The Effect of Framing on Loyalty Points Redemption

by

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ABSTRACT

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This research was conducted to understand the effect of framing on loyalty program (LP) points redemption. Specifically, this study investigated whether the frame of a promotional message (gain frame or loss frame) had an impact on the customer’s likelihood to redeem their reward points. This study also asked the question whether attribute framing affects consumers’ purchase choice. This study’s final question was whether LP customers consider the worth of points offered the same as those points’ equivalent dollar value. The results showed that loss framed message’s effect on participant’s likelihood to redeem was marginally more significant than that of the gain framed message. The study also found that when customers were presented with promotional offers of equal financial benefit, they did not show a significant preference towards either earning (gaining) or redeeming (losing) miles. Finally, the study also found that LP customers did not consider the worth of their loyalty points to be same as equivalent dollar value of those points. The findings have important implications for loyalty marketing managers as they suggest tactics that can be used to enhance redemption in existing LPs.
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1 Introduction

Loyalty programs (LP) have been a tool in the marketing manager’s chest to retain customers. Generally, the airline industry, and particularly American airlines is credited with the introduction of a loyalty program (McCall & Voorhees, 2010). Several academics have written about the disadvantages of blindly trusting loyalty programs to rake in repeat customers (Lisa O’Malley, 1998; Nunes & Drèze, 2006) however, creation of different types of loyalty programs is on the rise. There was a 26% increase in loyalty program members between 2012 and 2014 in the US, whereas, there was an 8% growth in the memberships in the same time period in Canada (Berry, 2015). With the advent of technology, more retailers are stepping up the efforts of not only retaining customers but also to extract and profile customer data gathered from those loyalty programs. Ubiquity of these LPs is the top trend in the 21st century predicted by Capizzi and Ferguson (2005).

There has been much discussion in the literature on the points issuance side of the business and how companies can get customers to participate and earn more points. The customer side or the redemption side is not as thoroughly studied. Companies can increase points redemption by offering incentives for people to redeem. For example, if an LP routinely offers a $10 reward for customers redeeming 100 points, it can offer $15 for redeeming 100 points a promotional redemption offer. However, this approach requires financial investment on the LPs part. The risk with financial investment is that it may not pay the returns and can, in fact, end up costing the LP in the long run. It can be beneficial to find an organic way for companies to get customers to redeem their points without using expensive promotional offers or adopting policies like mandatory points expiry (Harris, 2016).
This paper reviews the existing literature on LPs, their effectiveness, their profitability, and LP redemption behavior. The review of LP literature shows that even though there has been some research on LP effectiveness and profitability, little work has been done on LP redemption. Existing research on LP redemption primarily focuses on customers’ motivation to redeem and how it affects their purchase behavior. There exists a gap in literature that looks are promotional activities and their effect on LP redemption. A review of current industry practice of LP promotional messaging reveals a trend that most promotional messages use a standard headline that states the gains customers can receive if they redeem a certain number of points. For example, “Get $15 when you redeem 1,000 points”. There is an opportunity to use the messaging itself to drive desired behavior. Such persuasive messaging has been studied in the literature under the framing effect. This paper then reviews the literature on framing effect and its predecessor, prospect theory. Prospect theory dictates that, in decision making, losses loom larger and people are risk averse. Framing effect builds on the loss aversion principle and posits that people’s decision can be manipulated by presenting the choice in a gain or a loss frame.

Existing literature on framing reveals that two primary types of framing effects used in persuasive messaging are attribute framing and goal framing. Attribute framing alters an attribute of a singular choice in order to manipulate people decision making. People tend to prefer positive attributes. For example, people preferred beef labeled 75% lean to the beef labelled 25% fat (Levin & Gaeth, 1988). Goal framing, on the other hand, presents the same information as a gain or a loss. For example, more people used the credit card when they were told about the losses of not using the card compared to when they were told about the benefits of using the card (Ganzach & Karsahi, 1995). Review papers and meta-analyses of goal framing show that most people respond more to a loss framed message than a gain framed message. Most research in framing has been
conducted in the social health messaging areas like smoking cessation (Schneider et al., 2001), breast self-examination (Meyerowitz & Shelley, 1987), motivation for HIV testing (Apanovitch, McCarthy, & Salovey, 2003). A research gap was identified that persuasive messaging research has not been applied to LP promotions.

The effectiveness of loss framed messaging over gain framed messaging in social health messaging is well documented. An LP promotional message can be presented as gain framed message where the benefits of using the offer can be listed. It can also be presented as a loss frame where the losses of benefits in case of non-redeemption can be highlighted. Based on existing literature it was hypothesized that customers that receive the loss framed message will be more likely to redeem the offer compared to those that receive the gain framed message.

Attribute framing can also be used to manipulate customers choice as an LP promotion usually comprises of two attributes: (a) a dollar discount, (b) a chance to earn or redeem points. If the combined value of promotion is kept the same, the points attribute can be manipulated as: (a) opportunity to earn (gain) points or (b) opportunity to redeem (lose) points. Based on people’s preference of positive attributes in existing literature, I hypothesize that if the overall financial value of a promotional offer remains the same, people will prefer to earn points than to redeem points.

Smith and Sparks (2009) claim that people who redeem their points are familiar with the LP’s points structure and understand the dollar value of their points. The LP industry also advertises their points conversation rates frequently to their customers so people understand their points’ worth and consider the points similar to currency. I hypothesize that customers value their points and the equivalent dollar discount equally.
These hypotheses were test by conducted a field study in a large pharmacy retailer that offer LP points. The study was approved by the Research Ethics Board at University of Guelph- REB # 18-02-024. Customers were intercepted and were presented the survey on an iPad. Only customers that were LP members and had redeemed their points in the past were allowed to take the survey. The survey was about 10 minutes long and the participants were rewards with a $5 Tim Hortons card.

The results were analysed using SAS and SPSS software. Hypothesis 1 was marginally supported. Loss framed message was marginally more effective in persuading people to redeem the offer than the gain framed message. Hypothesis 2 was not supported. Even though the preference of people to purchase the product with a points earning offer was higher than the product with a points redemption offer, the difference was not statistically significant. Hypothesis 3 was not supported. Participants were not found to value the dollar discount and equivalent points, equally. Participants were found to value dollar discount much more than equivalent points.

2 Literature Review

The purpose of this literature review is to examine the existing body of literature on LPs, with a focus on redemption aspect of LPs. This section will begin with the history of LPs and their importance in the profitability of business today, followed by the literature on LP points redemption, framed messaging in marketing, and finally a discussion on the prospect of framing as a persuasion mechanism.
2.1 History of Loyalty Programs

2.1.1 Creation of the modern Loyalty Program

The birth of consumer loyalty program is credited to the frequent flyer program created by American Airlines’ AAdvantage program. The program was launched on May 1, 1981 (Airlines, 2017) and become one of the largest airline loyalty programs in the world. During 2016, AAdvantage members redeemed approximately 10 million rewards and approximately 6.3% of passenger miles flown in 2016 were flown on points (American Airlines, 2016). It was the first mileage-based frequent flyer program in history (Beiske, 2007). The program was created to provide an incentive to its customers to stay loyal to American Airlines in a competitive landscape. The business model was relatively simple. Flyers were awarded miles based on the distance they flew. These miles were converted to a dollar value by the airline a proprietary rate and the flyers were able to redeem the miles for economic rewards (cheaper flights, discounts on partner hotels) or non-economic rewards (upgrades to a higher class, membership tiers). The intention of the program was to imbue behavioral loyalty towards American Airlines. Other airlines quickly followed American Airlines’ and launched their own loyalty programs. Shortly after American’s LP launch, United Airlines introduced their Mileage Plus LP. And then Delta’s Frequent Flyer program (now rebranded to SkyMiles) was introduced a few months later (Beiske, 2007). Within two years, many premier airlines in the world had either launched their own LP or partnered with existing airline LPs. At this point hotels started to come on board with their own LPs. In 1983, Holiday Inn’s Priority Club program was launched which is considered to be the first hotel loyalty program (Beiske, 2007; Holiday Inn, 2017). The prevalent LPs in the early 1990s belonged to the industries where dollars spent by customers per transaction was high (airlines and hotels), hence,
fewer people owned LP memberships. For the LP to be ubiquitous and to be used by peoples at a much larger scale, the retail industry had to participate in the LP arena as the customer base is much larger compared to that of airlines or hospitality industry.

2.2 Retail Loyalty Programs

LPs like coupons and stamps had existed in retail for a long time but card-based LPs came into the retail industry in the early to mid 1990s. With the advancement in technology, Tesco launched its card-based loyalty program in 1995 called Clubcard. The value proposition of the program was similar to that of airline and hotel loyalty programs. Customers would earn points as they shopped and could redeem points for economic rewards. Berman (2006) has identified four broad types of retail LPs: (a) discount cards that rely on direct cash rebate to customers to generate repeat purchase, (b) ‘get 1 unit free when you buy X units’ type of programs incentivize customers to make extra trips to the retailer, (c) mailing lists that rely on physical or electronic mailing of promotional coupons to persuade customers to visit the retailer, and (d) points-based LPs that issue collectible points in return for purchases which, in turn, can be redeemed later for rewards. Points-based LPs “are able to offer individual members specialized communications, promotions, and rewards based on their purchase history” (Berman, 2006, p. 126). The points- based LPs are more attractive to customers since they give them rewards as well personalized promotions. This review will further look at points-based LPs in the retail industry and examine the program structure.

The points-based LPs in the retail industry can broadly divided into two types. First, there are individual retailers that own and operate their own loyalty program which is branded with their own store branding. These stores control the issuance of points, redemption of rewards and
maintain the customer database. These rewards could be referred to as store loyalty programs. Examples of such programs include Tesco’s Clubcard, CVS’s Extracare, Shopper’s Drug Mart’s Optimum Rewards etc.

The second type of loyalty program prevalent in the retail market is called a coalition LP. Some examples of such programs are Airmiles and Aeroplan. “The coalition model of loyalty – three or more companies banding together to share the branding, operational costs, marketing expense and data ownership of a common loyalty currency” (Capizzi & Ferguson, 2005, p. 75). The value proposition for firms is a reduction in entry costs. Smaller firms that cannot afford the initial capital cost of establishing an LP can partner with a coalition program and benefit from the customer base, reward bank, and data analytics of the coalition LP. Customers can also benefit from this arrangement as it provides them with opportunity to collecting points at various categories of retailers. Rese, Hundertmark, Schimmelpfennig, and Schons (2013) have studied the effectiveness of both types of LPs in retaining customers. The authors conducted a field survey with customers at both individual retailer LP \( (n = 204) \) and coalition LP \( (n = 197) \). The findings indicate a positive effect of a coalition LP on new customer acquisition compared to individual retailer LP \( (p < 0.01) \). Given the benefits of coalition LPs over individual LPs, they are becoming more prominent and are predicted to increase in number over time (Capizzi & Ferguson, 2005).

2.3 Effectiveness of Retail LPs

The direct financial impact of LPs on firm’s performance is well examined in the literature. Lee, Capella, Taylor, Luo, and Gabler (2014) conducted an extensive study that included 36 hotel brands, 31 loyalty programs, and 435 hotel properties. They based their study upon Social Exchange Theory (SET). The authors posited that since the hospitality business is highly driven
by customer service, SET is particularly applicable in this industry. SET’s premise is that when customers are provided with a choice, they undergo a subjective cost-benefit analysis to weigh alternatives before deciding. The authors analyzed the occupancy data for these hotels over a period of three years. With occupancy rate as the DV, the authors regressed variables such as loyalty expense per room (loyalty program and affiliation fees), sales and marketing expense, and number of units available. The results found that that Loyalty expense per room had a positive impact ($\beta = .00004, p = .009$) on the hotel occupancy rate. The authors also found positive but marginally significant impact ($\beta = .025, p = .075$) of loyalty spending relative to other marketing expense spending (such as advertising and promotions) on occupancy rate. In other words, hotels are better off spending a dollar on their loyalty program rather than advertising and promotions.

Singh, Jain, and Krishnan (2008) used a game-theoretic framework to investigate LPs that provide financial reward (percentage or dollar discount over marked price). The authors considered LP as the retailer’s value proposition as opposed to a competitor who offer lower prices (examples could be Loblaws [a retail LP] versus Walmart [a discount retailer]). The underlying game theory principle involved in the model stipulates that, whereas, the discount retailer cannot offer low prices at all times but only in certain promotional weeks, the LP retailer can reward customers at higher prices at all times. Retailers can especially use this LP opportunity to make up for lost margin against a loss leading competitor. This can be achieved without hurting margins significantly.

The creation of attitudinal (or affective) loyalty is critical for an LP. It can reduce the customer’s response to the competitors’ promotional activity and can enhance their word-of-mouth and positive behaviors towards the firm. Attitudinal loyalty is cost effective as well over the long
run (Bijmolt & Verhoef, 2017). With the passage of time, the attitudinally loyal customer becomes marginally less expensive in terms of marketing cost. LPs not only imbue attitudinal loyalty but also help to build behavioral loyalty. Taylor & Neslin (2005) conducted a four-month long field study over two years to test the impact of a few IVs. They tested the rewarded behavior effect which proposes that households who redeem more, ultimately spend more as well. The authors measured three sales variables. Baseline sales was the customer sales level before the program began. Sales during the program were measured to determine customers’ eligibility for reward. Finally, the sales after the reward were measured to determine the rewarded-behavior effect. The results of the analysis found an average weekly sales increase of $16.07 over baseline in year 1 and $10.41 in year 2. The authors called the year 1 impact significant at $p = .106$ and the year 2 impact was significant $p = .017$ level. The effectiveness of LPs in creating customer loyalty and increasing purchase partly depends on the redemption activity. An effective LP not only increase revenue but it also has the ability of doing so at a lower cost (McCall & Voorhees, 2010) that leads to an increase in profitability of the firm.

2.4 Profitability of Retail LPs

The profit earned by the LP is the difference between the rate at which it issues points and the rate at which the rewards are redeemed by the customer. However, a profit is only realized when a reward is redeemed by the customer. Until the reward is redeemed, the points issued by either the retailer or the coalition program are accrued as liabilities on the companies’ balance sheet (Chun, Iancu, & Trichakis, 2017). Loyalty Executives agree that managing these liability costs is the top challenge presented to them (Business Wire, 2018). American Airline Group (2017) reported that its current loyalty program liability is 3.2 billion dollars. According to a 2011
Colloquy loyalty survey, approximately 16 billion dollars’ worth of retail loyalty rewards will remain unredeemed in the US (Garrido, 2011). Redemption of points by LP members not only reduces a company’s liability but it also gets customers to earn and shop more often (Dorotic, Verhoef, Fok, & Bijmolt, 2014).

Lal and Bell (2003) further qualify the profitability of LPs by stating that LPs are profitable only due to incremental sales to fringe shoppers (the less frequent shoppers). They studied the impact of a six-week long promotion run at a large grocery chain in the US. The promotion rewarded a coupon for a free ham to customers that spent $475 or more on ham during the promotion period. They also offered a coupon for half a ham to the customers that spend between $325 and $474 inclusive. The customers spending less than $325 were not rewards. The six weeks prior to the promotion period was considered the pre-promotion period. The authors segmented the LP’s customers into three categories (best, better, and worst) according to their spending in the pre-promotion period. The best customers were expected to spend more than $475 and the better customers were expected to spend between $325 and $474, while rest of the customers were categorized as worst.

The six-week period immediately preceding the promotion was used as a control sample. The six-week period following the end of the promotion period was labelled as the redemption period. The authors found that the best customers who redeemed a reward spent $98.02 more per person than the best customers that did not redeem the coupon. This difference for better customers was $141. The biggest difference in spending was among the worst customers, at $150. The authors also found, however, that redemption rate (74.2%) was highest among the best customers. More of the people among the best segment that got a coupon came back in the redemption period to redeem it. On the other end of the spectrum, the worst segment’s redemption rate (49.4%) was
lowest but increase in redeemers’ average sale was the highest at $150.50. Despite, the lower redemption rate, the sales difference in the worst segment increase the profitability of the whole promotion. The authors conclude that the program was ultimately profitable not because of the basket size increase in the best customer segment but in that of the better and worst customers.

The coalition LP business model is driven by two primary activities. A customer purchases goods from an LP partner retailer and the LP issues the customer a set number of points. The rate at which points are awarded is determined by the LP and may involve promotional/bonus activities in the store. The partner retailer can pay for the issued points themselves or have one of their vendor partners pay for it as bonus promotion applied to their product (For example, Proctor & Gamble would pay for the promotion: Buy two Head & Shoulders and get 50 bonus points). Once the customer has earned sufficient points that makes them eligible for a reward, they can choose to redeem their points at a rate set by the company. The company can make money on the difference of the rate at which it issues points and rewards redemptions. The company can also make money by getting vendors to pay for the miles. The profitability of an LP is driven by customers earning points through purchasing at LP’s partner retailers. The customers’ desire to earn points will be encouraged when they have set a goal towards a reward or they be incentivized otherwise (through promotional messaging, in store marketing etc.) to redeem for an immediate reward. Therefore, the profitability of an LP is dependent on its customers’ redemption activity.

2.5 LP Redemption

Most research in LP has been conducted from the firm lens and has focused on how the firms can create an effective LP that is profitable and achieves the goal of imbuing loyalty in its customers. The redemption aspect of the business is under-studied. It is important to understand
what motivates a customer to redeem more and redeem more often. “Given this centrality [...] of redemption behavior to the LP business model], the academic consideration of consumer motivations towards redemption and that perceived impacts of reward redemption behavior are less common is surprising” (Smith & Sparks, 2009, p. 542).

The importance of redemption in an LP cycle is significant as it increases customer’s self-efficacy in order to repeat the collection cycle again. Dreze and Nunez (2011) conducted the study where university students asked to guess the next card drawn from a stack of cards presented to them. The IV was the number of cards drawn with two levels (10 or 30). Participants were told they will be rewarded with $4 if they guessed 66% (guessing ability of a professional poker player) of the cards correctly in the 10-draw treatment. The reward was $12 for the 30-draw treatment. The students were asked to rank their ability to guess the card correctly, before and after the experiment. The difference in the two ratings was the DV. The students were not aware that the game was set up that they will always get 66% of the cards right. The authors found that the DV was significantly higher for participants in the 30-card group than those in the 10-card group. \((M_{10} = .70 \ vs. M_{30} = .43; F = 13.68, p < .01)\). Even though the study was not set in a loyalty program setting, the authors posit the similar sense of goal achievement can be attained by LP members when they achieve their points goal and redeem. The resulting self-efficacy can encourage further points collection.

Smith and Sparks (2009) have investigated customers’ motivation to redeem for a reward. The authors selected a large retailer in the UK that has an extensive loyalty program. By their description of the retailer, is akin to a Shoppers Drug Mart in Canada. The retailer’s card sales penetration in the UK is about 70% according the company’s financials. The loyalty program is
easy to understand, and customers can, relatively easily, translate their points balance into a financial reward value. They can easily find out the balance after their purchase as it is printed on the receipt. Participants were recruited through personal contact and following the snowball technique. The authors chose to include only women as interviewees as the retailer focuses on female collectors. Twenty thematic interviews were conducted with the participants. Interviews were 30 minutes each. A structured interview guide that included open ended questions was used. Author’s thematic analysis showed that three themes were covered: (a) planned behavior and goal attainment, (b) self-gifts and windfall, and (c) perceived impacts on behavior. The first two themes are the primary division between the types of redeemers. The more common types of redeemers are motivated through goal setting and goal attainment. Usually they set an expensive, hedonic product as their goal (example, bottle of perfume). Their purchases are aimed towards fulfilling that goal. The second type of redeemers appear to go for the “small wins” and redeem more often on smaller value products. These products are usually utilitarian in nature but also could be hedonic. These participants consider these small purchases as small treats for themselves and find it to be an up lifter to their mood. The customer’s propensity to make impulse purchases is also important in this case. For the retailer to engage this type of customer, the ease of redemption is very important. Since this retailer’s loyalty program is a virtual e-purse where the customer can easily translate their point balance in Pounds, it becomes easier and more tempting for the customer to redeem those points. The authors are not definitive in their conclusion of the perceived benefit of the redemption behavior. Some collectors feel warm and happy after collecting their reward as it makes them feel they earned something for free. On the other hand, some customers feel that they have paid for the product they originally purchased and, hence, they have ‘earned’ these points and the reward that come from these points are not free. The act of redeeming itself, however, is
responsible for creating a feeling of winning and positive affective response towards the retailer. The participants also report that if they can calculate the financial benefits of the points in their head, they are willing to drive past a slightly cheaper competitor just so they can earn and accumulate the points. According to the authors, the motivation to desire varies across the customer base of an LP. The most common motivation stated by the participants was “that of accumulating points or value to save up for a large purchase or rewards” (Smith & Sparks, 2009, p. 544).

Dorotic et al. (2014) studied the effect of redemption decision on customer’s purchase behavior. The authors notice a spike in customers’ shopping behavior after they have made the decision to redeem for a reward. This effect exists regardless of the customer’s points balance. The authors call this phenomena redemption momentum. The authors found that an overwhelming majority (70%) of the customers made the redemption decision prior to redemption. 64% of the redemption decisions were made in the same week prior to redemption.

For the model results, the authors relied on the estimator, $\gamma$, for interpretation. For collector’s that had experienced points pressure, there’s an increased likelihood of purchase. The amount of purchase, however, was not significant. Also, if collectors redeemed before achieving a desired threshold, they were likely to redeem fewer of their points.

The most important takeaway in the results was the concept of redemption momentum. The authors found that the effects of the decision to redeem on likelihood of redemption started as soon as said decision was made. The authors found that once a collector had decided to redeem, frequency of purchase increased by about 76% ($\gamma_{\text{RedMom}} = 1.763$). This was also true for the purchase amounts ($\gamma_{\text{RedMom}} = .325$). This trend continued after the redemption, albeit, to a smaller
degree. Purchase frequency increased by about 3.3% ($\gamma_{PostRed} = .033$) and amount per purchase increased by a similar amount. Adding to this cyclical pattern, the authors also found a positive impact of accessibility (interaction with the LP) on frequency of purchase ($\gamma_{Access} = .282$). Not only did accessibility increase the frequency of purchase but it also increased the chance of redemption decision and, as shown earlier, a redemption decision created a redemption momentum. In the correlation examination, the authors found the more frequent shopper tended to decrease their purchase incidence over time. They found the same trend for purchase amount and likelihood to redeem. There are two probably explanations for this occurrence. First, as indicated in the paper, the collectors of the LP in this study are of a higher age and it is likely that their shopping needs simply go down as they age. Secondly, companies may focus too much on acquiring new collectors while ignoring their best collectors and that is why the authors saw this trend. This paper introduces the concept of redemption momentum that is relevant to increasing redemption by customers in retail LPs.

The relationship between the types of LP and its effect on redemption has also been studied. Noble et al. (2014) have examined the interaction among the types of loyalty programs (accumulation vs instant), the types of rewards (economic vs social), and the redemption policies (controlling vs lenient) and their effect of continued affiliation (loyalty) with the LP. The authors found that for programs that offer economic rewards, controlling redemption policies have lower commitment than those with no controlling policies ($M_{highcontrol} = 3.71$ versus $M_{noncontrol} = 4.13; p < .05$). For the programs that offer social rewards, however, LPs with controlling lenient policies have a higher commitment than those programs with lenient redemption policies. The authors posit that all LPs must first identify the type of their program and rewards types before
establishing redemption policies. A lenient redemption policy is not necessarily a source of increased loyalty.

Literature has discussed members’ motivation to redeem, types of redemption policy, and the effect of redemption on the sustainability of the LP. However, promotional activity by coalition LPs has not been a topic of interest in the LP redemption literature. LPs regularly use promotional vehicles like emails, flyers, and mail-in coupons to persuade customers to redeem. The redemption literature is missing the discussion on how to effectively promote points redemption and persuade LP members to redeem more.

Current industry practice is to send these promotions through email to the LP members or post them on popular deals website (e.g. redflagdeals.com). The email participation rate for the retail industry for the year 2017 was 2.50%. (Chaffey, 2018). Some other industries like restaurants (4.18%) and financial services (5.05%) have almost twice the email participation rate. The examination of popular deals website shows that most ads are written in a similar format. They present the benefits that the customer can receive by participating in the promotion. The front page of a website that features promotions reveals the prevalent promotional messaging (Figure 1). The messaging starts with the benefits of the action that follows in the message. This type of messaging can be called a gain framed messaging where the beneficial aspect of the message is highlighted. The ad conveys to the reader the gain they can receive by acting on the ad’s message (Earn 2x the points by booking flights with a certain card). There seems to be a dearth of loss framed ads in the promotional messages adopted by LPs. Highlighting the risk of losing out on a promotion has the possibility of being more persuasive to LP members.
The content and placement of promotional message affects the likelihood of consumption of the promotion. There is a gap in redemption literature that has not addressed the effectiveness of redemption promotion and how LPs can persuade customers to redeem more. Framing has been used as a persuasion tool mostly in the healthcare. There is an opportunity to explore the effectiveness of framing in the LP marketing setting.

2.6 Prospect theory

Prospect theory was presented as an “alternative account of individual decision making under risk” (Kahneman & Tversky, 1979, p. 274). The theory posits that, in case of a risky choice, people will be loss averse. They will avoid the loss option and prefer the alternative that provides a gain. The authors proposed the following hypothetical value function as an alternative to the existing expected utility theory (Figure 2). The three salient aspects of the value function that the authors provide are: (a) the function deals with the deviations from the reference points – that gains
and losses depict variance from the starting point, (b) generally concave gain curve and a generally convex loss curve, and (c) the curve is steep for gains and flatter for loss.

![Graph showing hypothetical value function](image)

*Figure 2: A Hypothetical Value Function (Kahneman & Tversky, 1979, p.279)*

The convex loss curve shows that the decrease in value is quicker and steeper than the increase in value received from the gains. It is inferred from the value function that the pain from losses is more painful than the pleasure received from an equivalent gain. Loss aversion can be simplified to say that “losses loom larger than corresponding gains” (Tversky & Kahneman, 1991, p. 1047). People respond to choices presented to them as gains and losses and their response to the choice may differ based on how the choices were framed. Framing has emerged as an extension of the loss aversion principle presented in the prospect theory.

The LP also functions on a similar gain and loss principle. The points are accumulated or “gained” over a period of time through regular purchases with a retailer. At the time of redemption, the points have to “lost”. At the same time, dollar discounts on purchases can also be translated
into a form of gain or loss. When a product is purchased at a discount, the dollars saved can be considered a gain, whereas, the product purchased without a discount can be deemed a loss.

### 2.7 Framing Effect

The loss aversion principle introduced in the prospect theory has found its practical implication in the form of framing effect. Framing effect has been a topic of interest and used by academics in psychology, social, and medical health as a persuasion messaging tool. There has been a lot of literature on framing since its inception through prospect theory by Kahneman and Tversky (1979). Levin, Schneider, & Gaeth (1998) had identified three typological types (Table 1) of framing used in experiments.

**Table 1: Summary of methodological differences in types of framing**

<table>
<thead>
<tr>
<th>Frame type</th>
<th>What is framed</th>
<th>What is affected</th>
<th>How effect is measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risky choice</td>
<td>Set of options with different risk levels</td>
<td>Risk preference</td>
<td>Comparison of choices for risky options</td>
</tr>
<tr>
<td>Attribute</td>
<td>Object/event attributes or characteristics</td>
<td>Item evaluation</td>
<td>Comparison of attractiveness ratings for the single item</td>
</tr>
<tr>
<td>Goal</td>
<td>Consequence or implied goal of a behavior</td>
<td>Impact of persuasion</td>
<td>Comparison of rate of adoption of the behavior</td>
</tr>
</tbody>
</table>

Note. Levin et al. (1998, p. 151)

The authors identify the *Risky Choice* frame type as the classical framing method; as proposed and used by Tversky and Kahneman (1981). In the Risky Choice frame type, options of equal expected value are presented to participants in a positive or a negative frame. For example; the Asian Disease Problem (Tversky & Kahneman, 1981). In this type of framing, the participants do not necessarily have something to profit or lose from this decision.
**Attribute Framing effect** is probably the simplest example of a framing effect, per the authors. Attribute framing provides a basic understanding of how descriptive valence affects information processing. In order to test this effect, one attribute of a choice manipulated. The dependant variable is not a choice between independent options, but it is between the presentations of the single attribute of the choice. One example noted is the labelling of beef (Levin & Gaeth, 1988) as 75% lean vs 25% fat and measuring the rating of the product by the participants on a one to seven scale with higher number representing a favorable response. The participants rated the beef better tasting and less greasy when it was labelled in a positive light (75% lean) compared to when it was presented in a negative light (25% fat). Here the change in frame is not in an outcome or choice but rather in an attribute or characteristic of the product. When one attribute of a choice is manipulated, the gain frame is preferred by the consumer. Attribute framing does not rely on the presence of risk or loss aversion as a decision-making criterion.

The third type of framing introduced by the authors is **Goal Framing**. This type of framing has become popular in persuasive communications especially health related behavior. In Goal framed messaging, the positive frame focuses attention on the goal of obtaining benefit or *gains* compared to avoiding negative consequences or *loss*.

This effect has been studied by Ganzach and Karsahi (1995) where they compared the effect of message framing on the use of credit cards. The participants in this study were 346 credit card owners that had not used their card in the last three months. The authors invited them back to use the credit card by sending them a letter (Figure 3).
The authors found that the loss frame was significantly more effective in persuading the participants to use the credit card. After receiving the letter, 54.8% of the recipients that got the loss framed letter used the credit card. The same number was 16.4% for the gain frame recipients.

Most research on this method, however, has taken place in the medical sector. The effectiveness of framed messages has been studied on areas like smoking cessation (Schneider et al., 2001), breast self-examination (Meyerowitz & Shelley, 1987), motivation for HIV testing (Apanovitch, McCarthy, & Salovey, 2003), and encouragement for early detection of skin cancer (Rothman, Salovey, Antone, Keough, & Martin, 1993). The primary focus of these literature has been to identify whether a gain-frame (potential of reward) or loss-frame (risk of loss) message is more effective in persuading participants to behave in the desired fashion. Levin et al. (1998) identified 24 studies as part of their paper that tested the effect of goal framing on the participants’ decision. In 14 studies, the loss frame has been shown to be more effective than gain frame. Seven studies report no effect and the other three report interaction with other variables. In their study, Meyerowitz & Chaiken (1987), presented participants with the following gain (loss) frames regarding Breast self-examination (BSE) as part of the experiment:

**Figure 3: Framed Messages (Ganzach & Karsahi, 1995, p. 12)**
By (not) doing BSE now, you (can) [will not] learn what your normal, healthy breasts feel like so that you will be (better) [ill] prepared to notice any small, abnormal changes that might occur as you get older.

Research shows that women who do [not do] BSE have (an increased) [a decreased] chance of finding a tumor in the early, more treatable stage of the disease.

The study set out to measure BSE attitudes (at the time of the experiment) and behavior (for four months following the experiment). The attitude was a measure of the participants’ agreement to the message provided. It was measured on a 5 points scale. The behavior was measured as a self-report dependant variable four months after the experiment. During monthly follow ups, participants were asked if they have performed BSE techniques in the previous month. Participants got a 1 if they had performed BSE techniques and they received a zero, otherwise. Their aggregate score was a measure of BSE behavior. The results found that the participants exposed to the loss framed message expressed a positive attitude towards BSE attitude \( (F(3,74) = 2.80, p < .05) \) compared to those presented the gain frame. Loss framed message was also more persuasive gain framed condition in imbuing BSE behavior among the participants \( (p < .05) \).

Block and Keller (1995) examined the impact of goal framing on sexually transmitted disease (STD) prevention behavior. The authors presented the following the message to the undergraduate participants \( (n = 94) \)

\[
\text{If you [don't] use the following precautions, you will [not] be able to avoid contracting HPV. If you do have HPV, [not] using these same precautions may help [speed] control the development of lesions.}
\]
The authors measured the participants’ likelihood to comply with the recommendation given in the message on a seven-point scale from 1 = very unlikely to 7 = very likely. The authors also asked the participants about their attitude towards the message itself (very persuasive/not at all persuasive, useful/useless). The authors found that the attitudes and intentions to follow the message were higher for the loss framed message than the gain framed message ($F(1,90) = 2.76, p < .05$).

A meta-analytics review of 53 studies ($n = 9,145$) was conducted by O’Keefe and Jensen (2009). The focus of the study was framing experiments conducted for disease detection behavior. The study compared the effect sizes of all the experiments and converted them into Fisher’s $z$ scores which were then analyzed using random-effects procedures. The authors found across all 53 studies, loss-frame appeals were found to be significantly more persuasive in impacting behavior than gain-framed appeals; (mean $r = -.039$ ($p = .02$)).

Arora (2000) studied the impact of message framing on consumers’ intention to use the dental office. The participants ($n = 210$) were presented with an ad for a dental office. The ad was shown between subjects. The gain framed ad presented four benefits of visiting the dental office: “Detect any cavity, determine if your gums are healthy and free of gingivitis, detect any build-up of plaque, and keep your original teeth for life.” The loss framed ad was presented as the previously mentioned benefits forgone if the participants do not visit the clinic. The participants were asked to indicate, on an 8-point scale, how likely were the participants to use the dental office’s services. The authors found that participants that saw the loss framed ad were significantly more likely to visit the dental clinic ($p < .05$) than those presented with the gain framed message.
The question asked in goal framing is “which frame, positive or negative, will have greater persuasive impact on achieving the same end result” (Levin et al., 1998. p. 168). Loss framed messages have shown to be more effective in persuading recipients to act in a desired way. The effect size of the message has varied across different studies, however, the loss aversion principle that drives the effectiveness of loss framed messages has been observed in many studies.

There have been studies where gain frame has been more effective as persuasive message. Thorsteinson and Highhouse (2003) studied the effect of goal framing in job advertisements on organizational effectiveness. The authors presented the participants with an ad for a bookstore customer service representative. The loss frame ad was titled as “don’t miss this unique opportunity!” The gain framed ad had the same content except it listed the benefits of working at the same bookstore. The authors found that participants were more attracted to the company in the gain framed ad compared to the loss framed ad. However, the authors found that the participants found the gain framed ad more attractive because the ad had become valence encoded and the positive encoding actually made the gain frame more attractive to the participant.

Most literature shows that loss framed messaging that invokes loss aversion is more effective as a persuasion tool. Studies where gain framed messages were effective can be considered an exception and might not be useful as an application of goal framing. Given the linguistic and contextual variations involved in goal framing, this type of messaging is more complex. Goal framing relies on consumers’ loss aversive tendencies by presenting a message that emphasizes the losses associated with not performing the given task.

The choice made in response to an LP product promotion is due to the points to be earned (gained) from the promotion or points to be redeemed (lost) from the promotion. The promotional
features can be considered an attribute of the product and be subject of attribute framing and manipulation.

Despite the depth of literature on framing effect, there seems to be a gap where the effect of framing is not tested as a persuasive messaging tool in LP redemption promotions. This research gap presents an interesting research opportunity.

3 Study Hypotheses

The prevalent wording of promotional content in LP messaging promises the recipients some form of benefits (or gains) as a result of recipients’ actions. For example, “Get $10 off your bill when you redeem 95 miles”. The promotional messages are meant to drive customers’ redemption activity that will, in turn, increase purchase behavior as well. Redemption activity also helps in reducing LPs’ financial liability towards its customers. Despite continuous promotional activity, the LP points liability in Canada was an estimated $16 billion (Harris, 2017). It is worth inquiring whether a more persuasive messaging tool will be effective in getting more LP customers to heed to the promotional messages.

Research Question: Will framing have an effect on how people respond LP promotions?

Kahneman and Tversky (1979) posited that losses loom larger than gains and operationalized the principle as the steeper value curve of the loss function. The framing effect is built on the loss aversion principle where a decision can be manipulated if the choice is framed as a risk. Meyerowitz and Chaiken (1987) have built on the loss aversion principle and stated that there is a bias in processing information, wherein negative information “has a systematically stronger impact on judgement than objectively equivalent positive information” (Levin et al., 1998. p. 176). For
goal framing to have an impact on decision making, presence of risk is not required. Loss aversion can occur in the absence of risk as well. Information presented in a loss frame should have more impact on people’s decision.

**H1: Loss frame is more effective than gain frame in increasing customers’ likelihood to redeem loyalty points.**

LP promotions do not just consist of redemption promotions where LP customers are asked to redeem miles for rewards. Routine LP promotions are a combination of reward miles and dollar discounts. For an LP customer, a product’s promotional attributes are made up of the amount of dollar discount on the product and the number of miles the customer stands to earn or has to redeem at the end of the transaction. The customers either stand to gain (earn) miles from a transaction or they could redeem (lose) miles. This attribute of the promotion can be manipulated to understand consumer preferences. According to Levin et al. (1998) attribute framing does not in any way rely on the presence of risk. Both frames will have to be equivalent in value in order to fulfill the absence of risk condition. The level of discount will have to be manipulated in order to make both gain and loss attributes equivalent. In the case of a dollar discount, the manipulation is not that of a gain or loss. The customer will always have to pay the cost of the product. The cost will vary slightly given the amount of discount in the choice. The pain or pleasure associated with paying a slightly higher or lower cost is not at all similar to the pain or pleasure associated with gaining or losing miles. The attribute framing, thus, only be because of the manipulation of gain or loss of miles.

**H2: Customers will prefer the promotion where they can earn miles compared to where they have to redeem miles, given that both choices have an equivalent financial value.**
According to Smith and Sparks (2009), LP members that redeem points for rewards are usually aware of the conversion rate between the loyalty points and the price of the reward. The LP industry also advertises their points conversation rates frequently to their customers so people understand their points’ worth and consider the points similar to currency. I hypothesize that customers value their points and the equivalent dollar discount equally.

**H3: Customers value the dollar discount and equivalent miles amount equally.**

This hypothesis is set as a null hypothesis and it will be tested as such.

## 4 Methodology

This chapter will discuss the instrument of research and its design. The logistics of the experiment and sample selection will also be discussed.

### 4.1 Sample Selection

For the purpose of this study, participants were required that were familiar with an LP and have participated in redemption activities with the LP. A large Canadian pharmacy chain was contacted for logistical support as they are partners with Air Miles loyalty program. The company agreed to run the study in the pharmacy store. The participants were recruited by intercepting and interviewing passing customers. The survey was set up in the Qualtrics survey software. Participants were intercepted and were asked the following qualifying questions:

- Are you a member of the Air Miles rewards program?
- If yes, have you redeemed for a reward in the past 12 months?
• If yes, have you purchased any two of the following products?
  o Head & Shoulders Shampoo (in the past 6 months)
  o Tide Laundry products (in the past 6 months)
  o Haagen-Dazs Ice Cream (in the past 12 months)
  o Lindt Chocolate (in the past 12 months)

If the participants said yes to the qualifying questions, they were presented with an online survey on an iPad. The first page of survey briefly described the purpose of the study and briefed the participants about their rights and that their responses will be anonymous and stored securely. As a reward for the participation in the survey, respondents were given a $5 Tim Hortons gift card.

4.2 Sample Selection

The required sample size was calculated as follows:

Discrete Choice Experiment:

Assuming the following:

\( z = 1.96 \), the value of normal distribution at a 95% confidence level

\( p = 3 \) options, the proportions of promotional options available in each choice set; 0.5

\( q = 1 - p = 1 - 0.5 = 0.5 \); the number of times a promotional option will not be selected

\( r = 6 \), the number of choice sets in the experiment

\( a = 0.1 \)

Therefore: \( n > z^2q/rpa^2 \)
\[
\begin{align*}
n &> \frac{1.96^2 \cdot 0.5}{6 \cdot 0.5 \cdot 0.1^2} \\
n &> 64.03 \\
n &\approx 65
\end{align*}
\]

Message Framing Experiment:

A one-way ANOVA was to be used to test the difference of means in the framed messaging experiments. In order to calculate sample size, I used G power software with the following factors

\[
\begin{align*}
\text{power} &= 0.9 \\
\alpha &= 0.05 \\
f &= 0.25 \text{ (effect size = medium)}
\end{align*}
\]

Number of groups = 3 (Control, Gain, Loss)

Number of measurements = 7 (Scale used in the experiment)

The software calculated a recommended sample size of 120 participants. In order to satisfy both experiments, a sample size of 120 participants will be sought.

4.3 Survey Design

The study was conducted in the field at a retail pharmacy store. The instrument of the study was survey designed in Qualtrics. As task 1, the participants were shown an image of an email received from Air Miles with a promotional offer. The text of the email was manipulated across the treatment groups. There were three treatment groups: (a) control, (b) gain framed, and (c) loss framed. The images presented to the groups are presented in Appendix 1, 2, and 3. The participants
were asked how likely they were to redeem this offer. They were asked to choose their likelihood to redeem on a 7-point scale where 1 denoted “extremely likely to redeem” and 7 denoted “extremely unlikely to redeem”.

The second task was a Discrete Choice Experiment (DCE). It was designed to test the preference of participants for a product based on attributes. The following attributes were chosen:

<table>
<thead>
<tr>
<th>Deal Amount</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-20</td>
</tr>
<tr>
<td>$1</td>
<td>-10</td>
</tr>
<tr>
<td>$2</td>
<td>0</td>
</tr>
<tr>
<td>$3</td>
<td>10</td>
</tr>
<tr>
<td>$4</td>
<td>20</td>
</tr>
</tbody>
</table>

Where deal amount is the amount of discount and Miles is the number to be earned (positive) or the number of miles to be redeemed (negative). Each participant was shown a product with two combinations of deal amount and miles and they were asked to choose which item would they prefer to buy. An example of a question asked is attached in Figure 4.
Figure 4: An example of the discrete choice questions presented to participants

The combination of the variables was selected so that both options represent equivalent value. According to the Air Miles Cash (2018) website, 95 miles are worth $10 in a store. For simplicity, that has been rounded to 100 miles for $10 in store. That makes 10 miles worth $1. In Figure 1, Option A is worth the same (customer gets $1 + 10 miles = $2) as option B (customer get 20 miles = $2)

The DCE was a within subject design. Each participant was presented with 24 sets of combinations with 2 options in each set. Four different products were also used in the experiment. However, product type was not an IV for this study.

4.4 Analysis Plan

4.4.1 Hypothesis 1

In order to examine the effect of message framing on the participants’ likelihood to redeem, one-way ANOVA was employed. The sample size (n = 106) was distributed evenly among the
three treatment groups: Control ($n = 35$), Gain Frame ($n = 35$), and Loss Frame ($n = 36$). The reported mean for each treatment group is on a scale of 1 to 7. The lower the mean, the more likely the group is to redeem the offer.

4.4.2 Hypothesis 2

The utility of purchasing a product can be determined by two components. A systematic component and random part, one that cannot be explained through our variables. The utility function, thus, can be written as follows:

$$ U_i = V_i + \epsilon_i $$

Where $U_{ni}$ is the latent utility of an alternative $i$ derived by the customer $n$. $V_{ni}$ is the systematic utility expressed as a function of $k$ observable variables. Where $\epsilon_{ni}$ is the stochastic or random part of the latent utility associated with an alternative $i$ by the consumer $n$.

The systematic part of the utility with ignoring subscript $n$ is $V_i$, can be specified as a function of a vector of causal variables manipulated in the study as follows

$$ V_i = \beta_0 + \beta_1 \text{Deal Amount} + \beta_2 \text{Gain Miles} + \beta_3 \text{Gain Miles Amount} + \beta_4 \text{Loss Miles} $$

$$ + \beta_5 \text{Loss Miles Amount} $$

Where:

- $V_i$ is the utility associated with alternative $i$,
- Deal Amount is the discount associated with the choice ($$1 or $2).
• Gain Miles is 1 when the choice offers a mile earning opportunity, 0 when the choice does not offer a mile earning opportunity.

• Gain Miles amount is the number of miles to be earned in the choice (10 miles, 20 miles).

• Loss Miles is 1 when the choice offers a mile loss, 0 when the choice does not offer a mile loss.

• Loss Miles Amount is the number of miles to be lost in the choice (10 miles, 20 miles).

Given that a random variable $y_i$ denotes that a participant selects an alternative $i$ and takes a binary form where value 0 denotes non-selection and 1 denotes selection of alternative, then under suitable assumptions about error terms, as shown by McFadden (1974) the probability that an individual would choose alternative $i$ over two alternatives presented in this study may be written as

$$Prob(y_i = 1) = \frac{\exp (V_i)}{\exp (V_a) + \exp (V_b)}$$

We can obtain the parameter estimates ($\beta_1$) to ($\beta_5$) for this multinomial logit model to infer what attributes of a loyalty promotion affect customers purchase decision. The data will be transformed in SAS Statistical software to run the parameter estimates for the variables discussed above. For H2 to be confirmed the following two conditions will have to be met

• $\beta_2 > \beta_4$
• $\beta_3 > \beta_5$
4.4.3 Hypothesis 3

H3 posited that customers value the dollar discount and equivalent miles amount equally.

The utility function for the deal amount and miles variables is written as follows

\[ V_i = \beta_0 + \beta_1 \text{Deal Amount} + \frac{\beta_2}{10} \times \text{Miles} \]

Where

- Deal Amount is the amount of discount provided ($0, $1, $2)
- Miles is the amount of miles provided in the choice (-20, -10, 0, 10, 20)

For H3 to be confirmed, the following condition will have to hold true

- \( \beta_1 = \beta_2 \)

5 Research Findings

5.1 Sample Characteristics

A total of 125 participants filled out the survey at the retail store. A total of 850 participants were intercepted over seven days. The survey had a qualifier at the beginning that checked for participant eligibility. One participant did not finish the survey. This provided a total of 124 usable surveys for data analysis.

Socio-demographic data including: gender, age, education, and level of education was collected. Participants were also given the option to select “Prefer Not to Answer” for demographic questions. Of the entire pooled sample, 27.6% were reported as male, 56.2% reported as female,
and 16.2% of the participant preferred not to answer. The minimum age for owning an Air Miles card is 18. Survey asked the participants for their age in the increments of 10, beginning with 18-25, 26-35 up to 56-65, 65 and older. Survey found that 28.6% of the participants were between the age of 26-35 and 42.9% of the participants were between 18 and 35. This was an unexpected demographic trend as practitioner publications are of the opinion that young people are not signing up for loyalty programs (Keyes, 2018). 14.3% of the participants preferred not to disclose their age bracket.

The survey also asked participants about three other loyalty programs and whether they were members of those LPs. Of the participants that completed the survey, 98 participants reported being part of at least one the three LPs: (a) Loblaws PC Points, (b) Aeroplan, and (c) Canadian Tire Triangle Rewards. 43% of the participants were also members of Aeroplan. 38.8% of the participants reported to be part of the Loblaws PC points card. About 18% of the participants reported as being part of the Canadian Tire rewards card.

### 5.2 Hypothesis Finding

#### 5.2.1 Hypothesis 1

The result indicates that the null hypothesis can be marginally rejected \( F(2,103) = 2.62, p = 0.076 \). Table 2 A post hoc Tukey HSD (Table 2) was conducted for pair-wise comparison among the three treatment groups. The post hoc test showed that the loss frame \( M = 2.75, SD = 2.14 \) was marginally more persuasive compared to the gain frame \( M = 3.74, SD = 1.84, p = 0.065 \). The DV in the gain frame \( M = 3.74, SD = 1.84 \) was not significantly different than the DV in the control frame \( M = 3.11, SD = 1.49 \).
The difference in means for the gain and loss frame treatment groups were marginally significant but the result still warrants an effect size calculation in case a larger sample size is gathered in future research to achieve significant difference in means. Cohen (1973) has recommended Partial Eta Squared as an estimator of effect size in One-Way ANOVA. As shown in table for, there is a small effect ($\eta_p^2 = .048$). The treatment was responsible for about 5% of the difference in the DV.

The first hypothesis posited that the frame of a promotional message will influence the customers’ likelihood of redemption of an offer. From the ANOVA, it was found to be marginally supported. In the post hoc test a partially significant difference in the means of gain and loss treatment groups was observed. The effect size was calculated to be small. The first hypothesis was marginally supported.
5.2.2 Hypothesis 2

Model 2 predicts the parameters required to test Hypothesis 2.

Table 3: Models Predicting Most Likely to Buy

<table>
<thead>
<tr>
<th></th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt (A or B)</td>
<td>-0.07</td>
<td>0.20</td>
<td>-0.05</td>
</tr>
<tr>
<td>DealAmt</td>
<td>0.37</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>Miles miles positive</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>miles (positive x miles)</td>
<td>-0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miles miles negative</td>
<td>0.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>miles (negative x miles)</td>
<td>-0.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log-Likelihood</td>
<td>-1166.92</td>
<td>-1136.97</td>
<td>-1141.94</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>59.89</td>
<td>49.97</td>
<td></td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>4.00</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>Prob of Chi-square</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

The parameter estimates predict the utility from each of the variables listed in the table. H2 posits that customers will prefer the promotion where they can earn (gain) miles compared to where they have to redeem (lose) miles, given that both choices have an equivalent financial value.

The parameter estimate for gain miles was found significant ($\beta_2 = 1.01, p < .05$). The estimate for loss miles for not found to be significant ($\beta_4 = .41, p > .05$). Table 4 reports the parameter estimates along with the $t$ statistics. The parameters for both variables were compared using the Wald test to test the null hypothesis that ($\beta_2 = -\beta_4$). The relationship between the two variables was not significant ($\chi^2(2, N = 1,685) = 3.46, p > .05$). The analysis failed to reject
the null hypothesis and the parameters were not found to be statistically different from each other. Hence, H2 was not supported.

| Parameter       | Estimate | Standard Error | t Value | Pr > |t| |
|-----------------|----------|----------------|---------|------|---|
| Alt             | 0.20     | 0.10           | 1.96    | 0.05 |
| Deal Amt        | 0.37     | 0.10           | 3.83    | 0.00 |
| Gain Miles      | 1.01     | 0.39           | 2.63    | 0.01 |
| Gain Miles Amt  | -0.02    | 0.01           | -1.71   | 0.09 |
| Loss Miles      | 0.41     | 0.27           | 1.53    | 0.13 |
| Loss Miles Amt  | 0.01     | 0.02           | 0.29    | 0.77 |

The parameters were found not found to be statistically significant different from each other. However, it was important to get a directional sense from the data regarding customers’ preference towards gaining miles compared to redeeming miles. Customers preference was calculated using the formula presented earlier in this section and a bar chart was plotted (Figure 5).
Figure 5: Customers’ preference comparison for loss miles and gain miles

The customers show a slight preference to offers that present an opportunity to gain miles compared to those that present an opportunity to redeem miles.

5.2.3 Hypothesis 3

The estimate for miles amount ($\beta_2$) is divided by 10 to equalize the scale difference between the dollar amount and miles amount. Table 2 above presents the parameter estimates in M2 for the above-mentioned utility function. The hypothesis was tested as a null hypothesis. The estimates for both parameters are statistically different from each other ($\chi^2(2, N = 1,685) = 40.84, p < .05$). The parameter estimates along with the $t$ statistics are presented in Table 5. As a result, the null hypothesis (H3) was rejected.
Table 5: Parameter Estimates with t-statistic for M2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>DF</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>t Value</th>
<th>Pr &gt;</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt</td>
<td>1</td>
<td>-0.05</td>
<td>0.05</td>
<td>-0.99</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>Deal Amt</td>
<td>1</td>
<td>0.33</td>
<td>0.08</td>
<td>4.00</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Miles</td>
<td>1</td>
<td>0.06</td>
<td>0.05</td>
<td>1.14</td>
<td>0.25</td>
<td></td>
</tr>
</tbody>
</table>

A visual representation of customer preference towards miles and deal amount is presented in Figure 6.

Figure 6: Customer preference plot comparison between miles and deal amount

The difference in slope of the two plots also confirms that customers’ preferences are not similar between the two attributes of LP promotions (deal amount and miles amount). The flatter slope of the miles amount plot shows that customers will need much more amount of miles to give the same of preference to a product with dollar discount (deal amount).
6 Discussion

Retailers spend sizeable investment in making their promotions successful. All managers want to earn the highest optimal return on their investment. Loyalty programs are no different than traditional retail promotional tools. Promotional programs provide diminishing, and in some cases, negative returns (Ha & Litman, 1997). In such situations, there needs to be a new marketing tool that does not cost incrementally more and can affect return on marketing dollars invested.

Message framing has primarily been used to increase participant response in the healthcare sector. The effect of framing in healthcare was significant because the loss loomed much larger. For example, the risk of contracting breast cancer if the self-exam isn’t done routinely is much higher than missing out on a promotional offer. Replicating some of the effect of framed messaging in the retail promotional activity will be a win for the managers. This study investigates whether message framing effects could have similar effect on financially motivated decisions.

The result for the message framing manipulation was marginally significant but it was not discouraging. Increasing the number of treatment groups reduced the number of participants in each group. In an F test, like ANOVA, an increased sample size is likely to obtain significant results. In addition to the significance level, a low effect size was not expected. Having said that, it is not completely discouraging. First, the effect size is also a function of the treatment level. The loss framed message could be worded better in the future in order to gain a more sizable effect. Even if after manipulating the independent variable, the effect size remains small, it can still be a material impact if repeated over a long promotional cycle (for example, an entire quarter or a season). A framing device is a relatively low-cost persuasion tool for a manager. Even if they
aren’t able to see material incremental sales dollar, a small sales boost at a much lower incremental cost is still a good return on investment.

The difference in the parameter estimates for gain (earn) and loss (redeem) miles was not found to be significant. However, the customers tend to prefer offers that present a chance to earn miles. If a new promotion is being created that is a combination of both dollar discount and a mile offering, managers can get a similar level of demand for their promotion even if they do not offer up the usual amount of miles. For example, if Colgate is routinely promoted at $1 off along with 8 bonus miles, it is now worth testing for the managers that whether they can generate similar demand by offering the same Colgate at $1 off along with 6 bonus miles. If managers can achieve that without sacrificing demand, the miles cost saving can be significant which can then be spent on other promotional or marketing activities. The marketing budget can also be revisited after this finding. There is usually lopsided amount of budget set for miles giving (earning for customer) events in a promotional calendar. Whereas, little no promotional activity is donated to redemption activities. If customers are naturally inclined to earn miles and it is relatively difficult to get them to redeem, marketing budget can be reallocated to spend more effort on getting LP customers to redeem more often.

Some of the participant statistics are also favorable for the external validity of the study. Approximately 70% of the participants reported that they redeemed for a reward because they received a promotional email (Appendix 4). This study also assumes that most promotional messages related to LP redemptions are being transmitted through email.
7 Contributions

This study attempted to address some gaps in framing literature, as well as provide additional results for hypothesis through the use of statistical analyses. The following is the discussion on the contributions intended through this research process.

7.1 Methodological Contribution

In an attempt to bridge the gap in framing literature, this study proposes framing techniques in the retail perspective and, especially, with regard to retail loyalty programs. Since LP program points are not real dollars but can be used in lieu of real dollars in specific circumstances, people interact with them differently. Goal-seeking behavior may affect redemption decision. This field study recruited real LP members as these members are closer to the LP can look at the framed options objectively. Herstein & Gamliel (2014) conducted a similar study to estimate the effect of framing on purchase decisions. They did not find a significant effect of the frame and cited the experiment setting as a potential confound.

The Discrete Choice Model is robust tool to estimate participants’ utility towards points versus dollar discounts. This model can be employed in the future and expanded to multiple IVs with higher levels to estimate the factors that make an LP member participate in a promotion.

7.2 Managerial Implications

This study targets LP marketing managers that create promotional programs to boost redemptions. The study introduces the notion that customers’ response to promotional messages can be manipulated using the way information is presented to them. This piece of information itself
can be adopted by marketing managers and their teams to create convincing messages that create a real sense of loss which, in turn, will make the promotion more attractive.

The results from the study are also encouraging for the managers. Even though the study found that the impact of framing on customers’ likelihood to redeem an offer is marginally significant, it should not be discourage them from testing it in the market. This effect can be increased by going to a wider audience and by trialling different loss framed message to zero in on the message that provides the biggest effect.

This finding can be coupled with the framing study effect in order to create a redemption momentum that is both profitable and sustainable.

8 Limitations

It was imperative for the study to use participants in the field that have LP memberships and have redeemed for rewards in the past. This was a stress on resources in two ways. First, it limited the number of participants as we imposed a few qualifiers on their eligibility. Second, it was time consuming as we had to engage participants and convince them their time and will be worthwhile.

Budgetary constraint was another limitation. I was able to get the required number of participants within my budget; however, a bigger budget would have meant a bigger reward for participants. A bigger reward would have meant that more people would have participated in the same amount of time.
9 Future Research

This study can be replicated with a bigger sample size and additional IVs so we can zero in on an effect size that is sustainable for the business. After replication, business application be expected through partnerships.

The research can be extended by adding demographic, financial, reward tier information as independent variables. This will inform whether framing in loyalty programs affect members differently based on their own attributes.
References


Appendices

Appendix 1: Copy presented to participants in the loss frame condition
Appendix 2: Copy presented to participants in the gain frame condition
Hello Valued Air Miles member!

We’ve got something special in-store for you!

Shop and Get Rewarded

Redeem 100 Air Miles this week at any Rexall store for $12 off your bill

Thank you for being a valued Rexall and Air Miles customer

Appendix 3: Copy presented to participants in the control frame
Appendix 4: Discrete Choice Experiment - Choices presented to participants

Thinking back to your redemption activity, did you redeem your points/miles because you got a promotional incentive in an e-mail?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
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<td>76</td>
<td>60.8</td>
<td>71.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>30</td>
<td>24.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>106</td>
<td>84.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Missing</td>
<td>System</td>
<td>19</td>
<td>15.2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>125</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 5: Proportion of Participants that Redeemed Points Because of an Email Promotion
To the best of your recollection, what is your Air Miles balance?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100</td>
<td>16</td>
<td>15.1</td>
<td>15.1</td>
</tr>
<tr>
<td>Between 100 and 1,000</td>
<td>22</td>
<td>20.8</td>
<td>35.8</td>
</tr>
<tr>
<td>Between 1,000 and 5,000</td>
<td>30</td>
<td>28.3</td>
<td>64.2</td>
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<tr>
<td>Between 5,000 and 10,000</td>
<td>21</td>
<td>19.8</td>
<td>84.0</td>
</tr>
<tr>
<td>More than 10,000</td>
<td>17</td>
<td>16.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Total 125

Appendix 6: Participants’ reported LP points balance