion consisted of two advertisements, a POS discount and a rebate, which were identical except for the treatment of the discount (Figure 21). By presenting graphically identical adverts the effect of the artwork design was consistent, thereby focusing the respondent on the offer presented.
The analysis of the 267 rebate promotions in Study 1 established rebate promotions fall into five broad product categories (Table 14). Almost 87% of the promotions were for the Consumer Electronics (37%), Kitchen Products (36%), or Electrical Products (14%) categories. Therefore, promotions from these categories were selected for use in this study. On the assumption that manufacturers choose artwork ‘creative’ that maximises the impact of their offer, their advertisement layouts were followed as closely as possible.

**Independent Variables**

**Promotion Offer Presentation**

The offers presented in each frame were one of three types: (1) a combination of advertised reference price (ARP), discount/rebate, and ‘now’ price, (2) an ARP and discount/rebate (without a 'now' price), or (3) the discount/rebate only, without any ARP information. Furthermore, the rebate ads could feature either a bonus product or cash back style promotion.

**Rebate Size**

To ensure that where ARPs were used they were realistic, they were based on the findings from Study 1. The rebate value was then calculated as a percentage of the ARP. Previous research on promotion pricing in rebate advertising (Hyeong Min, 2006) suggests a rebate of 10% would be considered low, whereas 45% would be high. Results from Study 1 reveal a rebate range of 1%-504%, a mean=20.31%, and a std dev=37.23%. The findings of Study 1 are consistent with previous research as 91% of the 267 promotions sampled had a rebate discount less than 50%. As such, the
promotions developed for this study have a rebate discount range of 4%-58% with a mean = 18.42%. The APRs range from $80-$3899.

Prior Knowledge

Following the demographic questions respondents were asked, “Have you recently purchased (within the last 12 months), or, are you intending to purchase, a product from any of the following categories?” (Table 14)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Electronics</td>
<td>Products associated with audio/visual or computing including hardware and software, televisions, DVD/Blu-ray players, theatre systems, gaming consoles.</td>
</tr>
<tr>
<td>Kitchen Products</td>
<td>Products specifically design for use in the kitchen, e.g. refrigerators, ovens, cooktops, food processors, dishwashers</td>
</tr>
<tr>
<td>Electrical Products</td>
<td>Hand held electrical products, excluding A/V or Computer products, e.g. coffee machines, vacuum cleaners, electrical tools, shavers, toothbrushes.</td>
</tr>
<tr>
<td>Household Products</td>
<td>Large ‘durable’ products used in the house not falling into other categories, e.g. air conditioners, water heaters, water tanks, swimming pool accessories</td>
</tr>
<tr>
<td>Laundry Products</td>
<td>Products specifically design for use in the laundry, e.g. washers, dryers, cloths irons, steam presses</td>
</tr>
</tbody>
</table>

This question serves two purposes. Firstly, it gives an indication as to the respondent’s knowledge about the product category and relative pricing. Secondly, this response was used to determine which promotions would be presented to the respondent. For example, if a respondent selected consumer electronics they were presented with the consumer electronics promotions. Respondents who selected household products, laundry products, or ‘none of the above’, were randomly assigned to one of the three product categories.

Dependant Variables

Measures of three dependent variables were then obtained through single-item scales (Study 4 Survey Measures). The main dependent variable, Offer Preference, was measured using a seven-point scale bounded by ‘Strongly Prefer Discount Offer’ (1)
and ‘Strongly Prefer Rebate Offer’ (7). After viewing the POS and Rebate advertisements for each promotion respondents were asked, “In your view which of the above promotions offers the best deal?” A higher score on the above scale indicates a greater preference for the rebate promotion.

The Rebate Saving measure was adapted from previous rebate advertising research (Hyeong Min, 2006). Rebate Saving measured the respondent’s assessment of the perceived saving presented in the cash back offer. The respondents were asked, “How would you rate the saving presented in the above Cash Back Offer”? A 7-point Likert scale bounded by ‘Very Small’(1) and ‘Very Large’(7) was the response scale used for this measure.

In line with Hyeong Min (2006), the respondent’s Price Awareness was assessed by asking, “Compared to the average consumer, how would you rate your ‘general’ knowledge/awareness of Laptop prices?” A 7-point Likert scale bounded by ‘Much Worse’ (1) and ‘Much Better’ (7) was used as the response scale for this measure.

**Sample**

The population was the same as used in Study 2. A total of 1,232 surveys were completed, from which 55 (4%) were rejected because the respondent was below the survey’s minimum age of 21. As a measure of inattentiveness those surveys completed faster than two standard deviations from the mean completion time were deleted (Jarnebrant et al., 2009). Given that each respondent was presented with up to five advertisement samples, a total of 5227 responses were collected.

**12.2 Hypotheses Testing Plan**

It has been theorised by Thaler (1985) that Prospect Theory predicts consumers would prefer rebate promotions to discount promotions. The literature, however, provides mixed support for this proposition. Furthermore, it can be rationally argued that a result opposite to that predicted by Prospect Theory is more likely.

Construal Level Theory (CLT) posits that in the near term consumers are more interested in the mechanics/specifics of saving and will choose the offer with the least amount of effort. This gives rise to the position that given the near-term choice between a $50 point of sale (POS) discount and a $50 mail-in rebate, consumers would choose the POS discount because it is the quickest/easiest method of gaining the discount.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

As such, H1 examines consumer’s responses to the choice between competing offers for the same product where the promotion benefits are equal. Consistent with CLT, it is expected that the immediate discount feature of the POS offer would be preferred to the delayed discount of the rebate offer.

The statistical techniques used in hypotheses testing were determined by the nature of the four dependent variables. Whilst the Offer Preference variable asked respondents to rate their preference on an ordinal scale, it is in fact a choice between three options: POS, Neutral, and Rebate, and is treated as a categorical variable. Given the study’s aim of determining which offer (POS or Rebate) is preferred, the group distributions for the three choice options are of interest. A Chi-Square ($\chi^2$) statistic is used to investigate whether the distributions of Offer Preference differ between the three choice options for each set of advert comparisons.

The remaining two dependant variables are ordinal. An examination of the data showed they contained several outliers and had unequal group variances. Therefore, the non-parametric Kruskal-Wallis test was selected to evaluate differences between the three Offer Preference groups (POS, Neutral, and Rebate) based on Perceived Savings and Product Knowledge.

12.3 RESULTS

12.3.1 Prospect Theory and Construal Level Theory (CLT)

H1: When presented with POS and Rebate offers with equal dollar discounts, consumers are more likely to prefer the promotion that provides the more immediate discount

To test this hypothesis the mean of the ‘Offer Preference’ variable is examined. The reader is reminder that ‘Offer Preference’ is scored on a Likert scale bounded by 1 = ‘Strongly Prefer Discount Offer’ and 7=‘Strongly Prefer Rebate Offer’. An Offer Preference score less than four – neutral on the seven-point Likert scale – is a preference for the POS discount. Conversely, a score higher than four is a preference for the rebate offer (Table 15).
The seven-point Likert scale was recoded into three Deal Preference groups; POS Preference (scores 1-3), Neutral Preference (score = 4), and a Rebate Preference (scores 5-7). For each set of adverts, a Chi-square test was conducted on the three Deal Preference groups, POS Discount Preference, Neutral, and Rebate Preference. If the predictions of the hypothesis (H1) hold true, the proportion of respondents who select the POS offer will exceed the number who selected the rebate offer.

All expected cell frequencies were greater than five. The results of the Chi-square tests showed a significant POS preference in all fourteen promotions presented (Table 16). Therefore, when the promotion discount value is equal, POS promotions are preferred to rebate discount promotions. This supports the first hypothesis (H1).

Table 16: Chi-Square test of Deal Preference Group

<table>
<thead>
<tr>
<th>Promotion Advertisement</th>
<th>Deal Preference Group</th>
<th>Total</th>
<th>$\chi^2(2)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS Discount</td>
<td>Neutral</td>
<td>Rebate Offer</td>
<td></td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>Ad 1</td>
<td>493</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Ad 2</td>
<td>475</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Ad 3</td>
<td>462</td>
<td>43</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Ad 4</td>
<td>429</td>
<td>91</td>
<td>32</td>
</tr>
<tr>
<td>Electrical Products</td>
<td>Ad 1</td>
<td>314</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Ad 2</td>
<td>271</td>
<td>44</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Ad 3</td>
<td>272</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Ad 4</td>
<td>274</td>
<td>52</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Ad 5</td>
<td>278</td>
<td>54</td>
<td>17</td>
</tr>
<tr>
<td>Kitchen Products</td>
<td>Ad 1</td>
<td>202</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Ad 2</td>
<td>209</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Ad 3</td>
<td>208</td>
<td>31</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Ad 4</td>
<td>226</td>
<td>5</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Ad 5</td>
<td>208</td>
<td>37</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td><strong>4321</strong></td>
<td><strong>598</strong></td>
<td><strong>308</strong></td>
<td><strong>5227</strong></td>
</tr>
</tbody>
</table>
12.3.2 Rebate Saving Measure

Readers are reminded that the Rebate Saving measure was adapted from previous rebate advertising research (Hyeong Min, 2006), and captures respondents’ perception of the size of the rebate saving. The ‘Rebate Saving’ is scored on a Likert scale bounded by 1 = ‘Very Small’ and 7 = ‘Very Large’. The rebate savings measure gives an indication as to the perceived size of the rebate saving.

It is of interest to investigate if the respondents’ perception of the rebate saving differs between promotion preference groups. For example, do those that chose the POS offer consistently rate the rebate saving as small? If so, it would be reasonable to conclude their perception of the rebate saving influenced their choice of the POS offer.

One method of investigating this relationship is to examine the mean ‘Rebate Savings Measure’ score between offer preference groups. One would expect those who chose the rebate offer to exhibit a higher rebate saving perception than those that did not.

The results of the Kruskal-Wallis test disclosed that all comparisons were in the hypothesised direction, but in only ten of the fourteen (71%) comparisons was the distribution of Perceived Savings across Offer Preference groups significantly different. Follow-up pairwise comparisons were performed on each of these ten significantly different comparisons. The Bonferroni correction for multiple comparisons was used to control for Type I error across tests. Statistical significance was accepted at the p < .016 level. The results of these tests indicate nine significant pairwise comparisons.

In each comparison, the group that preferred the Rebate offer scored the perceived Rebate Saving higher than the group that preferred the POS offer. That is, those that chose the Rebate Offer consistently judged the Rebate saving more favourably than did those who chose the POS discount. This judgement is statistically significant in nine of the fourteen (71%) comparisons (see Table 17). This is counter to Prospect Theory that argues Rebate promotions will be preferred when the saving is small.
Table 17: Deal Preference on Rebate Saving Kruskal-Wallis ($X^2$) Test Results

<table>
<thead>
<tr>
<th>Promotion Advertisement</th>
<th>Median Perceived Saving Score</th>
<th>$X^2(2)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Electronics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad 1 POS Discount</td>
<td>$4_a$</td>
<td>$5_b$</td>
<td>25.856</td>
</tr>
<tr>
<td>Ad 2 POS Discount</td>
<td>$4_a$</td>
<td>$5_b$</td>
<td>16.528</td>
</tr>
<tr>
<td>Ad 3 POS Discount</td>
<td>$4_a$</td>
<td>$5_b$</td>
<td>20.846</td>
</tr>
<tr>
<td>Ad 4 POS Discount</td>
<td>$4_a$</td>
<td>$5_b$</td>
<td>17.507</td>
</tr>
<tr>
<td>Ad 1 Neutral</td>
<td>$4_a$</td>
<td>$5_b$</td>
<td>12.119</td>
</tr>
<tr>
<td>Ad 2 Neutral</td>
<td>$5$</td>
<td>$5$</td>
<td>1.888</td>
</tr>
<tr>
<td>Ad 3 Neutral</td>
<td>$4$</td>
<td>$4$</td>
<td>0.04</td>
</tr>
<tr>
<td>Ad 4 Neutral</td>
<td>$5$</td>
<td>$5$</td>
<td>3.425</td>
</tr>
<tr>
<td>Ad 5 Neutral</td>
<td>$3_a$</td>
<td>$3_b$</td>
<td>13.312</td>
</tr>
<tr>
<td>Ad 1 Rebate Offer</td>
<td>$4$</td>
<td>$5$</td>
<td>6.236</td>
</tr>
<tr>
<td>Ad 2 Rebate Offer</td>
<td>$4_a$</td>
<td>$5_b$</td>
<td>11.917</td>
</tr>
<tr>
<td>Ad 3 Rebate Offer</td>
<td>$4$</td>
<td>$5$</td>
<td>4.878</td>
</tr>
<tr>
<td>Ad 4 Rebate Offer</td>
<td>$3_a$</td>
<td>$5_b$</td>
<td>21.891</td>
</tr>
<tr>
<td>Ad 5 Rebate Offer</td>
<td>$3_a$</td>
<td>$4_b$</td>
<td>29.166</td>
</tr>
</tbody>
</table>

12.3.3 Price Awareness Measure

It has been suggested (Pham, 1998) that a reliance on affect as opposed to substance in evaluative judgments increases when the knowledge needed to process substantive information accurately is lacking or limited. In other words, the use of affect increases as information accuracy decreases. High price knowledge consumers can evaluate savings accurately, regardless of the ad format, and should rely more on perceived savings than affect when evaluating a rebate offer.

Therefore, the overall preference for POS offers in this study could be explained by a preponderance of high price knowledge individuals within the POS group. Having higher price knowledge, they determined the rebate savings offered was low, and consequently chose the POS offer as it offered a faster, less onerous path to receiving the discount.

To investigate if price knowledge was a factor in the decision making process, the ‘Price Awareness Measure’ score between offer preference groups is examined. Readers are reminded that in line with Hyeong Min (2006), the respondent’s Price Awareness was assessed by asking, “Compared to the average consumer, how would you rate your 'general' knowledge/awareness of Laptop prices?” A 7-point Likert scale bounded by
An Analysis of Buyer Behaviour in Response to Rebate Promotions

‘Much Worse’ (1) and ‘Much Better’ (7) was used as the response scale for this measure.

The results of the Kruskal-Wallis test of Price Knowledge on Offer Preference disclosed that for thirteen of the fourteen promotion comparisons (93%) the distribution of Price Awareness was not significantly different. Follow up pairwise comparisons on the promotion comparison with the significantly different distribution found that the significant difference was between the rebate and POS discount groups, with the rebate group having higher price knowledge (Table 18).

**Table 18: Deal Preference on Price Awareness Kruskal-Wallis (X²) Test Results**

<table>
<thead>
<tr>
<th>Promotion Advertisement</th>
<th>Median Price Awareness Score</th>
<th>X²(2)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS Discount</td>
<td>Neutral</td>
<td>Rebate Offer</td>
</tr>
<tr>
<td>Electrical Products – Ad 1</td>
<td>4_a</td>
<td>4_a,b</td>
<td>5_b</td>
</tr>
</tbody>
</table>

The lack of significant differences across the majority of advert comparisons shows the level of price awareness was consistent between the offer preference groups. It also shows price awareness had no influence on the choice between the offers presented, and that the overall preference for POS offers is not explained by price knowledge.

**Additional Tests**

Additional Chi-Square tests were run on each of the fourteen advert comparisons examining the effects of Gender (14 adverts x 2 genders), Age (14 adverts x 6 age groups), Income (14 adverts x 9 income levels), Marital Status (14 adverts x 5 status categories), Education Level (14 adverts x 6 education categories), and Employment Status (14 adverts x 7 employment categories) on Offer Preference. Whilst a small number of significant results were found, they were not significant for any practical purpose. As such, it can be resolved that the covariate variables tested had no influence on the preference data.

**12.4 SUMMARY**

The aim of this study was to examine the choice between rebate and discount promotions in the context of Prospect Theory and Construal Level Theory (CLT). Before discussing the findings, it is worth considering the study’s limitations. Firstly, a fundamental characteristic of rebate promotions is the time difference between purchasing the product, completing the rebate requirements, and receiving the discount (rebate). It is difficult to capture this dynamic in this survey instrument. Even though
efforts were taken to build an appropriate scenario for the respondents that highlighted the time delay and redemption requirements, it is acknowledged that not all would have fully grasped the nuances of rebate versus discount promotions, nor could they fully factor these into their decision making.

Secondly, whilst the survey’s preamble included a purchasing scenario encouraging respondents to ‘imagine’ an intention to purchase the products displayed, it is acknowledged that this is not a substitute for actually purchasing the product. It is unclear how involved the respondents were in the scenario, or, how realistic their decision-making was between competing offers.

The aim of this study is to investigate consumer preference between a promotion offering a point-of-sale (POS) dollar off discount and a rebate promotion offering an equal dollar discount by redemption. Prospect Theory predicts that when given the choice between a rebate promotion framed as a future discount and a POS promotion with an immediate discount, consumers will prefer the rebate promotion. Construal Level Theory instead suggests that consumers will choose the promotion which best fits their super-ordinate goal, which for the purposes of this thesis is defined as savings maximisation.

Contrary to the predictions of Prospect Theory this study finds that when consumers are presented with the choice between a POS and Rebate promotions with equal benefit, the vast majority of consumers prefer the POS promotion. This finding is irrespective of product knowledge, price knowledge, demographic or socio-economic variables.

Reported price knowledge was not significantly different between groups for almost all (86%) of the promotion comparisons. The rebate promotion dollar benefit was consistently judged lower by the POS group, significantly so in 65% of the comparisons. It suggests price knowledge was not an effect in the decision between offers. Instead, the decision between offers was based on one or more alternative factors.

Remember that in the fourteen promotion comparisons the dollar benefit presented by the POS and rebate promotions were equal – yet the POS promotion was usually preferred. Compared to the POS offer, the rebate affords no compensation for the extra effort required to redeem the discount. In comparison, the preferred POS discount promotion represents a simple, immediate saving. This finding supports the predictions of Construal Level Theory and H1.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In the next chapter, the analysis of rebate offer preference is extended to encompass promotions where the dollar benefit is not equal. To further test the predictions of Construal Level Theory, it is necessary to examine promotion preferences where the dollar benefit offered by the Rebate exceeds that of the POS discount.
Chapter 13. STUDY 5: COMPARING DISCOUNT & REBATE PROMOTIONS WITH UNEQUAL DISCOUNTS

The previous chapter, Study 4, found that when given the choice between POS or Rebate promotions offering an equal promotion benefit on identical products, consumers consistently chose the POS promotion. This finding is contrary to the predictions of Prospect Theory, but consistent with Construal Level Theory (CLT).

Whilst the results were consistent for the predictions of CLT, it does beg the question, “What happens when the promotion dollar benefits are not equal?” Specifically, what happens when the rebate benefit exceeds the dollar benefit of the POS promotion?

This is more than just an academic question. In interviews with rebate fulfilment houses it was noted that rebate face values are regularly higher than POS promotions. The fact that rebate promotions repeatedly have less than 100% of those eligible to redeem actually redeem, implies that they lend themselves to a higher discount value. In fact, this is a key difference between rebate and POS discount promotions. If a consumer buys a product with a POS discount, they automatically redeem, whereas this is not the case with rebates.

Furthermore, comparing rebate and POS promotions is not an abstract concept. This is particularly so when one remembers that a promotion for Brand A is often evaluated within the context of promotions for similar products from competing Brands. For example, during major sales periods (e.g., Christmas sales) multiple competing products are on promotion at the same time.

The central objective of this study is to compare how promotion preference is effected by the composition of the rebate promotion. Specifically,

1. How increasing the difference between the POS discount and rebate benefit influences the preference between offers (H2),
2. Whether the type of rebate (cash or bonus product) influences deal preference (H3),
3. Whether these effects would hold after testing for covariate effects, e.g., previous rebate experience (H4), price knowledge, and selected demographic descriptors,
4. Whether the rebate advert format influences deal preference (H5)
13.1 METHODOLOGY

This study measured consumer responses using a survey. Given the importance of differentiating between POS and rebate promotions, the survey introduction included a short explanation of the differences between POS discounts and rebate promotions. Respondents were also instructed not to focus on the artwork, or to rate the artwork. They were asked to select the promotion that in their view offered the best deal. The introduction concluded by presenting a scenario to ‘set the scene’ for the purchase decision, asking them to imagine that they were ready to buy the product presented.

Respondent Screening

As a measure of attentiveness, a question asking about respondents’ feelings was included immediately after the long introduction section. Within the introduction was the sentence, “To show us that you have read the instructions, please ignore the question below about how you are feeling and instead check only the ‘none of the above’ option as your answer.” Respondents who did not check ‘none of the above’ exited the survey.

To select respondents with current knowledge of the four products used in the comparisons, the following question was presented, “Have you recently purchased (within the last 12 months), or, are you intending to purchase, any of the following products? Please provide an answer for each line.” Fourteen products were presented, each with three selection options, ‘Have Recently Purchased’, ‘Planning to Purchase Soon’, ‘No Interest in Product’ (Appendix 4). Only respondents who selected a ‘Laptop Computer’, a ‘Personal Printer’, a ‘Television’, and/or a ‘Blu-ray Player’, progressed to be shown the four sets of promotion comparisons.

Comparison Advertisement Development

Study 1 identified that consumer electronics was the product category most likely to use rebate promotions. As such, the four consumer electronics promotions previously used in Study 4 (see Table 19) were redesigned for the purposes of this study. Each treatment consisted of two advertisements, a POS discount and a rebate. The artwork design for the two advertisements was identical except for the treatment of the discount (see Figure 22). By presenting graphically identical adverts the effect of the artwork design was accounted for, thereby focusing the respondent on the offers presented.

Treatment 1 (Laptop) and Treatment 2 (Printer) presented a choice between a POS discount and cash-back rebate offer. These comparisons were designed to test what
effect increasing the differential between the POS and rebate discounts has on the choice between promotions. It is theorised that as the differential increases there will be an increasing preference for the rebate offer (H2).

Table 19: Promotion Comparison Groups

<table>
<thead>
<tr>
<th>Promotion Comparison</th>
<th>Product</th>
<th>Offer Comparison Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment 1</td>
<td>Laptop</td>
<td>POS Discount vs ‘Cash Back’ Rebate</td>
</tr>
<tr>
<td>Treatment 2</td>
<td>Printer</td>
<td>POS Discount vs ‘Cash Back’ Rebate</td>
</tr>
<tr>
<td>Treatment 3</td>
<td>Blu-Ray Player</td>
<td>POS Discount vs Product and Cash Rebates</td>
</tr>
<tr>
<td>Treatment 4</td>
<td>Television</td>
<td>POS Discount vs ‘Cash Back’ Rebate with Alternate Rebate Pricing Formats</td>
</tr>
</tbody>
</table>

The comparisons in Treatment 3 (Blu-ray Player) compared the POS discount with two types of rebates: a cash-back and bonus product rebate. The aim of the comparisons in Treatment 3 (Blu-ray Player) is to test whether, as theorised, product rebates would be preferred to cash-back rebates (H3). The comparisons in Treatment 4 (Television) were designed to test the effect of different rebate price formats on the choice between promotion offers (H5).

In each of the four treatments, the ARP value was held constant at $299.99. For the rebate advertisements the rebate value, rebate type (cash back or product), and pricing format were variable. Conversely, the POS discount was held constant at 10% ($30) across all four treatments (see Figure 22). This design allows for comparisons of multiple rebate promotion designs against a POS promotion with a constant dollar benefit.
Independent Variables

Rebate Size

The rebate dollar values were calculated as a percentage of the ARP ($299.99).
Previous research on rebate price formats (Hyeong Min, 2006), Hardesty and Bearden (2003) suggests a discount of 10% is considered low, 25% moderate, and 40% high. Findings from Study 1 were consistent with previous research, with 93% of promotions having a rebate discount between 5%-50%. Therefore, for the purposes of this study the rebate values would have a range of 10%-50%.

Treatment 1 (Laptop) and Treatment 2 (Printer) were designed to test what effect increasing the differential between the POS and rebate discounts has on the choice between promotions. To approximate the range of rebate discounts identified in Study 1 (5%-50%) while maintaining adequate group sample sizes, a 5 (discount levels) x 1 (cash-back rebate) design was selected. The five levels of rebate discount utilised were 10%, 20%, 30%, 40% & 50% (see Table 20). The reader is reminded that the POS discount was held constant at 10%, such that in the first comparison of each Treatment the discount differential = 0%. For each subsequent comparison the differential increases by 10%.

The aim of the comparisons in Treatment 3 (Blu-ray Player) is to test whether, as theorised, product rebates would be preferred to cash-back rebates (H3). As such, for the purposes of this Treatment, the discount level is less pivotal than in Treatments 1 (Laptop) and 2 (Printer). That is, fewer discount levels are required. Therefore, in line with previous rebate research (Hyeong Min, 2006), Hardesty and Bearden (2003) three levels of discount were utilised: 10%, 25%, and 40% (see Table 20), yielding a 3 (discount levels) x 2 (rebate types) design.

The comparisons in Treatment 4 (Television) were designed to test the effect of different rebate price formats on the choice between promotion offers (H5). As in Treatment 3 (Blu-ray Player) the discount differential is less significant than for Treatments 1 (Laptop) and 2 (Printer), thereby requiring fewer discount levels. In order to maintain acceptable group sample sizes the low (10%) and high (40%) discount levels identified by Hyeong Min (2006) were utilised in this Treatment, yielding a 2 (discount levels) x 3 (price formats) design (see Table 20).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Rebate Type

*Treatment 3 (Blu-ray Player)*

Results from Study 1 showed rebate promotions consisted of either a cash-back (56.6%) or bonus product (43.4%) offer. The aim of the comparisons in Treatment 3 (Blu-ray Player) is to test whether, as theorised, product rebates are preferred to cash-back rebates (H3). To make the bonus product rebate offer relevant to the product being purchased, a complimentary product to Blu-ray players – Blu-ray movies – was used.

As outlined in the previous section (Rebate Size) a 3 (discount levels) x 2 (rebate types) design was used yielding six choice sets. That is, at each of three discount levels both a cash-back and bonus product rebate offer were compared to the POS discount (Figure 23).

**Figure 23: Treatment 3 – Promotion Advertisements Examples**

<table>
<thead>
<tr>
<th>Treatment 3</th>
<th>Choice Set</th>
<th>POS Discount Offer</th>
<th>Bonus Product 40% Rebate Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 of 6</td>
<td></td>
<td><img src="image1" alt="POS Discount Offer" /></td>
<td><img src="image2" alt="Bonus Product 40% Rebate Offer" /></td>
</tr>
<tr>
<td>6 of 6</td>
<td></td>
<td><img src="image3" alt="POS Discount Offer" /></td>
<td><img src="image4" alt="Cash-back 40% Rebate Offer" /></td>
</tr>
</tbody>
</table>

*Treatment 4 (Television)*

Study 1 identified that most (92%) rebate promotion advertisements do not include an ARP, instead only displaying the rebate dollar value (RO). Where an ARP was displayed, it took the form of either an ‘After Rebate’ (AR) price, or ‘Combination’ (CR) of ARP, rebate value, and after rebate price.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

This is contrary to findings by Hyeong Min (2006), where most (80.8%) rebate
advertisements included a combination of an ARP, the rebate, and the after rebate price
(CR). The remaining adverts displayed only the rebate, without price information (RO),
or, the rebate dollar value and an after rebate price (AR). Similarly, Chandrashekaran
(2004), found that including a ARP increases the likelihood a consumer will evaluate a
promoted product more favourably against the higher ARP. The aim of the comparisons
in Treatment 4 (Television) is to test whether respondents are more likely to choose a
Rebate promotion when the Rebate offer is advertised with a price reference rather than
without a price reference (H5).

As outlined in the chapter above (Rebate Size) a 2 (discount levels) x 3 (rebate price
formats) design was used yielding six choice sets. That is, at each of two discount levels
a CR, AR, and RO rebate price format offer was compared to the POS discount (Figure
24).

![Figure 24: Treatment 4 – Rebate Price Format Examples](image)

<table>
<thead>
<tr>
<th>Treatment 4 Choice Set 1 of 6</th>
<th>POS Discount Offer</th>
<th>Combination Price (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung - 39&quot; LCD HDTV 1080p - 60Hz</td>
<td>Our Price: $299.99 Less $30 Discount</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment 4 Choice Set 2 of 6</th>
<th>POS Discount Offer</th>
<th>After Rebate Price (AR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung - 39&quot; LCD HDTV 1080p - 60Hz</td>
<td>Our Price: $299.99 Less $30 Discount</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment 4 Choice Set 3 of 6</th>
<th>POS Discount Offer</th>
<th>Rebate Only (RO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung - 39&quot; LCD HDTV 1080p - 60Hz</td>
<td>Now With $30 Mail-in Rebate You Pay: $269.99</td>
<td></td>
</tr>
</tbody>
</table>
Table 20: Promotion Comparison Treatment Structure

<table>
<thead>
<tr>
<th>Promotion Comparison</th>
<th>Product</th>
<th>POS Discount</th>
<th>Rebate Discount</th>
<th>Comparison Type</th>
<th>Hypothesis Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment 1</td>
<td>Laptop</td>
<td>10%</td>
<td>10%</td>
<td>POS vs Cash-back Rebate</td>
<td>H2, H4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment 2</td>
<td>Printer</td>
<td>10%</td>
<td>10%</td>
<td>POS vs Cash-back Rebate</td>
<td>H2, H4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment 3</td>
<td>Blu-Ray Player</td>
<td>10%</td>
<td>10%</td>
<td>POS vs Cash-back Rebate</td>
<td>H3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>10%</td>
<td>POS vs Product Rebate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>25%</td>
<td>POS vs Cash-back Rebate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>25%</td>
<td>POS vs Product Rebate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td>POS vs Cash-back Rebate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td>POS vs Product Rebate</td>
<td></td>
</tr>
<tr>
<td>Treatment 4</td>
<td>Television</td>
<td>10%</td>
<td>10%</td>
<td>POS vs Combination Format</td>
<td>H5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>10%</td>
<td>POS vs After Rebate Format</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>10%</td>
<td>POS vs Rebate Only Format</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td>POS vs Combination Format</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td>POS vs After Rebate Format</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>40%</td>
<td>POS vs Rebate Only Format</td>
<td></td>
</tr>
</tbody>
</table>

Covariate Variables

Previous Promotion Experience

Previous research (Diamond and Johnson, 1990) has argued that increased familiarity with rebate promotions can cause departures from the predictions of Prospect Theory. To account for the effects of recent experience with Rebate promotions, respondents were asked about their purchasing history.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

It was thought that simply asking respondents if they had recently participated in a rebate promotion may prejudge their responses. Therefore, to mask the intent of the survey six promotion options were presented, each with examples (Table 21). The options were randomly presented when the following question was posed, “In the last 12 months, have you purchased a product which was part of one of the following types of promotions? (Select all that apply)”.

Table 21: Recent Promotion Experience

<table>
<thead>
<tr>
<th>Promotion Type</th>
<th>Example</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonus Product Promotion</td>
<td>For Example: Buy 1, Get 1 Free, or, 1lt for the price of 750ml etc.</td>
<td>○</td>
</tr>
<tr>
<td>Cashback (by Redemption) Promotion</td>
<td>For Example: $100 off by Redemption.</td>
<td>○</td>
</tr>
<tr>
<td>Coupon Promotion</td>
<td>For Example: cut a coupon from the paper to present at the checkout to receive a discount</td>
<td>○</td>
</tr>
<tr>
<td>Trade-In Promotion</td>
<td>For Example: trade in your old washing machine and receive $100 off a new one</td>
<td>○</td>
</tr>
<tr>
<td>Premium Promotion</td>
<td>For Example: buy a 1kg of coffee and receive a bonus coffee mug.</td>
<td>○</td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

Membership in these groups will be used as a covariate when looking for differences in offer preference between the POS and Rebate promotions. Specifically, this study is interested in whether individuals with recent rebate experience are more likely to choose the POS offer as offering a better deal than the rebate offer.

Dependant Variables

Offer Preference
A desired outcome from Study 5 is the capacity to predict the probability that a consumer will prefer either a POS or rebate offer based on one of the independent variables. For example, how much more likely is the rebate offer to be chosen at 40% discount than at 30% discount. As such the choice process differs from Study 4, where respondents were required to rate their preference between offers on a 7-point Likert scale. It instead necessitates a dichotomous choice between the POS and rebate offers within each choice set. Each respondent viewed two comparison advertisements in each Treatment, with each choice set containing a POS and Rebate advert for the same product. The ARP was consistent across all Treatments. After viewing the each set of
An Analysis of Buyer Behaviour in Response to Rebate Promotions

comparison advertisements respondents were asked, “In your view which of the above promotions offers the best deal?”

Rebate Perceived Saving
Adapted from previous rebate advertising research (Hyeong Min, 2006), Rebate Saving measured the respondent’s perception of the saving presented in the rebate offer using two questions, the of which was, “How would you rate the saving presented in the above Mail-in Rebate Offer?” Responses were via a 7-point Likert scale bounded by ‘Very Small’ (1) and ‘Very Large’ (7). The second question was, “I feel the Mail-in Rebate promotion above offers value for money.” Responses were completed with a 7-point Likert scale bounded by ‘Strongly Disagree’ (1) and ‘Strongly Agree’ (7).

The two scales were averaged into a single measure for each question. The scales in each group of advertisement comparisons had a high level of internal consistency as determined by a Cronbach's alphas shown in Table 22.

<table>
<thead>
<tr>
<th>Table 22: Rebate Savings Measure Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
</tr>
<tr>
<td>Treatment 1</td>
</tr>
<tr>
<td>Treatment 2</td>
</tr>
<tr>
<td>Treatment 3</td>
</tr>
<tr>
<td>Treatment 4</td>
</tr>
</tbody>
</table>

Price Awareness
The Price Awareness measure asked respondents to assess their knowledge of the product presented by asking: “Compared to the average consumer, how would you rate your 'general' knowledge/awareness of Product X prices?” Answers were via a 7-point Likert scale bounded by ‘Much Worse’ (1) and ‘Much Better’ (7).

Respondent Routing Procedure
For Treatment 1 (Laptop) respondents were randomly assigned to one of five discount levels (10%-50%). They were then shown the same rebate discount in Treatment 2 (Printer). For Treatments 3 (Blu-ray player) and 4 (Television) choice sets were again randomly assigned irrespective of previous assignments and/or answers. The
randomising algorithm was configured to ensure choice set group sizes were equal. Figure 25 provides a flow diagram of routing procedure.

**Figure 25: Survey Respondent Routing Procedure**

As in Study 2, participants were recruited from Amazon’s Mechanical Turk (www.MTurk.com) online marketplace and received USD0.60 compensation for their participation.

A total of 1,177 surveys were completed, from which 37 (3%) were rejected because the respondent was below the survey’s minimum age of 21. A further 220 (19%) were rejected for failing the ‘attentiveness’ test, and 164 (14%) for not having experience with one of the four target products. This yielded 756 usable responses.

The sample (Appendix 6) consisted of 54% Male vs. 46% Female, with 86.6% aged between 21-49 years, and 60.6% married or in a relationship. Most of the sample was employed 76.7% (52.8% fulltime), with the next largest group being unemployed 11.0%, followed by stay at home parents 7.3%. University education was common, with 49.7% having an Undergraduate and 15.5% a Postgraduate degree. Almost one quarter (23.1%) of the survey had a household income of $25,001-$40,000, while 76.3% were less than $70,000. Most had experience with coupon (66.1%) and bonus product (63.4%) promotions, whilst approximately one third (31.5%) with rebate promotions.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Given that some of the results of this study will be compared to those of Study 4, it was deemed appropriate to contrast the demographics between the samples. A Chi-square test with Bonferroni adjustment was conducted on each of the demographic variables, and previous promotion experience. The adjusted Bonferroni p-values revealed three significant differences in group proportions between studies, denoted by an ‘*’ in Table 23.

Firstly, the sample group used in this study were better educated than in Study 4, with a higher proportion having Postgraduate (15.5% vs. 12.2%) education. Secondly, Study 5 had a higher percentage of respondents in full time employment (52.8% vs. 44.8%).

Perhaps the most noteworthy difference though, is that this study contains a significantly higher proportion of respondents with recent rebate promotion experience, 31.5% vs. 23.4% in Study 4. This is encouraging, as more respondents in Study 5 have an appreciation for both the extra effort required for rebate redemption and the delayed nature of rebate payments. Given H4 predicts respondents with recent rebate experience will prefer the POS offer, having a larger proportion of respondents with recent rebate experience serves to add greater weight to findings of this study.

### Table 23: Chi-Square Tests of Demographic Variables between Study 4 and 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
<th>Adjust p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.392</td>
<td>1</td>
<td>0.238</td>
<td>0.025</td>
</tr>
<tr>
<td>Age</td>
<td>7.978</td>
<td>4</td>
<td>0.092</td>
<td>0.010</td>
</tr>
<tr>
<td>Income</td>
<td>8.593</td>
<td>8</td>
<td>0.378</td>
<td>0.005</td>
</tr>
<tr>
<td>Relationship Status</td>
<td>7.741</td>
<td>4</td>
<td>0.102</td>
<td>0.010</td>
</tr>
<tr>
<td>Education</td>
<td>18.434</td>
<td>5</td>
<td>0.002*</td>
<td>0.008</td>
</tr>
<tr>
<td>Employment</td>
<td>22.525</td>
<td>6</td>
<td>0.001*</td>
<td>0.007</td>
</tr>
<tr>
<td>Recent Rebate Experience</td>
<td>15.214</td>
<td>1</td>
<td>&lt; 0.001*</td>
<td>0.025</td>
</tr>
</tbody>
</table>

An ‘*’ denotes a significant difference at the adjusted Bonferroni p-level.

13.3 Hypotheses Testing Plan

Study 5 tested three research hypotheses. Firstly, it has been theorised by Thaler (1985) that Prospect Theory predicts consumers would prefer rebate promotions to discount promotions. Further, this preference will be strongest when the rebate value represents a small saving relative to the purchase price. The literature, however, provides mixed support for this position. Furthermore, it can be rationally argued that a result opposite to that predicted by Prospect Theory is more likely. That is, a discount promotion would
be preferred to a rebate promotion when the saving percentage offered by the rebate is small.

CLT posits that in the near term consumers are more interested in the mechanics/specifics of saving and will choose the offer with the least amount of effort. This gives rise to the position that given the near-term choice between a $50 point of sale (POS) discount and a $50 mail-in rebate, consumers would choose the POS discount because it is the quickest/easiest method.

CLT suggests that given the longer-term nature of the rebate redemption timeframe, consumers ignore the specifics of the redemption process (i.e., the redemption requirements) and focus instead on the superordinate goal of savings maximisation. As such, one would expect them to choose a larger rebate promotion with the future payment over the smaller POS promotion with the immediate discount (Refer to chapter 9.3 for a full explanation of CLT).

As such, H2 examines consumers’ responses to the choice between competing offers for the same product where the promotion dollar benefits are unequal. Consistent with CLT, it is expected that consumers seeking to maximise their saving will prefer the rebate offer over the POS discount.

Diamond and Johnson (1990) found consumers perceive promotion benefits differently if they are presented as monetary or nonmonetary rewards. Bonus products are not as easily integrated into the purchase price and will more often be seen as a separate gain. Consistent with Prospect Theory, separate gains are evaluated more favourably than reduced losses. It is expected, therefore, that consumers will prefer bonus product rebate promotions to POS discounts (H3). (Refer to chapter 10.1 for a full explanation)

This study also examines the hypothesis that buyers’ previous experience with rebate promotions will produce a negative effect in their response to the rebate promotions. Therefore, it is expected these individuals will exhibit a greater preference for POS discount promotions compared to those without previous rebate promotion experience (H4).

Research into rebate framing suggests offers should present pricing information in terms of a regular price, a rebate value, and an after rebate price. Study 1 found, however, it was more common for rebate promotions to display the rebate value without an advertised price. Study 5 will examine three types of rebate advertised prices, rebate
An Analysis of Buyer Behaviour in Response to Rebate Promotions

only (RO), after rebate ARP and rebate (AR), and a combination structure (CR). It is hypothesised that rebate promotions with an advertised price reference (i.e., the CR format), will have a higher offer preference likelihood than those that do not include an advertised price reference (H5). (Refer to chapter 10.3 for full explanation of rebate offer framing)

The Offer Preference measure asked respondents to select between two promotion choices, POS and Rebate, it is a dichotomous categorical variable. To test each hypothesis a binomial Logistic Regression will be used for each of the four comparison groups. A binomial logistic regression attempts to predict the probability that an observation falls into one of the two promotion choices based on the independent variables.

13.4 RESULTS

13.4.1 Construal Level Theory (CLT)

H2: Given the choice between a discount received now, and a larger discount received in the future, consumers are more likely to prefer the promotion with the largest saving.

CLT posits that in the near term consumers are more interested in the mechanics/specifcics of saving and will choose the offer with the least amount of effort. As the saving increases, however, their superordinate goal of savings maximisation will lead them to focus more on the discount.

As shown in Study 4, when the promotion benefit is equal, consumers would choose the POS discount because it is the quickest/easiest method. Hypothesis H2 seeks to determine if respondent’s promotion preference differs as the Rebate promotional dollar benefit increases, whilst holding the POS discount constant.

Two product comparisons were used to test this hypothesis, a laptop (Treatment 1) and a printer (Treatment 2), see Figure 26. In both Treatments, five rebate discount levels (10%, 20%, 30%, 40%, and 50%) were compared to a fixed POS discount (10%). At the first rebate level the discount differential = 0%, both the rebate and POS discount = 10%. For each subsequently higher rebate discount level the differential increases by 10% to a maximum of 40%.
Respondents were randomly assigned to one of the five rebate discount levels in Treatment 1 (Laptop). They were then shown the product comparison in Treatment 2 (Printer) with the same discount as they had been shown in Treatment 1 (see Figure 26). For example, if Respondent X was randomly assigned a 20% rebate offer in Treatment 1 (Laptop), they were shown the same rebate discount (20%) in Treatment 2 (Printer). The fact that the rebate stayed the same between Treatments while the product changed, provides a test for any possible product effects.

Figure 26: Advertisement Samples for Treatments 1 and 2

Holding the POS discount constant at 10% and increasing the rebate discount will see an increasing preference for the rebate promotion (H2). That is, the preference for the rebate promotion will be positively related to the size of the rebate discount. To examine this hypothesis the proportion of respondents who selected the POS or Rebate offer at each level of rebate discount was compared. If the hypothesis is supported, then the probability that respondents will select the rebate offer should increase for each higher discount level.

Chi-square analysis will be utilised to investigate the direction of the relationship between the rebate discount levels (independent variable) and the choice between the POS and Rebate promotions (dependent variable). The chi-square analysis will not be
used to investigate the direct effects between the dependent and independent variables. Whilst Chi-square tests can reveal a preference for either the POS or rebate offer at each discount level, they cannot predict offer preference based on the discount level. This requires a more sophisticated procedure. Given the binary nature of the dependent variable (i.e., selecting either the POS or Rebate offer) the binary logistic regression statistic was chosen to estimate the probability that a respondent would select either the POS or Rebate offer.

Binary logistic regression (herein referred to as logistic regression) is a form of regression used to predict the probability that an observation falls into one of two categories of a dichotomous dependent variable, based on one or more continuous and/or categorical independent variables. Logistic regression also determines the percent of variance in the dependent variable explained by the independents.

Importantly, logistic regression also ranks the relative importance of the independent variables’ influence on the dependent variable to provide an understanding of their impact on the probability of a certain event occurring. For a logistic regression, the predicted dependent variable is a function of the probability that a particular subject will be in one of two categories.

For the purposes of this chapter of the current study, logistic regression was used to predict the probability that a respondent would select the rebate offer using rebate discount as the predictor variable. Selecting the POS offer was coded as (0) and the Rebate offer as (1).

**RESULTS: Treatment 1 (Laptop)**

**Chi-Square Test Results**

A Chi-square test was conducted on Offer Preference and Rebate Discount level. All expected frequencies were greater than five. The test statistic $\chi^2(4) = 282.17$ ($p < .001$) shows that there is a significant relationship between rebate discount levels and offer preference.
Table 24: Chi-Square test of Deal Preference for Treatment 1 (Laptop)

<table>
<thead>
<tr>
<th>Preferred Offer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>POS</td>
<td>Rebate</td>
</tr>
<tr>
<td>Rebate Discount = 10%</td>
<td>145 (95%)</td>
</tr>
<tr>
<td>Rebate Discount = 20%</td>
<td>54 (36%)</td>
</tr>
<tr>
<td>Rebate Discount = 30%</td>
<td>39 (26%)</td>
</tr>
<tr>
<td>Rebate Discount = 40%</td>
<td>26 (17%)</td>
</tr>
<tr>
<td>Rebate Discount = 50%</td>
<td>22 (14%)</td>
</tr>
<tr>
<td>Total</td>
<td>286 (38%)</td>
</tr>
</tbody>
</table>

An ‘*’ denotes a subset of Preferred Offer categories whose column proportions differ significantly from each other at the adjusted p=0.025 level.

Pairwise comparison with Bonferroni adjustment (p=0.025) revealed four of the five rebate discount levels had significantly different group proportions. In Table 24 these are denoted by an ‘*’. Statistical significance was accepted at the adjusted p=0.025 level. Table 24 reveals that when the discount benefits are equal at 10%, there is a strong preference for the POS discount. At the 20% level the difference is not significant. At 30% and higher, there is a preference for the rebate promotion.

Figure 27 provides a graphical representation of the increasing preference for the rebate promotion at successively higher levels of rebate discount. One can clearly see the initial preference for the POS offer, followed by a large ‘switch’ towards the rebate offer occurring between the 20%-30% discount levels. There is a steady rise in rebate preference at each subsequent discount level.

Figure 27: Treatment 1 (Laptop) – Percentage of Offer Preferences
A binary logistic regression was used to predict the probability that a respondent would select the rebate offer, utilising rebate value as the predictor variable. For the purposes of this analysis, selecting the POS offer was coded as (0) and the Rebate offer as (1).

There are two statistical tests for establishing the significance of the binary logistic regression model. The first test is a chi-square test for change in the -2LL value from the base model, and the second is the Hosmer and Lemeshow measure of overall fit (Hair et al., 2010). The chi-square value was statistically significant \( \chi^2(4) = 307.14, p < .001 \). The Hosmer and Lemeshow measure of overall fit indicated that there was no statistically significant difference between the observed and predicted classifications \( p=0.83 \). In this example both measures provide support for the acceptance of the binary logistic regression model as a significant logistic regression model and thus appropriate for further evaluation.

When assessing overall model fit several measures are available. The Cox and Snell R\(^2\) is a measure of goodness of fit with higher values indicating greater model fit. In this test the Cox and Snell R\(^2\) is 0.33 indicating the model explains 33% of the variation in the dependent variable. A second measure used is the Nagelkerke R\(^2\), with higher values indicating a better model fit. In this test the Nagelkerke R\(^2\) is 0.45, which indicates the model explains 45% of the variance in offer preference. Overall, these measures indicated better model fit in comparison to the base model analysis.

The classification matrix identifies the number and percentage of cases correctly classified by the model, and is the last measure used to determine overall model fit (Table 25). The model showed a high rate of success at correctly classifying situations in which respondents chose the rebate offer (98.3%). The overall percentage of cases that were correctly classified was 80.3%. To assess the effectiveness of the model these ‘hit ratios’ should be compared to the maximum chance and proportional chance criteria. If the percentage of correct classifications is significantly larger than would be expected by chance, the logistic regression model accurately predicts the factors related to respondents’ preference between offers. It has been suggest that the classification accuracy should be at least 25% greater than that achieved by chance (Hair et al., 2010).

The maximum chance criterion is the hit ratio obtained if all observations are assigned to the group with the largest probability of occurrence. In this case that being the ‘Rebate Offer’ group with 61.1% (462/756) of the cases. The calculated threshold value
An Analysis of Buyer Behaviour in Response to Rebate Promotions

for the maximum chance is 76.3% (61.1%+25%). The proportional chance criterion is obtained by squaring the proportions of each group \((0.378^2 + 0.622^2) = 52.9\%\). The calculated threshold value for the proportional chance is 66.2% (52.9%+25%). Given the model accuracy rate (80.3%) exceeds both these criteria, the model has an adequate level of statistical and practical significance (Table 25).

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS Offer</td>
</tr>
<tr>
<td>POS Offer</td>
<td>145</td>
</tr>
<tr>
<td>Rebate Offer</td>
<td>8</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
</tr>
</tbody>
</table>

Table 25: Treatment 1 (Laptop) Logistic Regression Classification Matrix

To establish the contribution of each of the independent variables to the model, along with their relationship with the dependent variable, the parameter estimates (B – logistic coefficients) are now discussed. The logistic coefficients values explain the relationship between the independent variables and the dependent variable, where the dependent variable is on the logit scale.

These estimates explain the amount of increase (or decrease) in the predicted log odds of correctly classifying the dependent variable that would be predicted by an increase (or decrease) in the predictor, holding all other predictors constant. For example, in this study the logistic coefficients are explaining the effect increasing the rebate discount has on the preference for either the POS or rebate promotion.

In this Treatment, all five rebate discount levels showed a significant and positive effect on offer preference (Table 26). That is to say, increasing levels of rebate value were associated with an increased likelihood of selecting the rebate promotion. At each higher rebate discount level the odds of selecting the rebate offer increased. For example, at rebate discount values of 20% and 50% respondents were 32 and 107 times (respectively) more likely to select the rebate offer than when the rebate and POS benefits were equal at 10%.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Table 26: Treatment 1 (Laptop): Effects of Rebate Value on Offer Preference

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebate Value (10%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt; 0.001</td>
<td>32.56</td>
</tr>
<tr>
<td>Rebate Value (20%)</td>
<td>3.48</td>
<td>.40</td>
<td>75.48</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>51.59</td>
</tr>
<tr>
<td>Rebate Value (30%)</td>
<td>3.94</td>
<td>.41</td>
<td>93.36</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>86.44</td>
</tr>
<tr>
<td>Rebate Value (40%)</td>
<td>4.46</td>
<td>.42</td>
<td>111.46</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>107.10</td>
</tr>
<tr>
<td>Rebate Value (50%)</td>
<td>4.67</td>
<td>.43</td>
<td>118.05</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>107.10</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.90</td>
<td>.36</td>
<td>63.64</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>.06</td>
</tr>
</tbody>
</table>

RESULTS: Treatment 2 (Printer)

Chi-Square Test Results

A Chi-square test was conducted on Offer Preference and Rebate Discount (Table 27) to test for difference in group membership. The Chi-square statistic \( \chi^2(4) = 333.62 \) (\( p < .001 \)) shows there is a significant relationship between rebate discount levels and preference for the rebate offer.

To identify which groups are different, post hoc pairwise comparisons with Bonferroni adjustment was undertaken. Statistical significance was accepted at the adjusted \( p=0.025 \) level. The results revealed four of the five rebate discount levels had significantly different group proportions. In Table 27 the significant differences are denoted with an ‘*’. Similar to the results found in the Treatment 1 comparisons, when the discount benefits are equal, at 10%, there is a strong preference for the POS discount. At the 20% level the difference is not significant. At 30% and higher there is a preference for the rebate promotion.

Table 27: Treatment 2 - Chi-Square test of Deal Preference

<table>
<thead>
<tr>
<th>Preferred Offer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS</td>
</tr>
<tr>
<td>* Rebate Discount = 10%</td>
<td>143 (93%)</td>
</tr>
<tr>
<td>Rebate Discount = 20%</td>
<td>42 (28%)</td>
</tr>
<tr>
<td>* Rebate Discount = 30%</td>
<td>24 (16%)</td>
</tr>
<tr>
<td>* Rebate Discount = 40%</td>
<td>22 (15%)</td>
</tr>
<tr>
<td>* Rebate Discount = 50%</td>
<td>16 (11%)</td>
</tr>
<tr>
<td>Total</td>
<td>247 (33%)</td>
</tr>
</tbody>
</table>

An ‘*’ denotes a subset of Preferred Offer categories whose column proportions differ significantly from each other at the adjusted \( p=0.025 \) level.
Figure 28 provides a graphical representation of the increasing preference for the rebate promotion at successively higher levels of rebate discount. Again, the preference for the POS offer at the 10% discount level is evident. Similarly, the large ‘switch’ to the rebate offer can be seen between the 10%-30% discount levels, as can the flattening out across the 30%-50% discount levels.

**Figure 28: Treatment 2 (Printer) – Percentage of Offer Preference**

A visual comparison of Figure 27 and Figure 28 reveals similarly shaped curves. That is, the rate at which offer preference (POS vs rebate) changes as the rebate discount increased, is similar between Treatment 1 (Laptop) and Treatment 2 (Printer). This suggests there is consistency in results between the Treatments. It also suggests the presence of an underlying factor influencing the preference between offers.

**Binary Logistic Regression Model**

A binary logistic regression was used to predict the probability that a respondent would select the rebate offer, utilising rebate value as the predictor variable. For the purposes of this analysis, selecting the POS offer was coded as (0) and the Rebate offer as (1). The logistic regression model was statistically significant ($\chi^2(4) = 343.639, p < .001$). The model explained between 36.5% (Cox & Snell) and 50.9% (Nagelkerke $R^2$) of the variance in offer preference. Overall, these measures indicated better model fit in comparison to the base model analysis.

The classification matrix identifies the number and percentage of cases correctly classified by the model, and is the last measure used to determine overall model fit (Table 28). The model showed a high rate of success at correctly classifying situations in which respondents chose the rebate offer (98.0%). The overall percentage of cases
that were correctly classified was 84.9%. To assess the effectiveness of the model these ‘hit ratios’ should be compared to the maximum chance and proportional chance criteria. If the percentage of correct classifications is significantly larger than would be expected by chance, then the analysis of the logistic regression model can proceed. It has been suggested that the classification accuracy should be at least 25% greater than that achieved by chance (Hair et al., 2010).

The maximum chance criterion is the hit ratio obtained if all observations are assigned to the group with the largest probability of occurrence. In this case that group is the ‘Rebate Offer’ group with 66.0% (499/756) of the cases. The calculated threshold value for the maximum chance is 82.5% (66.0%+25%). The proportional chance criterion is obtained by squaring the proportions of each group (0.326² + 0.673²) = 56.0%. The calculated threshold value for the proportional chance is 70.0% (56.0%+25%). Given that the model accuracy rate (84.9%) exceeds both of these criteria, the model has an adequate level of statistical and practical significance (Table 28).

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS Offer</td>
<td>Rebate Offer</td>
</tr>
<tr>
<td>POS Offer</td>
<td>143</td>
<td>104</td>
</tr>
<tr>
<td>Rebate Offer</td>
<td>10</td>
<td>499</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this Treatment, all five rebate discount levels showed a significant and positive effect on offer preference (Table 29). That is to say, increasing levels of rebate value were associated with an increased likelihood of selecting the rebate promotion. Each higher level of rebate discount was associated with higher odds of selecting the rebate offer. For example, at rebate values of 20% and 50% respondents were 37 and 121 times (respectively) more likely to select the rebate offer than when the rebate and POS benefits were equal at 10%.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Table 29: Treatment 2 (Printer): Effects of Rebate Value on Offer Preference

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebate Value (10%)</td>
<td>162.76</td>
<td></td>
<td></td>
<td>4</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Rebate Value (20%)</td>
<td>3.61</td>
<td>.37</td>
<td>93.30</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>37.11</td>
</tr>
<tr>
<td>Rebate Value (30%)</td>
<td>4.32</td>
<td>.40</td>
<td>119.09</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>75.08</td>
</tr>
<tr>
<td>Rebate Value (40%)</td>
<td>4.42</td>
<td>.40</td>
<td>121.97</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>83.20</td>
</tr>
<tr>
<td>Rebate Value (50%)</td>
<td>4.80</td>
<td>.42</td>
<td>130.30</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>121.55</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.66</td>
<td>.33</td>
<td>66.14</td>
<td>1</td>
<td>&lt; 0.001</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Summary

The significance of the results in this section are two-fold. Firstly, the findings of Study 4 are replicated with respondents tending to prefer POS promotions when the promotion dollar benefits are equal. This finding supports H1. Secondly, as the rebate value increased relative to a constant POS discount the probability that respondents would select the rebate offer increased. Therefore, H2 is supported.

Rebate Savings Measure

In Study 4, it was found that those who chose the Rebate Offer consistently judged the Rebate saving more favourably than those who chose the POS discount. This judgement was statistically significant (using a Bonferroni adjusted p-value) in nine of the fourteen (64%) comparisons.

Whilst not specifically hypothesised in this study, it is of interest to investigate if respondents perceived that each higher level of rebate discount represented a larger saving. For instance, does the perception of the rebate saving differ between respondents who selected the POS offer versus those who chose the rebate offer? Did those respondents who chose the POS offer perceive the rebate discount as offering a smaller saving than those who chose the rebate offer? If so, then it would be reasonable to that conclude their perception of the rebate saving influenced their choice between offers. Such knowledge would be beneficial to promoters when designing promotions. It would allow them the fine tune their discount structures to ensure that they are offering sufficient discount to attract the consumer’s attention, without sacrificing more margin than required.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

In order to investigate whether perceived rebate saving is an effect in the preference between the POS and rebate promotions, the mean ‘Rebate Savings Measure’ score was examined for each rebate discount level. Readers are reminded that the ‘Rebate Saving’ measure is the average of two rebate saving questions scored on a 7-point Likert scale. It represents the respondents perception as to the size of the rebate saving. Given that each of the five rebate discount levels represented a sequentially larger saving, one would expect respondents’ perception of the rebate saving to increase at each successive discount level.

Descriptive statistics for the rebate saving measures are shown in Table 30. It can be seen that in both Treatment 1 (Laptop) and Treatment 2 (Printer) the perceived rebate saving increases for each higher level of rebate discount. A Kruskal-Wallis test was conducted on Treatments 1 and 2 to determine whether the observed differences in perceived savings at each rebate discount level were significant. The results showed that for both Treatments there was at least one significant difference in the distribution of Perceived Savings between rebate discount levels.

Table 30: Rebate Saving Measure by Rebate Discount Level

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rebate Value</th>
<th>Median</th>
<th>Mean</th>
<th>N</th>
<th>Std. Dev</th>
<th>K-W Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment 1</td>
<td>10% Discount</td>
<td>4.0</td>
<td>4.03</td>
<td>153</td>
<td>1.09</td>
<td></td>
</tr>
<tr>
<td>Treatment 1</td>
<td>20% Discount</td>
<td>5.0</td>
<td>5.16</td>
<td>151</td>
<td>0.87</td>
<td>$X^2(4) = 266.776, p &lt; 0.001$</td>
</tr>
<tr>
<td>Treatment 1</td>
<td>30% Discount</td>
<td>5.5</td>
<td>5.60</td>
<td>150</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Treatment 1</td>
<td>40% Discount</td>
<td>6.0</td>
<td>5.81</td>
<td>150</td>
<td>0.88</td>
<td>0.001</td>
</tr>
<tr>
<td>Treatment 1</td>
<td>50% Discount</td>
<td>6.0</td>
<td>5.99</td>
<td>152</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>Treatment 2</td>
<td>10% Discount</td>
<td>4.0</td>
<td>4.02</td>
<td>153</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>Treatment 2</td>
<td>20% Discount</td>
<td>5.0</td>
<td>4.94</td>
<td>151</td>
<td>1.03</td>
<td>$X^2(4) = 246.321, p &lt; 0.001$</td>
</tr>
<tr>
<td>Treatment 2</td>
<td>30% Discount</td>
<td>5.5</td>
<td>5.44</td>
<td>150</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Treatment 2</td>
<td>40% Discount</td>
<td>6.0</td>
<td>5.68</td>
<td>150</td>
<td>0.93</td>
<td>0.001</td>
</tr>
<tr>
<td>Treatment 2</td>
<td>50% Discount</td>
<td>6.0</td>
<td>5.92</td>
<td>152</td>
<td>0.78</td>
<td></td>
</tr>
</tbody>
</table>

To identify which of the observed differences in perceived saving were significantly different, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Statistical significance was accepted at the adjusted $p = 0.005$ level. Results revealed that in both Treatment 1 (Laptop) and Treatment 2 (Printer) there were statistically significant differences in 18 of the 20 pairwise comparisons. Discount comparisons 30%-40% and 40%-50% were not significantly different in both Treatments 1 and 2.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Figure 29 graphically illustrates the pairwise comparisons. Red lines indicate the two non-significant (p>0.005) pairwise comparisons. Black lines indicate significant pairwise comparisons in each test.

**Figure 29: Rebate Promotion Perceived Savings Pairwise Comparisons**

The results of the above Kruskal-Wallis tests find that in both Treatments 1 (Laptop) and 2 (Printer) respondents correctly perceived that each higher level of rebate discount represented an increased rebate saving. What cannot be determined from the Kruskal-Wallis tests is whether respondents’ choices between the POS and rebate offers have an effect on their rebate savings perception.

The results of the previous section (chapter 13.4.1) and Study 4 found that Construal Level Theory (CLT) correctly predicted that where the POS and rebate discounts were equal, respondents exhibited a preference for the POS offer. In this case, the offers were identical except for the type of promotion (i.e., POS versus rebate). They were graphically the same and offered the same discount. It is therefore reasonable to assume that respondents understood the central differences between POS and rebate promotions. One offers a no hassles, immediate discount. The other, a future discount that requires additional post purchase effort to redeem. This suggests that where the discount levels were equal the group that preferred the POS offer perceived the rebate saving as insufficient inducement to undertake the redemption process. They instead opted for the immediate discount of the POS promotion.

At each higher rebate discount level, respondents were more likely to prefer the rebate offer versus the POS offer. This suggests that respondents’ who preferred the rebate offer had a more favourable perception of the rebate saving than those who preferred the
An Analysis of Buyer Behaviour in Response to Rebate Promotions

POS offer. Further, the rebate saving perception was strong enough to overcome the perceived difficulty in redeeming the rebate. Using the vernacular of CLT, the preference for the rebate promotion at higher discount levels can be explained as follows. Respondents’ who preferred the rebate offer perceived it as offering a sufficient discount to shift their attention away from the short term rebate redemption requirements towards the subordinate goal of savings maximising.

The perceived saving score at each discount level is compared in order to test whether the respondents who preferred the rebate offer perceived the rebate saving to be higher than those who preferred the POS offer. An examination of the descriptive statistics (Appendix 7) for Treatment 1 (Laptop) and Treatment 2 (Printer) reveals that for all rebate discount levels, the group that preferred the rebate offer had a higher perceived rebate saving that the group who preferred the POS promotion.

Mann-Whitney U tests were used to identify which of the observed differences in perceived saving were significantly different. In Treatment 1 (Laptop) perceptions of rebate saving were significantly higher (p<0.05) for those who preferred the rebate offer in four of the five discount levels (20%, 30%, 40%, and 50%). In Treatment 2 (Printer) perceptions of rebate saving were significantly higher (p<0.05) for those who preferred the rebate offer at all five discount levels (Table 31).

<table>
<thead>
<tr>
<th>Treatment 1 (Laptop)</th>
<th>Rebate Discount Level</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Rank</td>
<td>Rebate POS</td>
<td>90.88</td>
<td>89.85</td>
<td>85.00</td>
<td>84.23</td>
<td>82.76</td>
</tr>
<tr>
<td>Mann-Whitney U</td>
<td></td>
<td>691.00</td>
<td>3962.00</td>
<td>3218.50</td>
<td>2694.50</td>
<td>2244.00</td>
</tr>
<tr>
<td>Significance</td>
<td></td>
<td>0.357</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment 2 (Printer)</th>
<th>Rebate Discount Level</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Rank</td>
<td>Rebate POS</td>
<td>108.30</td>
<td>89.98</td>
<td>80.39</td>
<td>82.66</td>
<td>80.72</td>
</tr>
<tr>
<td>Mann-Whitney U</td>
<td></td>
<td>1028.00</td>
<td>3813.00</td>
<td>2128.00</td>
<td>2324.00</td>
<td>1661.50</td>
</tr>
<tr>
<td>Significance</td>
<td></td>
<td>0.019</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

The results of the Mann-Whitney U tests reveal that in both Treatment 1 (Laptop) and Treatment 2 (Printer) respondents who preferred the rebate offer expressed a higher perceived rebate saving than those who preferred the POS offer. Therefore, respondent’s perceptions of the saving offered by the rebate promotion is an effect in
their preference between offers. Specifically, that when presented with two offers with unequal discounts, respondents select the offer with the largest discount, thereby maximising their savings.

Summary

Construal Level Theory (CLT) argues that individuals interpret, or construe, future events differently to present events using abstract construals. Whilst the construals may differ in the near term versus the longer term, they are related to the same superordinate goal. They are defined from one’s own point of view and as such have the same egocentric reference point across various distances.

In the previous section (chapter 13.4.1) CLT was shown to explain the preference between the POS and rebate promotions. A central facet of this finding was that respondents’ had a superordinate goal of saving maximisation. And, that their preference between promotions was a reflection of them seeking to satisfy this goal. The results of this section support that notion. It has been shown that respondents who preferred the rebate promotion viewed it as providing a higher perceived saving than those who preferred the POS offer.

13.4.2 Rebate Experience

**H4: Individuals with recent rebate promotion experience will prefer a POS discount to a cash back promotion.**

Some in the popular press argue that redemption requirements are made deliberately onerous to deter consumers from redeeming. They cite stories of consumers being denied rebate payments due to minor technicalities, offer advice on how consumers can beat the system to ensure they get their rebate, and highlight retailers who discourage manufacturer rebates to reduce customer complaints. This perception is re-enforced when, in the name of consumer protection, regulators have to step in and force companies to more clearly disclose conditions.

The effects of onerous rebate requirements has been covered at length in Chapters 4 and 5. The purpose of this section is to explore the notion that using rebate promotions has the potential to foster negative affect that leads to them becoming ineffective as a demand stimulus tool. Consumers experienced with rebate promotions are likely to value the rebate less (Khouja et al., 2008a, Lu and Moorthy, 2007), and are more likely to be unaffected by the rebate promotion (Khouja et al., 2008b).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

For the purpose of this study, recent promotion experience is defined as having participated in a rebate promotion at least once within the last 12 months. In this study 31.5% of respondents reported having recent experience with rebate promotions. If respondents had negative perceptions of rebate promotions, and factored these into their choice between offers, it would manifest as an over representation of respondents with ‘Rebate Experience’ preferring the POS promotion to the rebate promotion (H4).

To examine hypothesis H4, the proportion of respondents with recent rebate experience who selected the POS or Rebate offer was compared using Chi-square tests. For both Treatment 1 (Laptop) and Treatment 2 (Printer) comparisons all expected frequencies were greater than five. The Chi-square test statistics showed no significant relationship in either Treatment between having recent rebate experience and the choice between offers (Table 32).

<table>
<thead>
<tr>
<th>Table 32: Recent Rebate Experience and Offer Preference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POS Offer</strong></td>
</tr>
<tr>
<td>Treatment 1 (Laptop)</td>
</tr>
<tr>
<td>Recent Rebate Experience</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Treatment 2 (Printer)</td>
</tr>
<tr>
<td>Recent Rebate Experience</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

If respondents with recent rebate experience did have negative perceptions of rebate promotions, it is not an effect in their preference between offers. This finding is contrary to the fourth hypothesis (H4). Previous rebate experience was not an effect in rebate preference.

13.4.3 Bonus Product Promotions

**H3** Given the choice between a rebate promotion offering a bonus product and a POS dollar-off discount promotion, consumers will prefer the bonus product rebate promotion.

Research has shown that consumers perceive promotion benefits differently when they are presented as monetary versus nonmonetary rewards. Further, when offers are presented in different units to the dollar value, such as bonus products, consumers may
not expend the mental effort required to convert the bonus item’s value into the same units as the purchase price.

Hypothesis H3 examines the relationship between POS and rebate promotion preference and the form in which the rebate offer is presented (i.e., ‘cash’ or a ‘bonus product’). Specifically, it predicts that consumers will exhibit a preference for the bonus product rebate offer compared to the POS offer. For H3 to be accepted, respondents should report a greater preference for the product rebate than the POS discount.

Treatment 3 utilised a Blu-ray player (Figure 30) promotion to test this hypothesis. The reader is reminded that Treatment 3 utilises a 3 (discount levels) x 2 (rebate types) design, yielding six choice sets. That is, at each of three discount levels (10%, 25%, and 40%) both a cash-back and bonus product rebate offer were compared to the POS discount. The POS discount was fixed at 10% in each of the comparison. This survey design allows for a direct comparison of offer preference between a cash-back and product rebate, at each discount level.

<table>
<thead>
<tr>
<th>Rebate Value</th>
<th>Cash-back Rebate</th>
<th>Product Rebate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Discount ($30.00)</td>
<td>126</td>
<td>126</td>
<td>252</td>
</tr>
<tr>
<td>25% Discount ($75.00)</td>
<td>127</td>
<td>127</td>
<td>254</td>
</tr>
<tr>
<td>40% Discount ($120.00)</td>
<td>124</td>
<td>126</td>
<td>250</td>
</tr>
<tr>
<td>Total</td>
<td>377 (50%)</td>
<td>379 (50%)</td>
<td>756</td>
</tr>
</tbody>
</table>

Respondents in the bonus product group were presented with the choice of Blu-ray movies to the value of “$XXX” as the ‘Bonus’ product rebate. Respondents in the ‘Cash Back’ groups were presented with the three discounts via a cash back rebate. For example, Figure 30 shows the two choice sets at the 40% discount level against a 10% POS offer.
Hypothesis H3 predicts that the proportion of respondents who choose the Product Rebate will significantly exceed the proportion who select the Cash Rebate. To examine the hypotheses the proportion of respondents who selected the Cash or Product rebate offer at each level of rebate discount was compared. If Hypothesis H3 is supported, the proportion of respondents who select the product rebate offer will exceed the proportion that selected the cash rebate offer.

A Chi-square test with Bonferroni adjustment for multiple comparisons was conducted on the preferred offer (POS vs rebate) and the rebate type (i.e., Cash-back or Product) at each of the discount levels. The Chi-square statistics show that there is a significant relationship between the preferred offer and rebate type in the total sample proportions, along with two of the three discount levels (i.e., 25% and 40%). There was no significant relationship found when the POS and rebate discounts were equal at the 10% discount level (Table 34). Subsequent post hoc pairwise comparisons of the significant results found that all column proportions were significantly different. Statistical significance was accepted at the adjusted $p = 0.025$ level and are denoted by an ‘*’ in Table 34.
### Table 34: Cash vs. Bonus Product Rebate Promotion Chi-squared Contingency Table

<table>
<thead>
<tr>
<th>Rebate Type</th>
<th>Preferred Offer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS</td>
<td>Mail-in</td>
</tr>
<tr>
<td>10% POS Discount</td>
<td>Cash-back Rebate</td>
<td>118ₐ</td>
</tr>
<tr>
<td>10% Rebate Discount</td>
<td>Product Rebate</td>
<td>114ₐ</td>
</tr>
<tr>
<td>( \chi^2(1) = 0.869, p=0.351 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>232</td>
<td>20</td>
</tr>
</tbody>
</table>

| 25% Rebate Discount    | * Cash-back Rebate| 26ₐ   | 101ₐ | 127  |
|                        | * Product Rebate  | 74ₐ   | 53ₐ  | 127  |
| \( \chi^2(1) = 38.001, p<0.001 \) |                 |       |      |      |
| Total                  | 100             | 154    | 254  |

| 40% Rebate Discount    | * Cash-back Rebate| 16ₐ   | 108ₐ | 124  |
|                        | * Product Rebate  | 70ₐ   | 56ₐ  | 126  |
| \( \chi^2(1) = 50.382, p<0.001 \) |                 |       |      |      |
| Total                  | 86              | 164    | 250  |

| Total                  | * Cash-back Rebate| 160ₐ  | 217ₐ | 377  |
|                        | * Product Rebate  | 258ₐ  | 121ₐ | 379  |
| \( \chi^2(1) = 50.237, p<0.001 \) |                 |       |      |      |
| Total                  | 418             | 338    | 756  |

An * denotes a subset of Preferred Offer categories whose column proportions differ significantly from each other at the adjusted \( p=0.025 \) level.

From the results of previous chapters (see chapters 12.3.1 and 13.4.1) one would expect a preference for the POS promotion at the 10% discount level, and a preference for the rebate promotion at the 25% and 40% rebate discount levels. In the case of the cash-back rebate, the results follow the expected pattern. That is, at both the 25% and 40% discount levels the cash-back rebate is preferred to the POS offer.

In the case of the product rebate promotions, the results are not as expected. The proportion of respondents who prefer the POS offer significantly exceeds the proportion that prefer the product rebate at both the 25% and 40% discount levels. In addition, the pairwise comparisons for the total sample show the proportion of respondents who prefer the POS offer significantly exceeds the proportion who prefer the product rebate.

Given the results of the Chi-square analysis, it is reasonable to conclude that there is no preference for product rebate promotions compared to POS promotions. Furthermore, given the fact that the equivalent cash-back rebates were preferred to the POS offers, suggests product rebate promotions are not more effective than cash back rebate promotions. As such, H3 is not supported.
13.4.4 Price and Rebate Advertising

**H5** *Consumers are more likely to choose a Rebate promotion when the Rebate offer is advertised with a price reference rather than without a price reference.*

Using comparison prices in retail price advertisements to enhance consumers’ evaluations is a common tactic. An ARP is used to provide the consumer a reference by which to evaluate the promotion product price. It is hoped that by comparing the offer against a higher ARP the consumer’s evaluation will be more favourable, and they will make a purchase.

Previous research has identified that most rebate adverts include a combination of the product ARP, the rebate, and the after rebate price (CR). Other pricing formats include displaying the rebate alone without price information (RO), or, displaying the rebate and an after rebate ‘nett’ price (AR). See Table 35 for examples of each format.

**Table 35: Advertised Rebate Price Formats**

<table>
<thead>
<tr>
<th>Treatment 4 Choice Set 1 of 6</th>
<th>POS Discount Offer</th>
<th>Combination Price (CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment 4 Choice Set 2 of 6</td>
<td>POS Discount Offer</td>
<td>After Rebate Price (AR)</td>
</tr>
<tr>
<td>Treatment 4 Choice Set 3 of 6</td>
<td>POS Discount Offer</td>
<td>Rebate Only (RO)</td>
</tr>
</tbody>
</table>
Hypothesis H5 examines whether the format of rebate pricing is an effect in respondent’s preference between offers. H5 proposes that including an ARP in the rebate advert will produce a higher preference for the rebate offer compared to the rebate formats that do not include an ARP. In this Treatment, only the combined rebate format (CR) advertisement includes an ARP (see Table 35). For H5 to be accepted respondents should exhibit a preference for the rebate offer vs the POS offer when the rebate is presented in the CR format, rather than when it is presented in either the ‘after rebate’ (AR) or ‘rebate only’ (RO) formats.

Chi-square analysis will be utilised to investigate the direction of the relationship between the independent and dependent variables. In this situation, the chi-square analysis will not be used to investigate the direct effects between the dependent and independent variables. A logistic regression will be used by this task. Rather the chi-square analysis will support the findings from the logistic regression and will help better explain the subjects’ decisions.

Treatment 4 featured a Television promotion to test this hypothesis. Respondents were randomly assigned to one of six choice sets. The choice sets comprised two discount levels (10% & 40%) and three rebate formats (CR, AR, and RO), producing a 2x3 design (Table 36). The POS discount was fixed at 10%.

Table 36: POS vs. Rebate Promotion Treatment 4 – Group Sample Sizes

<table>
<thead>
<tr>
<th>Rebate Ad Format</th>
<th>10% Rebate Discount</th>
<th>40% Rebate Discount</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combination (CR)</td>
<td>126</td>
<td>126</td>
<td>252</td>
</tr>
<tr>
<td>After Rebate (AR)</td>
<td>127</td>
<td>126</td>
<td>253</td>
</tr>
<tr>
<td>Rebate Only (RO)</td>
<td>124</td>
<td>127</td>
<td>251</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>377</strong></td>
<td><strong>379</strong></td>
<td><strong>756</strong></td>
</tr>
</tbody>
</table>

To examine the hypotheses, the proportion of respondents who selected either the POS or Rebate offer was compared for each of the three rebate formats. Given the results of previous sections, it is expected the POS offer will be preferred at the 10% level where the POS and rebate discounts are equal. If the predictions of hypothesis H5 are supported, the proportion of respondents who select the rebate offer displayed in the CR format at the 40% discount level will exceed the proportion that selected either the RO and AR formats.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

To examine group size, a Chi-square tests with Bonferroni adjustment were conducted on offer preference (POS vs rebate) and rebate discount (10% and 40%) for each type of three rebate format types CR, AR, and RO (Table 37). The Chi-square statistics for each choice set shows there is a significant relationship between rebate discount levels and offer preference. To identify which groups are different, post hoc pairwise comparisons of column proportions were undertaken. Statistical significance was accepted at the adjusted p=0.025. The pairwise comparisons that are significant are denoted by an ‘*’ in Table 37.

Table 37: POS vs. Rebate Advert Format Chi-squared Contingency Table

<table>
<thead>
<tr>
<th>Rebate Format</th>
<th>Rebate Value</th>
<th>Preferred Offer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Combination (CR)</td>
<td>*10% Discount</td>
<td>105 (83%) (a)</td>
<td>21 (17%) (b)</td>
</tr>
<tr>
<td></td>
<td>*40% Discount</td>
<td>11 (9%) (a)</td>
<td>115 (91%) (b)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>116 (46%)</td>
<td>136 (54%)</td>
</tr>
<tr>
<td>(\chi^2(2) = 141.143, p &lt; .001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After Rebate (AR)</td>
<td>*10% Discount</td>
<td>103 (81%) (a)</td>
<td>24 (19%) (b)</td>
</tr>
<tr>
<td></td>
<td>*40% Discount</td>
<td>57 (45%) (a)</td>
<td>69 (55%) (b)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>160 (63%)</td>
<td>93 (37%)</td>
</tr>
<tr>
<td>(\chi^2(2) = 34.996, p &lt; .001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rebate Only (RO)</td>
<td>*10% Discount</td>
<td>116 (94%) (a)</td>
<td>8 (6%) (b)</td>
</tr>
<tr>
<td></td>
<td>*40% Discount</td>
<td>26 (20%) (a)</td>
<td>101 (80%) (b)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>142 (57%)</td>
<td>109 (43%)</td>
</tr>
<tr>
<td>(\chi^2(2) = 136.375, p &lt; .001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>418 (55%)</td>
<td>338 (45%)</td>
<td>756</td>
</tr>
</tbody>
</table>

An ‘*’ denotes a subset of Preferred Offer categories whose column proportions differ significantly from each other at the adjusted p=0.025 level.

As expected the POS offer was preferred at the 10% discount level, consistent with the analysis in previous sections. Whilst all Rebate advert formats exhibited an increased preference for the Rebate offer at the 40% discount level, the proportion is lowest for the ‘After Rebate’ (AR) group. The ‘Combined Rebate’ (CR) group exhibited the largest proportion of respondents who selected the rebate offer.

Based on the above Chi-square tests, there is a significant relationship between offer preference (POS vs rebate) and the format in which the rebate discount is displayed. To further clarify the relationship, a binary logistic regression was used to predict the
An Analysis of Buyer Behaviour in Response to Rebate Promotions

probability that a respondent would select the rebate versus the POS offer using rebate value and rebate format as predictors.

For the purposes of this analysis, the respondents that preferred the POS offer were coded as (0) and the Rebate offer as (1). A test of the full model against a constant only model was statistically significant ($\chi^2(3) = 333.92, p < .001$) indicating the predictors as a set reliably distinguished between offer preference groups (POS vs rebate). The model explained between 35% (Cox & Snell) and 48% (Nagelkerke $R^2$) of the variance in offer preference. These measures indicate the model is a better fit than the base model analysis.

The classification matrix identifies the number and percentage of cases correctly classified by the model, and is the last measure used to determine overall model fit (Table 38). The model showed a high rate of success at correctly classifying situations in which respondents chose the rebate offer (84.3%). The overall percentage of cases that were correctly classified was 80.6%. To assess the effectiveness of the model these ‘hit ratios’ should be compared to the maximum chance and proportional chance criteria. If the percentage of correct classifications is significantly larger than would be expected by chance, the logistic regression model accurately predicts the factors related to respondents’ preference between offers. It has been suggested that the classification accuracy should be at least 25% greater than that achieved by chance (Hair et al., 2010).

The maximum chance criterion is the hit ratio obtained if all observations are assigned to the group with the largest probability of occurrence. In this case that related to the ‘POS Offer’ group with 42.8% (324/756) of the cases. The calculated threshold value for the maximum chance is 53.5% (42.8% + 25%). The proportional chance criterion is obtained by squaring the proportions of each group $(0.553^2 + 0.447^2) = 50.56%$. The calculated threshold value for the proportional chance is 63.2% (50.56% +25 %). Given the model accuracy rate (80.6%) exceeds both these criteria, the model has an adequate fit to the data (Table 38).

Table 38: Treatment 4 (Television) Logistic Regression Classification Matrix

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POS Offer</td>
<td>Rebate Offer</td>
</tr>
<tr>
<td>POS Offer</td>
<td>324</td>
<td>94</td>
</tr>
<tr>
<td>Rebate Offer</td>
<td>53</td>
<td>285</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An Analysis of Buyer Behaviour in Response to Rebate Promotions

To establish the contribution of each of the independent variables to the model, along with their relationship with the dependent variable, the parameter estimates (B – logistic coefficients) are now discussed. The logistic coefficients values explain the relationship between the independent variables and the dependent variable, where the dependent variable is on the logit scale.

These estimates explain the amount of increase (or decrease) in the predicted log odds of correctly classifying the dependent variable that would be predicted by an increase (or decrease) in the predictor, holding all other predictors constant. For example, in this Treatment the logistic coefficients are explaining the effect of changing the format in which the rebate discount is displayed has on the choice between the POS and rebate promotions.

As was found in previous sections, increasing levels of rebate value were associated with an increased likelihood of selecting the rebate promotion. Respondents in this Treatment were 21 times more likely to choose the rebate offer at the 40% discount rate versus the 10% level.

All three rebate discount formats showed a significant effect on offer preference. Significantly for this test, both the ‘After Rebate’ (AR) and ‘Rebate Only’ (RO) formats had a negative effect on rebate offer preference, compared to the ‘Combination’ (CR) format. In fact, the AR and RO formats were respectively 3.22 and 2.08 times more likely to generate a preference for the POS offer, compared to the CR format (Table 39).

| Table 39: Treatment 4 – Effects of Rebate Format and Rebate Value on Offer Preference |
|---------------------------------|---|---|---|---|---|
|                                  | B  | S.E. | Wald | df | Sig. | Exp(B) |
| Rebate Value (40%)              | 3.06 | 0.20 | 230.37 | 1   | < 0.001 | 21.34 |
| Rebate Format (CR)              |    |    | 23.63 | 2   | < 0.001 |       |
| Rebate Format (AR)              | -1.16 | 0.24 | 23.15 | 1   | < 0.001 | .31   |
| Rebate Format (RO)              | -744 | 0.24 | 9.85  | 1   | 0.002  | .48   |
| Constant                        | -1.26 | 0.18 | 46.68 | 1   | < 0.001 | .28   |

Given the results of the above binary logistic regression model and Chi-square analysis, it is reasonable to conclude that including an ARP and framing the rebate saving in the combination (CR) format produces the strongest preference for the rebate promotion. As such, H5 is supported.
13.5 SUMMARY

The previous section, Study 4, found that when given the choice between POS or Rebate promotions offering equal promotion dollar benefit on identical products, consumers consistently preferred the POS promotion. The findings of Study 4 were replicated here. When presented with the choice between POS discount and Rebate promotions offering an equal promotion dollar benefit, consumers will usually (95%) prefer the POS offer.

The current study extends the findings of Study 4 to investigate preference between POS and rebate promotions where the rebate discount exceeds the POS discount. The literature review identified two theories to explain consumer preference: Construal Level Theory (CLT) and Prospect Theory (see Chapter 9). Interestingly in the discount scenarios being examined (rebate > POS), their predictions are mutually exclusive.

Prospect Theory and Construal Level Theory (H2)

According to Thaler’s (1985) ‘silver lining’ principle, Prospect Theory suggests that when the rebate discount is small relative to the purchase price, the rebate promotion will be preferred to the POS promotion. Moreover, the ‘silver lining’ principle suggests that the smaller the rebate discount relative to the purchase price the stronger the preference for rebate promotions will be.

CLT instead suggests that when the rebate discount exceeds the POS discount the rebate promotion would be preferred to the POS promotion because consumers seek to maximise their savings. This gives rise to the hypothesis H2, “Given the choice between a discount received now, and a larger discount received in the future, consumers are more likely to prefer the promotion with the largest saving.”

Treatment 1 (Laptop) and Treatment 2 (Printer) were designed to examine offer preference (POS vs Rebate) at five rebate discount levels (i.e., 10%, 20%, 30%, 40%, and 50%). The POS discount was held constant at 10% in each of the five choice sets. In each of the choice sets where the rebate discount was greater than the POS discount, Chi-square tests showed respondents preferred the rebate promotion over the POS offer.

Logistic regression was used to predict the probability of the rebate promotion being preferred at each discount level. Results showed that at each higher level of discount, respondents were increasingly more likely to prefer the rebate promotion. For example, when the advertised discount differed by 10% (POS = 10% vs. Rebate = 20%),
An Analysis of Buyer Behaviour in Response to Rebate Promotions

respondents were at least 36 times more likely to choose the rebate promotion. At the maximum rebate discount of 50%, a difference of 40% (POS = 10% vs. Rebate = 50%), respondents were at least 122 times more likely to prefer the rebate promotion.

The conclusion arising from these results is that when the rebate discount exceeds the POS discount, respondents prefer the rebate promotion. Furthermore, as the dollar discount differential increases, the preference for the rebate versus the POS promotion strengthens. Whilst these findings are contrary to the predictions of Prospect Theory, they are consistent with predictions based on Construal Level Theory (CLT) and support hypothesis H2.

A central tenant of CLT is that given the longer-term nature of the rebate redemption timeframe, consumers ignore the near term specifics of the redemption process (i.e., the redemption requirements) and focus instead on satisfying a superordinate goal. It was argued that when evaluating promotions the superordinate goal is savings maximisation.

The Rebate Savings Measure provides evidence that respondents who chose the rebate offer were attempting to maximise their savings. When comparing the POS discount and Rebate promotions, respondents who preferred the rebate offer judged the rebate saving to be higher than those who preferred the POS offer. It follows that those who did not judge the rebate saving to be high instead focused on the subordinate features, such as the timeframe to receive the discount, preferring the immediate POS discount over the delayed rebate offer.

**Bonus Product Rebate Promotions (H3)**

Previous research has found respondents are capable of discriminating between monetary and nonmonetary promotions. Specifically, that nonmonetary promotions such as bonus packs or free samples, were evaluated differently to monetary promotions. For example, for nonmonetary promotions consumers may not expend the mental effort required to convert the bonus item’s value into the same units as the purchase price. As a result, bonus products are not easily integrated into the purchase price and will more often be seen as a benefit separate from the purchase.

Whilst this study supports the suggestion that consumers can differentiate between monetary and nonmonetary promotions, the results do not suggest product promotions are preferred to discount offers of the same value. In fact, respondents in this sample were more than four times more likely to choose a POS discount than a product rebate.
Rebate Promotion Experience (H4)

It could be argued that those who chose the POS offer did so because of previous negative experiences with rebate promotions; this is the reasoning behind H4. The results of this study, however, found that having previous experience with rebate promotions does not produce a preference for POS promotions. In fact, in this study previous rebate promotion experience is not a significant factor in respondents’ preference between offers (POS vs Rebate). This result could be strengthened in future studies by more detailed definition of the previous rebate experience. For example, it could be in this study that the respondents who indicated they had previous experience with rebate promotions had mostly positive experience. Equally, respondents may have had mostly negative previous experiences and assume this is normal. As a result their perceptions are not affected.

Rebate Promotion Pricing Formats (H5)

Using comparison prices in retail price advertisements to enhance consumers’ evaluations is a common tactic. The advertised reference price (ARP) is intended to serve as an anchor that increases the likelihood that a consumer will evaluate a promoted product more favourably against the higher ARP than they would without one.

Respondents in this study showed a significant preference for the rebate promotion when the benefit was framed together with an ARP. The two rebate formats that did not feature the ARP were between two and three times more likely to result in a preference for the POS offer. Importantly, the preference for the POS discount was significant at the highest rebate discount level (POS = 10% vs. Rebate = 40%). This is contrary to the results of Treatments 1 (Laptop) and 2 (Printer) that showed when the rebate discount was greater than the POS discount respondents were more likely to prefer the rebate promotion.
Table 40 summarises the findings of hypotheses testing in Study 5.

**Table 40: Summary of Research Hypotheses Results in Study 5**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROSPECT THEORY AND CONSTRUAL LEVEL THEORY</strong></td>
<td></td>
</tr>
<tr>
<td>H2 Given the choice between a discount received now, and a larger</td>
<td><strong>Supported</strong></td>
</tr>
<tr>
<td>discount received in the future, consumers are more likely to</td>
<td></td>
</tr>
<tr>
<td>prefer the promotion with the largest saving.</td>
<td></td>
</tr>
<tr>
<td><strong>BONUS PRODUCT PROMOTIONS</strong></td>
<td><strong>Not Supported</strong></td>
</tr>
<tr>
<td>H3 Given the choice between a rebate promotion offering a bonus product</td>
<td><strong>Not Supported</strong></td>
</tr>
<tr>
<td>and a POS dollar-off discount promotion, consumers will prefer the bonus</td>
<td></td>
</tr>
<tr>
<td>product rebate promotion.</td>
<td></td>
</tr>
<tr>
<td><strong>CONSUMER LEARNING</strong></td>
<td></td>
</tr>
<tr>
<td>H4 Individuals with recent rebate promotion experience will prefer a</td>
<td><strong>Not Supported</strong></td>
</tr>
<tr>
<td>POS discount to a cash back promotion.</td>
<td></td>
</tr>
<tr>
<td><strong>ADVERTISED REFERENCE PRICES</strong></td>
<td><strong>Supported</strong></td>
</tr>
<tr>
<td>H5 Consumers are more likely to choose a Rebate promotion when</td>
<td></td>
</tr>
<tr>
<td>the Rebate offer is advertised with a price reference rather than</td>
<td></td>
</tr>
<tr>
<td>without a price reference.</td>
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</table>
Chapter 14. DISCUSSION AND CONCLUSION

Unlike other promotion vehicles, rebates are unique in that they offer a post-purchase discount. More importantly though, consumers receive the discount only if they complete the promotion’s requirements. Rebate promotions have become a widely used promotional tool despite the negative attention rebates have received in business news and popular press (Ploskina, 2008, Ross, 2010).

Despite the popularity of rebate promotions, they have received limited academic attention. This research thesis contributes to the dearth of literature on rebate promotions on two fronts. Firstly, it examines the characteristics of rebate promotions and their redemption requirements. Secondly, it compares the efficacy of rebate promotions compared to discount offers, at various discount levels, rebate types (cash versus products), and alternative rebate price formats.

In Study 1, an audit of 268 active rebate promotions was conducted that identified 12 commonly used requirements. It was argued that some of these involved a level of compliance beyond that required to simply deter fraud. For example, some required the consumer to divulge information that may be deemed too private, e.g. bank details. Others were simply unclear and could lead to confusion. Finally, some such as ‘Paying Freight on Bonus Products’ fail the test of fairness. Would a consumer expect to have to pay to freight their ‘bonus’ product?

Common to all was the same penalty for non-compliance, a rejected claim and the potential consumer dissatisfaction. To assist manufacturers design promotions that provide tangible savings to consumers whilst minimising the possibility of fraudulent claims and consumer angst, it is important to determine if a promotion’s requirements could in fact foster breakage. The obvious question becomes, “Can consumers actually differentiate between the onerousness of a promotion’s requirements?” Equally, “Does the level of onerousness deter them from redeeming?”

In Study 2, the 12 commonly used requirements were tested for their perceived onerousness. As a result, this thesis confirms that some requirements are more likely than others to discourage consumers from redeeming. More importantly, through the use of Finn and Louviere (1992) Best-Worst Scaling (BWS) it was possible to rank the requirements and distill a set of four conditions that were the least likely to discourage redemption and that should form the "base compliance requirements" of rebate promotions. Whilst a relatively high number of conditions may be interpreted as
An Analysis of Buyer Behaviour in Response to Rebate Promotions

onerous by most, it is more likely to be the case if the ‘extra’ conditions are also difficult and if non-compliance leads to a rejected claim. As such, the composition of a promotions requirements rather than their total number, could be the determining facet.

To fully appreciate the importance of this finding, one must view it in tandem with the findings of Study 3, a field study offering a seemingly simple online redemption versus the traditional and seemingly cumbersome mail-in redemption process. The significance of Study 3 lies in the finding that reducing redemption requirements via a simpler redemption process does not produce a higher redemption rate.

The findings of Studies 4 and 5 have important implications for Prospect Theory’s application to rebate promotions. The results in this thesis suggest consumers perceive a POS discount as an immediate reduction and a rebate as a future reduction and prefer the POS discount. This continues to be the case until the rebate saving reaches a level sufficient to compensate for the risk of not redeeming, the opportunity cost of time associated with completing the redemption process, and/or, the delayed nature of the payment. Once their ‘critical’ level is reached the rebate promotion becomes more attractive and they are prepared to redeem and wait. This finding is more in line with the predictions of Construal Level Theory with individuals seeking to satisfy their saving maximising goal.

This thesis has other implications for rebate theory. It confirms that respondents perceive the time delay nature of rebates and are aware of the extra work required in obtaining the discount associated with a rebate promotion. They do not, however, perceive rebate promotions to be more risky than discount promotions. And, previous rebate experience is not a negative effect in the choice between rebate and POS discount promotions.

This research has two implications applicable to designing rebate promotions. Firstly, given a choice between a POS discount and a product rebate, consumers prefer the POS discount. Furthermore, consumers prefer a cash back rebate to a product rebate. Interestingly these relationships hold across all discount levels.

Secondly, how the rebate price is presented in rebate advertisements has a significant effect on promotion evaluation. Although the combined format (regular price, rebate, and after rebate prices) and the after rebate format provide equivalent information, the combined format was perceived as offering a significantly larger saving. It appears that respondents did not do the mental arithmetic required to compute the regular price in
An Analysis of Buyer Behaviour in Response to Rebate Promotions

order to make an effective evaluation of the offer. Presenting the offer in the combined format produces the optimum results.

14.1 Research Limitations

Before discussing this thesis’s findings in more detail, it is worth considering the study’s limitations. Firstly, a fundamental characteristic of rebate promotions is the time difference between purchasing the product, completing the rebate requirements, and receiving the rebate payment. It is difficult to capture this dynamic in the survey instruments employed in this thesis. Even though efforts were taken to build appropriate scenarios for the respondents that highlighted the time delay and redemption requirements, it is acknowledged that not all would have fully grasped the nuances of rebate versus discount promotions, nor could they fully factor these into their decision making.

Whilst the survey’s preamble included a purchasing scenario encouraging respondents to ‘imagine’ an intention to purchase the products displayed, it is acknowledged this is not a substitute for actually purchasing the product. It is unclear how involved the respondents were in the scenario, or, how realistic their decision-making between competing offers.

The quality and interpretation of the study outcomes are potentially affected by the choices of how the constructs are measured. For example, the questionnaires did not include any weighting for choices due to the amount of information that respondents were asked to consider. The inclusion of weightings for multiple response questions may have added more importance to some responses.

As the research questionnaires were based on self-reported data they may reflect under or over reporting in the disclosure of sensitive information, particularly given the surveys were completed online. Furthermore, a drawback of paid online surveys is the risk that respondents will answer as quickly as possible without sufficient thought. Whilst measures were taken to limit these possibilities, it is acknowledged that they may still occur.

14.2 Characteristics of Rebate Promotions

It has been noted that next to coupons, rebates are the most popular promotion tactic used by consumer goods companies (Moses, 2009) and are the most common promotion strategy used by technology retailers (Bowman, 1989). Furthermore, since their
An Analysis of Buyer Behaviour in Response to Rebate Promotions

inception, rebate values have jumped, from a few dollars to hundreds of dollars (Grow and Chhatwal, 2005). One industry study reported 76% of surveyed packaged goods companies in the U.S.A. had used rebate offers in the past year, with usage growing at 25% annually (Bulkeley, 1998). One estimate suggests that approximately 300 million rebates were offered in the U.S.A. in 2009 (Ross, 2010). More recent estimates have valued rebate programs in the U.S.A. at USD8 billion (Parago, 2011).

Yet in spite of their popularity, there is no literature examining the characteristics of rebate promotions. This is in stark contrast to the extensive literature on coupon promotions. This thesis begins to redress this imbalance with an audit of 268 active rebate promotions. The results have revealed noteworthy differences in rebate usage between product categories and rebate promoters. More importantly, however, this research identifies the more commonly used rebate requirements.

14.2.1 Differences in Rebate Promotions between Product Categories

The audit in Study 1 supported industry reports that rebates were a popular promotional strategy used by technology retailers (Bowman, 1989, Ploskina, 2008, McCall, 2006), with Computer products (37%) the largest users of rebate promotions. This research showed that promoters of Computer products favoured using cash back rebates over bonus product promotions. Computer products had one of the lowest mean rebate dollar values, shelf prices, and rebate percentages. Conversely, this product group had the highest minimum, maximum, and mean number of redemption requirements.

Promoters of Kitchen appliances were the second largest users (36%) of rebate promotions. In comparison to computer product promotions, Kitchen appliance promotions were heavy users of bonus product rebates. Their rebate promotions had the highest average rebate face value, shelf price, and rebate percentage. Whilst they had amongst the highest number of redemption requirements, they tended to be a less onerous type.

14.2.2 Regular Rebate Promoters

One of the more significant findings of Study 1 relates to the behaviour of promoters who were regular users of rebate promotions. As promoters use rebate promotions more frequently the number of requirements employed per promotion increases, as does the time taken to pay the rebate. In other words it is harder to claim and takes longer to be paid. This finding supports industry reports that rebate payments take too long to be processed (Furger, 1997, Arar, 2007, Ploskina, 2008, McCall, 2006)
It is easy to conclude that this is a deliberate ploy to generate sales and suppress redemptions. That through experience promoters have learnt that increasing the number, and/or onerousness, of redemption requirements does in fact reduce redemptions. It is a reasonable contention.

Alternatively, it could be argued that these promoters have simply been exposed to higher levels of fraudulent claims, and as such have tightened their compliance requirements. An increased use of promotions may have resulted in budget over-runs and require tighter controls to ensure only legitimate claims are paid.

### 14.2.3 Rebate Requirements

Whilst the specific requirements varied between the 268 promotions, eight were more common. The requirement to complete a redemption form – either manually or online – was common to all. Of the remaining seven, the requirement to supply an invoice copy (98.8% of promotions) and the date of purchase (93.6% of promotions) were common to almost all promotions. Furthermore, the store name (83.7% of promotions), store location (75.7% of promotions) and product serial number (77.9% of promotions) were required by most promotions.

The requirement to provide a sample of the packaging – usually the bar code – was more common to consumer electronics promotions. It is also a requirement often cited in industry reports as causing consumer angst and frustration (Bulkeley, 1998, Ploskina, 2008, Spencer, 2002). Similarly, the requirement to pre-register the purchase prior to commencing the redemption process mostly used in consumer electronics promotions (82.8%).

### 14.3 The Onerousness of Rebate Requirements

Many in the popular press argue that rebate promotion requirements are made deliberately onerous in order to deter redemption. A phenomenon referred to as “breakage”. It is an easy argument to make since manufacturers have much to gain if redemption rates are below 100%.

Clearly each promotion is different, yet reports of 5%-10% redemption rates are numerous (Spencer, 2002, Ploskina, 2008). In interviews with fulfilment houses, redemption rates of 5%-15% were widely quoted. Add to this the documented cases of consumer protection agencies prosecuting companies for conditions deemed, “…particularly unusual and onerous…” (ACCC, 2010 pg.1), where consumers have
been misled, or where conditions have been concealed (ACCC, 1996), and one begins to understand the negative press reports and finger pointing.

From a marketer’s point of view, it is difficult to imagine companies risking damage to their brands by deliberately alienating consumers in this way. The short-term gain of reducing individual promotion costs seems trivial next to the possible long-term brand damage. Yet, given this important disconnect, there is no research investigating rebate redemption requirements. The obvious question becomes, “Do consumers actually perceive the onerousness of a promotion’s requirements?” Equally, “Does the level of onerousness deter them from redeeming?”

14.3.1 Rating Rebate Requirements

In Study 2, the commonly used rebate requirements identified in Study 1 were tested for perceived onerousness. This research supports an association between promotion requirements and consumer behaviour, specifically the intention to redeem (Tat et al., 1988, Inman and McAlister, 1994, Tat and Lee, 1993). Respondents indicated that they could be discouraged from redeeming if the requirements of the promotion were perceived as onerous in nature.

More importantly, this research provides a sample of redemption requirements deemed most likely to discourage redemption. Through the use of Finn and Louviere (1992) Best-Worst Scaling (BWS) it was possible to rank the requirements and demonstrate that the most onerous were up to 50 times more likely to deter consumers from redeeming than the least onerous.

The results of the BWS analysis show that for the majority of respondents, four requirements were considered as not discouraging redemption. Three of the four conditions, providing the store name, store location, and the purchase date, are easily obtained from the purchase receipt. The fourth condition, providing the product serial number, has been linked to dissatisfaction with the redemption process (Ploskina, 2008, Ross, 2010, McCall, 2006). Such a link was not supported by this research.

On the other hand, three conditions were deemed likely to discourage redemption by most respondents in Study 2. These included the requirements to register the purchase before redeeming, to provide bank account details for payment, and to pay the freight to ship bonus products. This is not to suggest these requirements cannot be used in rebate promotions. Rather, that by including these requirements promoters face a greater onus
of justification. They should make it clear why they are putting them in place. If the consumer is fully informed, the potential for angst or suspicion may be reduced.

14.3.2 Simplifying Rebate Redemption

Study 3 investigated the consequence of providing a simpler rebate claim process on redemption rates. If one accepts the underlying assertion of those in the popular press – that the redemption process is made deliberately onerous to discourage redemption – it follows that promoters fear that simplifying the redemption process would produce a substantial increase in redemption rates, and thus an increase in cost. Tat and Schwepker Jr (1998) in arguing for simpler redemption processes acknowledged that they may result in higher redemption rates, and increased costs for the manufacturer.

This research showed that for this data set a simplified redemption process is not an effect in redemption behaviour and does not produce a higher level of redemption. The redemption rate for the promotion with the simplified process in Study 3, was less than or equal to previous promotions run by the same manufacturer for the same products.

14.3.3 Managerial Implications

Whilst this is the first study to investigate redemption requirements, it has yielded two significant managerial insights. Firstly, there are differences between redemption requirements in terms of the perceived onerousness. Secondly, the level of perceived onerousness has a tangible effect on the individual’s intention to redeem.

These realisations are a double-edged sword. On the one hand, they seem to validate the cries of rebates naysayers, “Surely this proves companies make the redemption process deliberately difficult and time-consuming in order to reduce redemption rates?” Perhaps. It is hard to deny that the profit gained by reducing redemption rates via increasing the onerousness of redemption requirements would be attractive to some.

On the other hand, rebate promotions provide companies with a powerful mechanism to increase brand equity through a positive engagement with consumers. In fact, reducing consumer angst with the redemption process has benefits beyond the immediate promotion; it could lead to higher long-term brand loyalty. Tat and Schwepker Jr (1998) argue that increasing redemption rates via reduced compliance requirements can lead to higher consumer satisfaction and loyalty.

Making a rebate payment provides the manufacturer direct contact with the consumer, potentially increasing revenue in the long term. For example, along with the rebate
payment, manufacturers can provide related product information, ‘loyalty’ discounts, upgrade options, and incentives for referrals. If consumers have had a positive experience with the redemption process, they are more likely to be receptive to customer relationship management (CRM) initiatives than if their experience has not been positive.

To reduce the level of perceived onerousness of their rebate promotions, companies should be conscience that most consumers dislike two of the more commonly used redemption requirements; paying freight on bonus products and providing bank account details. If the requirements are not known at the point of purchase, instead being discovered when completing the redemption form, any positive affect of the purchase could be lost.

14.3.4 Suggestions for Future Research on Rebate Requirements

Whilst, this thesis contributes to understanding rebate promotion requirements, it raises a number of future research questions. For example, ‘do consumers read the redemption requirements prior to purchase?’ ‘How accessible are the redemption requirements at the time of purchase?’ ‘Do consumers fully understand the redemption requirements when making a purchase decision?’

Perhaps the most misunderstood aspect of rebate promotions is the phenomena of non-redemption, or “breakage”. Given its pivotal function in rebate promotions, researchers should look to field studies of ‘live’ rebate promotions, surveying consumers at multiple stages from the point of purchase through to receiving (or not) the rebate payment.

It is critical to understand the factors contributing to breakage. To date the focus has centred on redemption requirements as the leading factor in breakage. Little research has examined if breakage occurs prior to consumers becoming aware of the effort required to redeem, for example through procrastination (Gilpatric, 2009, Soman, 1998) or forgetfulness (Lu and Moorthy, 2007). Equally, research could examine the tendency for consumers to over-estimate their likelihood of redeeming (Gilpatric, 2009, Soman, 1998) as a cause of breakage. If the role of these pre-redemption factors is significant, then firms may be over emphasising the part played by redemption effort in producing breakage.

Additionally, rebate use and conditions from a manufacturer’s viewpoint should be examined. For example, do they find that the type and quantity of conditions influence the level of redemptions, what are the (dis)advantages of rebates versus other promotions, and what is the relative effectiveness of rebates versus other promotions?
14.4 Rebate Proneness

There is a large body of literature examining coupon usage and demographic variables such as age and gender of users. The coupon literature has found no clear association between age and coupon use (Lichtenstein and Burton, 1997, Cronovich et al., 1997, Lichtenstein et al., 1995). Equally, previous rebate research has found no association between rebate use and age (McCall et al., 2009). In Study 1, however, this thesis found a relationship between age and rebate redemption, with the older demographics (aged 51+) being more likely to redeem.

The McCall et al. (2009) finding of no association between rebate use and gender was not supported by this research. This thesis found an association between gender and rebate redemption with males being more likely to redeem rebates than females. This supports previous research, which suggests women are more likely to utilise coupons and men rebates (Harmon and Hill, 2003, Hill and Harmon, 2009, Kyoung-Nan and Yoo Jin, 2007, Lichtenstein et al., 1995).

Whilst this thesis has revealed an association between redemption behaviour and demographics (i.e., older males) the results should be interpreted with caution. The manufacturer of the product used in Study 3 (a household durable) suggested the target market for their product was males over 40 years of age. This is not to say a relationship between demographics and rebate redemption does not exist, only that in this dataset the nature of the relationship appears contingent on the type of product contained in the offer.

Previous research (McCall et al., 2009) has examined rebate proneness and found it to be significantly related to the number of products purchased in rebate promotions in the prior 12 months. This research supports this finding. Where previous rebate experience is an effect in the choice between promotions, it is related to a preference for rebate promotions.

14.4.1 The Rebate Independent Consumer

Khouja et al. (2008b) suggest that rebate independent (RI) consumers are unaffected by a rebate promotion and do not redeem. The presence of a rebate has no effect on their decision to purchase. They would purchase irrespective of a rebate being present or not, and they do not intend to redeem.

In Study 3, 60% of those that redeemed said the rebate had ‘no influence’ on their decision to purchase, yet they made the effort to complete a claim. The percentage rises
to 79% with the inclusion of the group who reported the rebate was ‘somewhat influential’ in their decision to purchase. This research highlights a possible subset of the rebate independent (RI) consumers identified by Khouja et al. (2008b). This subset of consumers can be thought of as ‘Opportunists’. They redeem the rebate simply because it is available.

From a promoter’s standpoint, the ‘Opportunist’ is an undesirable element of a rebate promotion. Because they make a purchase irrespective of the rebate promotion, they do not represent additional sales. Yet they cost the promoter profit margin by way of the rebate payment. That is, a rebate payment is made without achieving an incremental purchase.

In a perfect world, promoters could monitor redemptions by opportunistic redeemers in order to minimise their impact on profitability (i.e., reduce their redemption rate). This type of analysis would be useful when comparing different types of rebate promotions, e.g. comparing bonus product rebates versus cash backs. Equally, altering aspects of the rebate promotion, such as ‘time taken to pay the rebate’, may influence the ‘Opportunist’ in a different way to other consumers.

Most firms, however, probably do not have a sufficient level of detail within their redemption data to make a distinction between the ‘types’ of redeemers. For one thing, it is difficult to determine why a consumer redeems the rebate. It should nevertheless be possible to estimate if ‘Opportunists’ are over represented in the redemption data. For example, firms could begin by estimating the level of incremental sales attributable to the rebate promotion. If the number of redemptions received for the promotion is greater than the incremental sales generated, it may indicate a preponderance of opportunistic redeemers.

14.5 **Prospect Theory and Rebate Promotions**

Prospect Theory asserts that gains and losses from a transaction like rebates, are defined relative to a given reference point. Furthermore, differences in how individuals ‘perceive’ a problem have a significant impact on the reference point chosen. This ‘perception’ can be influenced by how the problem is framed. For example, separating outcomes into their risky and riskless components, or, by labelling the outcomes in either positive or negative terms (Tversky and Kahneman, 1986).
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Thaler’s (1985) ‘Mental Accounting’ framework extends Prospect Theory to suggest that when evaluating a transaction, gains and losses can be valued together or separately. Where a promotion is framed as a gain, its benefit will be evaluated separately from the original purchase price. On the other hand, where a promotion is framed as a loss it will be seen as merely reducing the initial purchase price.

Thaler (1985) proposes that individuals create a separate "mental account" for the rebate payment thereby separating it from the initial sale. In comparison, a point of sale (POS) discount is seen as a reduced loss, rather than a separate gain. As such, a rebate discount is viewed as a gain, producing more ‘value’ than an equally sized POS discount.

Whilst Thaler’s (1985) Mental Accounting framework is largely theoretical, subsequent research (Mayer, 1995) has found support for the preference of rebate versus discount offers. This research, however, was not a comparison of similar promotions. Furthermore, there is some question as to the equivalence of the scales used to compare the rebate and discount promotions.

Significantly, there has been no research directly comparing POS and rebate retail promotions. Study 4 presented fourteen POS versus rebate promotion comparisons, where the dollar discounts were equal. This study does not support the Thaler (1985) ‘Mental Accounting’ framework. Rebate promotions were not preferred to an equally valued discount promotion. In all fourteen comparisons, the discount was preferred to the rebate promotion.

This result has important implications for Prospect Theory and Thaler’s (1985) Mental Accounting framework. Thaler’s (1985) Mental Accounting framework proposes that the financial loss incurred when making a purchase can be reduced by the gain associated with receiving a promotional discount. Alternatively, in certain circumstances, the discount is viewed as a separate ‘transaction’ and as such it is evaluated as a benefit in and of itself, a ‘Silver Lining’ to the loss.

Thaler (1985) cites rebate promotions as the quintessential example of the ‘Silver Lining’ principle. In particular, the case where the rebate face value is small relative to purchase price. Importantly, this effect is predicted to strengthen as this relative differential increases.

Sovern (2006) extends the argument to suggest that by the time the consumer comes to complete the redemption process, the rebate appears more as a gain than as a reduction
An Analysis of Buyer Behaviour in Response to Rebate Promotions

of the loss associated with the initial purchase. Similarly, Folkes and Wheat (1995) found that consumers separate the rebate saving from the purchase resulting in higher price perceptions at the point of purchase. The loss and the gain were effectively segregated. Jarnebrant et al. (2009) conducted two surveys, both of which showed support for the existence of a silver lining effect. Respondents preferred the choices where the small gain was separate from the larger loss.

The results of this thesis do not support the existence of the ‘Silver Lining’ principle as an effect in the preference between POS and rebate promotions. At low levels of savings where the rebate promotion should be preferred, respondents defy the predictions of Prospect Theory and opt for the POS discount. In Studies 4 and 5, this thesis finds that as the rebate face value increases as a percentage of the purchase price, the preference for the rebate offer strengthens. Using the vernacular of Prospect Theory – this suggests that at a fundamental level consumers treat both POS discount and rebate promotions as a loss reduction. That is, consumers interpret both promotions types as reducing the purchase price, and they choose the promotion that offers the largest saving. This is contrary to Thaler’s (1985) assertion that rebates would be viewed as a gain separate to the purchase.

14.6 PROSPECT THEORY AND RISK

Prospect Theory arose from the observation that choices made in the presence of risk were not always as predicted by expected utility theory. In the main where a problem has been framed as a set of risky choices with a given probability, the predictions of Prospect Theory have been supported (Levin et al., 1998).

The risk of not receiving a POS discount is low – almost zero. When a purchase is made the discount is received. For rebates, however, at the point of purchase the discount is far from guaranteed. Notwithstanding the risk of non-redemption, previous research (Gilpatric, 2009, Soman, 1998) has shown that the rebate saving is clear, salient, and unambiguous at the time of purchase, and integrated easily into the purchase price. Similarly, industry reports suggest that rebate promotions are no less acceptable to consumers than other forms of promotion (Arar, 2007).

This thesis supports the existing literature with the finding that when evaluating offers consumers do not perceive the likelihood of receiving the rebate discount as any less certain than the POS discount. If previous non-redemption behaviour increases the non-redemption risk attributed to rebate promotions, one would expect consumers with
An Analysis of Buyer Behaviour in Response to Rebate Promotions

previous rebate experience to be less likely to prefer a rebate promotion. This thesis instead finds that where previous rebate experience was an effect, it was associated with a pro-rebate decision. This would not be the case if claiming the rebate discount was viewed as more risky than a POS discount. This finding is consistent with previous research that observed that consumers are not dissuaded from rebate programs even when they fail to complete the transaction by neglecting to apply for the rebate (Zeithaml, 1988).

Therefore, the choice between a POS discount and a rebate promotion is not viewed as a choice between risky outcomes. This finding explains why the predictions of Prospect Theory, with respect to rebate promotions, do not hold true. It also supports previous research (Levin et al., 1998) showing that where a decision does not involve a choice between two risky options with a given probability, the predictions of Prospect Theory are less reliable. Finally, contrary to Thaler’s (1985) Mental Accounting framework, a rebate’s discount does not appear to be evaluated as a gain separate from the purchase, but rather as a loss reduction.

14.7 CONSTRUAL LEVEL THEORY AND REBATE PROMOTIONS

The predictions of Construal Level Theory (CLT) suggest that consumers will choose the promotion which best fits their super-ordinate goal (Trope and Liberman, 2000). This thesis presented a choice between two offers, with a goal of savings maximisation. Where the two offers (POS versus rebate) presented an equal dollar discount, CLT posits that consumers will choose the offer with the least amount of effort (i.e., the POS discount).

Whilst there are no studies empirically testing this position, there is anecdotal support in the literature. Previous research (NPD, 2005) found that the most commonly cited reason for dissatisfaction with rebate programs was "prefer instant cash", followed by "too much work for the money". Tat and Lee (1993) found rebate users feel there is too much time and effort required in the redemption process. Tat and Schwepker Jr (1998) found that the less time and effort involved in redemption the more likely an individual is to redeem.

Study 4 is the first research directly comparing POS and rebate retail promotions with equal dollar discounts. The research supports the predictions of CLT. Specifically, this study finds that when consumers are presented with the choice between POS and Rebate promotions with equal benefit, the vast majority of consumers prefer the POS
promotion. This finding is irrespective of product knowledge, price knowledge, demographic or socio-economic variables.

When the rebate promotion offers a greater saving than the POS offer, the consumer faces a longer timeframe to receive their rebate discount versus the immediate POS discount. Construal Level Theory contends that people use increasingly higher levels of construals to represent an object as the psychological distance from the object increases (Trope and Liberman, 2010). From a temporal distant perspective, consumers find it more useful to make the comparison between promotions in terms of the higher-level goal rather than the lower-level actions.

It follows that given the longer-term nature of the rebate redemption timeframe, consumers ignore the specifics of the redemption process (i.e., the redemption requirements) and focus instead on how much they will save. As such, one would expect them to choose a larger rebate promotion with a future payment over the smaller POS promotion with an immediate discount.

Roehm and Roehm (2010) instead argue that in the case of incentives received at or soon after purchase, incentives with a higher face value will be more appealing in the near term than those with lower face values. Alternatively, face value will carry less importance for incentives with a long redemption period, such as rebate promotions.

This thesis finds that incentive face value is important in both the near and longer term. When the saving offered in the promotions was equal (i.e., POS saving was equal to the rebate saving) consumers have a stronger preference for the POS discount where the saving is received in the shortest timeframe. When the rebate saving exceeds the POS saving, respondents exhibit a preference for the rebate promotion, even though the discount would be received in the future.

This research provides evidence that respondents who chose the rebate offer were attempting to maximise their savings. When comparing the POS discount and Rebate promotions respondents who preferred the rebate offer judged the rebate saving to be higher than those who preferred the POS offer. This change in preference from POS to rebate becomes more pronounced as the savings gap between promotion types widens.

Importantly, the discount difference required to produce a switch in preferences from a POS to a rebate promotion is not large. When the advertised offers differed by only 10%, (POS = 10% vs. Rebate = 20%) respondents were 32 to 37 times more likely to
choose the rebate promotion. At a difference of 20% (POS = 10% vs. Rebate = 30%) consumers were 50 to 75 times more likely. The discount values of 10% and 20% are noteworthy for another reason, they have a basis in real world promotions. The market survey undertaken in Study 1 revealed a mean promotion saving of 15.54%.

14.8 Managerial Implications of Rebate Theory

The managerial implications of these findings are significant, particularly when one remembers a promotion for Brand A is often evaluated with reference to other product promotions. For example, during the Christmas sales period multiple products are on promotion at the same time.

Firstly, consumers are aware of the extra work required in obtaining the discount associated with a rebate promotion. Furthermore, when a similar rebate discount is compared to a no hassles POS discount they will choose the POS discount.

When faced with a competitor’s rebate promotion, managers may be tempted to match it with an equal, or higher, rebate promotion of their own. In Study 1, 30% of rebate promotions offered a ‘low’ promotion benefit of less than 10%. In combating rebate promotions with ‘low’ rebate values, rather than countering with a rebate promotion a better strategy may be to offer an equal or lower POS discount. This is particularly so if the competing products are substitutes, or, have low product loyalty.

Secondly, whilst respondents appear to consider rebate promotions a riskless option, this is not the case in practice, as non-redemption still occurs. Therefore, where a larger discount is desirable, Managers are advised to ensure their rebate discounts are at least 20% greater than the competition’s POS discounts. In this way, their promotions will be more successful in switching consumers, with ‘natural’ breakage rates acting to reduce costs.

14.9 Suggestions for Future Research on Rebate Theory

The examinations of Prospect Theory and Construal Level Theory in this thesis utilised one type of comparison price, that is, regular price. It is unclear whether similar results would be obtained with other types of reference prices (e.g. competitors’ prices). Additional research could also investigate whether the results obtained here are replicated by varying the type of promotions used for comparison, e.g. rebate vs. coupon promotions.
This research has shown that the value of the rebate is an important consideration. In Study 5, the Advertised Reference Price (ARP) was held constant between the POS and rebate offers to allow comparisons between groups. Comparing promotions with different rebate dollar discounts, advertised retail prices, and saving presentation formats (e.g. percentage discounts) will undoubtedly advance our understanding.

The discount levels 40% and 50% added little to the findings that wasn’t present at the 30% level. Future research might look at using additional discount levels between 10% and 30%, to better define the point at which the rebate offer becomes more attractive.

Whilst not addressed in this thesis, there is a need for research that involves examining whether the degree of credibility of the regular and advertised price effects the believability of the overall price offer and therefore the preference between offers.

Finally, this study would have benefited from process measures to provide insight into consumers’ thought processes.

14.10 Types of Rebate Promotions

It has been argued that people have difficulty comparing offers expressed in different units. Specifically, that offers presented in terms of bonus products will be judged more favourably than POS discounts (Campbell and Diamond, 1990, Diamond and Johnson, 1990). Whilst this study supports the proposition that consumers can differentiate between monetary and nonmonetary promotions, the results do not suggest product promotions are preferred to discount offers.

This research found that there is a negative relationship between choosing a rebate promotion when the rebate was presented as a Bonus product. Said another way, it appears that given the choice between POS discount and a bonus product rebate consumers prefer the POS discount. Interestingly this relationship holds across all discount levels.

This is consistent with previous studies that found at high discount values the cognitive complexity of processing bonus product offers can cause miscomprehension and scepticism, leading to lower deal evaluations (Hardesty and Bearden, 2003). Similarly, Krishna et al. (2002) found consumers generally preferred discount promotions for higher priced items and bonus products for lower priced items.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

14.10.1 Managerial Implications and Future Research

Whilst it is acknowledged that on balance bonus products were not preferred to discounts, they have a significant additional benefit. Their perceived value is higher, sometimes substantially, than their cost. This is particularly pertinent where the bonus product is also made by the promoter, e.g. bonus ink cartridges with a printer. On the other hand discounts, and cash back rebates, are paid in cash (or cash equivalents) where the cost to the promoter is equal to the value perceived by the consumer.

The type of product selected for the rebate offer may have an effect on promotion preference. Specifically, whilst the bonus product used in this thesis (Blu-ray movies) was complementary to the main product (Blu-ray player) they were not a compulsory purchase. Blu-ray and DVD players of today do more than simply play movies: they stream online content, act as media servers, and facilitate internet access. As such, it is possible that product rebate promotions would be more attractive if the bonus product were essential to the primary function of using the main product. For example, in the case of a washing machine, washing powder is an ongoing requirement. For a dishwasher, it is detergent. Future research using rebate promotion offering ‘compulsory’ complimentary bonus products may produce different results than found in this study.

14.11 Price Framing in Rebate Promotions

Previous research (Chandrashekaran, 2004) on the format of price presentation in advertisements, found most (73%) presented the offer as a combination of the advertised discount and the normal shelf price. Research into rebate pricing formats (Hyeong Min, 2006) found that most (80%) rebate adverts included a combination of the normal shelf price, the rebate, and the after rebate price. This thesis finds that it in Australia it is more common for rebate promotions to display the rebate value only, without a normal shelf price or an after discount advertised price.

The importance of framing rebate pricing is best summarised by Hyeong Min (2006, pp. 309)), “…little research has examined the possible impact of price presentation formats on consumers’ evaluation of rebate offers”. Chandrashekaran (2004), for example, found contextual cues such as ARPs in POS offers positively influence offer evaluations. This thesis supports the influence of ARP on offer evaluations. Presenting the offer as a combination of an ARP, the rebate, and an after rebate price resulted in a higher preference for the rebate offer.
An Analysis of Buyer Behaviour in Response to Rebate Promotions

It is therefore curious that the industry audit in Chapter 3 found that so many rebate promotions do not include an ARP. It could be that promoters did not want to risk lowering the consumer’s reference price for their products by providing an ARP. Alternatively, perhaps promoters are trying to simplify their adverts by excluding price information. Whilst the combination format is the most effective, it presents three pieces of pricing information and is arguably the most cluttered in terms of the advertisement artwork layout. In comparison, the rebate only layout is the least cluttered, displaying only a single piece of price information.

It would appear the answer lies in the perceived saving measure. Although the combination and after rebate formats provide equivalent information, the combination format was perceived as offering a significantly larger saving. Even the rebate only format, which carries no price information, had a higher perceived saving than the after rebate format. It appears then, that respondents did not do the mental arithmetic required to compute the regular price in order to make an effective evaluation of the offer. If they did then the after rebate format would be equivalent to the more popular combination format, and presumably would have received a similar rating.

14.11.1 Managerial Implications

The managerial implications of this study suggest, at the very least, that promoters should avoid using the after rebate format in their advertisements. Whilst the rebate only advert format produced a higher rebate preference and perceived saving than the after rebate format, the results in this thesis indicate that it does not produce the best results.

It is the combination format that yields the best results in terms of perceived savings and produces the highest preference for the rebate offer. The application of this finding lies in attracting the uninformed consumer, who without an advertised price has no reference by which to judge the rebate offer.
POST SCRIPTUM

In the words of physicist John Archibald Wheeler:

“We live on an island surrounded by a sea of ignorance. As our island of knowledge grows, so does the shore of our ignorance.”

It is hoped that this thesis has, in some small way, contributed to expanding the reader’s island of rebate promotion knowledge.
Chapter 15. REFERENCES

An Analysis of Buyer Behaviour in Response to Rebate Promotions


An Analysis of Buyer Behaviour in Response to Rebate Promotions


An Analysis of Buyer Behaviour in Response to Rebate Promotions


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212
An Analysis of Buyer Behaviour in Response to Rebate Promotions


An Analysis of Buyer Behaviour in Response to Rebate Promotions


An Analysis of Buyer Behaviour in Response to Rebate Promotions


An Analysis of Buyer Behaviour in Response to Rebate Promotions


TONN, R. 2010. Be a savvy rebate card user. (c) 2010 Dolan Media, all Rights Reserved.
An Analysis of Buyer Behaviour in Response to Rebate Promotions


# Appendix 1. STUDY 2 BIBD MATRIX

## Study 2: BIBD Matrix

<table>
<thead>
<tr>
<th>Category</th>
<th>Condition</th>
<th>Card Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity</strong></td>
<td></td>
<td>1    2</td>
</tr>
<tr>
<td>Provide a Copy Receipt</td>
<td>(include a copy of the purchase receipt with the redemption form)</td>
<td>x   x</td>
</tr>
<tr>
<td>Redeem Online Then Mail</td>
<td>(complete the redemption application online, then print and mail a copy to the manufacturer)</td>
<td>x   x</td>
</tr>
<tr>
<td>Pre-Register Redemption</td>
<td>(Visit manufacturers website within 14 days of purchase and registering details of purchase. The manufacturer will then send you an email confirming registration and provide a unique code. You then return to the website and redeem your cashback using the unique code, within 14 days. You then print and mail the redemption application to the manufacturer within 14 days.)</td>
<td>x   x</td>
</tr>
<tr>
<td>Sample Packaging</td>
<td></td>
<td>x   x</td>
</tr>
<tr>
<td>Serial Number</td>
<td>(provide the serial number of purchased product)</td>
<td>x   x</td>
</tr>
<tr>
<td>Complete Redemption Form</td>
<td>(complete a redemption form either manually or online)</td>
<td>x   x</td>
</tr>
<tr>
<td>Provide Purchase Date</td>
<td>(enter the date the product was purchased on the redemption form)</td>
<td>x   x</td>
</tr>
<tr>
<td>Provide Store Location</td>
<td>(enter the store location where the product was purchased on the redemption form)</td>
<td>x   x</td>
</tr>
<tr>
<td>Provide Store Name</td>
<td>(enter the store name where the product was purchased on the redemption form)</td>
<td>x   x</td>
</tr>
<tr>
<td>Receive EFT Card</td>
<td>(Your cashback is paid using an EFTPOS card. You must call the provider to activate the card before it can be used. The card expires after 6 months and any unused credit is lost)</td>
<td>x   x</td>
</tr>
<tr>
<td>Pay Freight on Bonus Products</td>
<td>(Your rebate is a bonus product, e.g. free washing powder, which must be shipped from the manufacturer. You are required to pay the freight to ship the bonus product.)</td>
<td>x   x</td>
</tr>
<tr>
<td>Provide Bank Account Details</td>
<td>(You cashback is paid via direct transfer. You are required to submit your bank account details on the redemption form)</td>
<td>x   x</td>
</tr>
</tbody>
</table>
Appendix 2. Study 4 Survey Instructions

Study 4: Instructions to Respondents

‘Cash-back’, or ‘Rebate’, promotions require you to pay the full price of the product at the checkout, and then to claim a discount from the manufacturer when you get home. This is different to ‘Price-off’ or 'Discount' promotions where the product shelf price is lowered and you pay a reduced price at the checkout.

In the next section of the survey you will be shown 8 product adverts which contain both a Discount & Cash-back offer. We are interested in your opinion of the offers, in particular which of the two offers you find most attractive. Comparing artwork is not important, it is the content of the promotion that is important, e.g. in your view which represents the best deal?

For each of the 8 adverts presented please imagine that you have been keen to buy the product displayed for some time. Imagine, for instance, you have been waiting to see it on promotion and happen to see the advert in your local paper.
**Appendix 3. STUDY 4 SURVEY MEASURES**

**Study 4: Survey Measures**

Q1. In your view which of the above promotions offers the best deal?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q2. How would you rate the saving presented in the above Cash Back Offer?

<table>
<thead>
<tr>
<th>Size of Cash Back Savings</th>
<th>Very Small</th>
<th>Small</th>
<th>Somewhat Small</th>
<th>Neutral</th>
<th>Somewhat Large</th>
<th>Large</th>
<th>Very Large</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
An Analysis of Buyer Behaviour in Response to Rebate Promotions

Q3. Based on the offer you selected above, how likely would you be to purchase the product advertised?

<table>
<thead>
<tr>
<th>Likelihood of Purchase</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Somewhat Unlikely</th>
<th>Neutral</th>
<th>Somewhat Likely</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q4. Compared to the average consumer, how would you rate your 'general' knowledge/awareness of laptop prices?

<table>
<thead>
<tr>
<th>Knowledge of Product Price</th>
<th>Much Worse</th>
<th>Worse</th>
<th>Somewhat Worse</th>
<th>Neutral</th>
<th>Somewhat Better</th>
<th>Better</th>
<th>Much Better</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Appendix 4. STUDY 4 RESPONDENT SCREENING

Respondent Screening

“Have you recently purchased (within the last 12 months), or, are you intending to purchase, any of the following products? Please provide an answer for each line.”

<table>
<thead>
<tr>
<th></th>
<th>Have Recently Purchased</th>
<th>Planning to Purchase Soon</th>
<th>No Interest in Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablet</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Video Camera</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Desktop Computer</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Television</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Game Console</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>DVD/Blu-Ray Player</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Computer Software</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Laptop Computer</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Universal Remote Control</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Personal GPS</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Media Player</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Home Theatre System</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Modem/Router</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Personal Printer</td>
<td>□</td>
<td>□</td>
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</tbody>
</table>
### Appendix 5. STUDY 4 CHI-SQUARE TEST RESULTS

**Chi-Square test of Deal Preference Group and Rebate Experience**

<table>
<thead>
<tr>
<th>Recent Rebate Experience</th>
<th>POS Discount</th>
<th>Neutral</th>
<th>Rebate Offer</th>
<th>Total</th>
<th>$\chi^2(2)$</th>
<th>$p$</th>
<th>Cramer’s V</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE1</td>
<td>No</td>
<td>370</td>
<td>27</td>
<td>12</td>
<td>409</td>
<td>9.237*</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>123</td>
<td>8</td>
<td>13</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>493</td>
<td>35</td>
<td>25</td>
<td>553</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE2</td>
<td>No</td>
<td>356</td>
<td>46</td>
<td>8</td>
<td>410</td>
<td>5.088</td>
<td>0.079</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>119</td>
<td>15</td>
<td>8</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>475</td>
<td>61</td>
<td>16</td>
<td>552</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE3</td>
<td>No</td>
<td>342</td>
<td>35</td>
<td>26</td>
<td>403</td>
<td>1.229</td>
<td>0.541</td>
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<tr>
<td></td>
<td>Yes</td>
<td>120</td>
<td>8</td>
<td>10</td>
<td>138</td>
<td></td>
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<td></td>
<td>Total</td>
<td>462</td>
<td>43</td>
<td>36</td>
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<td></td>
<td></td>
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<tr>
<td>CE4</td>
<td>No</td>
<td>320</td>
<td>66</td>
<td>22</td>
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### Appendix 6. Study 5 Sample Characteristics

#### Study 5 - Sample Characteristics

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<td>50.8%</td>
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<td>Household Income</td>
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<td>10.61%</td>
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<td>Recent Promotion Experience</td>
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<td>Bonus Product Promotion</td>
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An Analysis of Buyer Behaviour in Response to Rebate Promotions

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**Age Groups** (ASC, 2010)

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<th>Number</th>
<th>Percentage</th>
<th>Rebate Participation Rate</th>
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<tr>
<td>21-29 Years Old</td>
<td>342</td>
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<td>18.93%</td>
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<td>30-39 Years Old</td>
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<td>17.80%</td>
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<td>40-49 Years Old</td>
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<td>19.34%</td>
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<td>50-59 Years Old</td>
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<td>18.61%</td>
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<td>60 years or older</td>
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**Relationship Status** (ACS, 2012)

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<th>Rebate Participation Rate</th>
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<tbody>
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<td>Married</td>
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<td>42.5%</td>
<td>48.28%</td>
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<td>Single</td>
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<td>Divorced</td>
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**Employment Status** (BLS, 2014)

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<td>Employed on a casual basis</td>
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<td>Retired</td>
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<td>Carer or stay at home parent</td>
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### Appendix 7. Study 5 Rebate Saving Measure

#### Treatment 1 (Laptop)

**Descriptive Statistics**

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**Mann-Whitney Test Results**

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An Analysis of Buyer Behaviour in Response to Rebate Promotions

Treatment 2 (Printer)

Descriptive Statistics

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Mann-Whitney Test Results

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