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Essays on Consumer's Psychological and Behavioral Responses toward Social Coupons

Chintorn Nakhata

University of South Florida, cnakhata@hotmail.com

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Essays on Consumer’s Psychological and Behavioral Responses toward Social Coupons

by

Chinintorn Nakhata

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration Department of Marketing College of Business University of South Florida

Major Professor: James Stock, Ph.D. Anand Kumar, Ph.D. Dipayan Biswas, Ph.D. Terry Sincich, Ph.D.

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Keywords: Face Value Plausibility, Mental Budget, Pain of Prepayment, Spending-Decision

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DEDICATION

This dissertation is gratefully dedicated to my parents for all of their love and support.
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I would have never been able to finish my dissertation without the supervision from my advisor, guidance from my dissertation committee members, help from my friends in the Ph.D. program and the staff at the Department of Marketing, and support from my friends and family.

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# TABLE OF CONTENTS

List of Tables .......................................................................................................................... v
List of Figures .......................................................................................................................... vi
Abstract ................................................................................................................................... viii

Introduction to Dissertation ........................................................................................................ 1
  Background ................................................................................................................................. 1
  Statement of the problem ........................................................................................................... 5
  Main theoretical framework ....................................................................................................... 5
  Research questions and objectives ............................................................................................ 6
  Approach and structure ............................................................................................................. 7
    Approach .................................................................................................................................. 7
    Structure ................................................................................................................................. 8
  Unit of analysis and industry focus .......................................................................................... 10
    Unit of analysis ...................................................................................................................... 10
    Industry focus ........................................................................................................................ 10
  Main methodology .................................................................................................................... 11
  Delimitations ............................................................................................................................. 12
  Definitions of key terms in the dissertation .............................................................................. 12
  References ............................................................................................................................... 14

ESSAY 1: Prepaying Less is Preferable to Saving More: The Role of Consumer Aversion to Pain of Prepayment in Social Coupon Purchasing-Decisions ........................................... 17
  Abstract .................................................................................................................................... 17
  Introduction ............................................................................................................................... 18
  Conceptual framework and hypotheses ..................................................................................... 21
    Reference price (RP) .............................................................................................................. 21
    Face value as an advertised reference price (ARP) ................................................................. 23
    Theories related reference price processing in social coupon purchasing-decisions ............... 23
      Adaptation-level theory ....................................................................................................... 24
      Assimilation-contrast theory ............................................................................................... 24
      Mental accounting theory .................................................................................................. 27
  Pain of prepayment ................................................................................................................... 30
  Willingness-to-prepay for a social coupon (WTPP-SC) ............................................................. 32
  Time pressure ........................................................................................................................... 34
  Semantic cue concreteness ....................................................................................................... 36
<table>
<thead>
<tr>
<th>Experiment 1: Manipulating face value plausibility and coupon price relative to WTPP-SC</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>41</td>
</tr>
<tr>
<td>Participants, design, and procedure</td>
<td>42</td>
</tr>
<tr>
<td>Measures</td>
<td>42</td>
</tr>
<tr>
<td>Dependent variable</td>
<td>42</td>
</tr>
<tr>
<td>Manipulation checks</td>
<td>43</td>
</tr>
<tr>
<td>Other measures</td>
<td>43</td>
</tr>
<tr>
<td>Results</td>
<td>44</td>
</tr>
<tr>
<td>Discussion</td>
<td>45</td>
</tr>
<tr>
<td>Experiment 2: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness</td>
<td>46</td>
</tr>
<tr>
<td>Participants, design, and procedure</td>
<td>46</td>
</tr>
<tr>
<td>Measures</td>
<td>47</td>
</tr>
<tr>
<td>Process evidence</td>
<td>47</td>
</tr>
<tr>
<td>Covariates</td>
<td>47</td>
</tr>
<tr>
<td>Attention check</td>
<td>48</td>
</tr>
<tr>
<td>Results</td>
<td>49</td>
</tr>
<tr>
<td>Discussion</td>
<td>51</td>
</tr>
<tr>
<td>Experiment 3: Manipulating coupon price relative to WTPP-SC and time pressure</td>
<td>51</td>
</tr>
<tr>
<td>Pretest</td>
<td>52</td>
</tr>
<tr>
<td>Participants, design, and procedure</td>
<td>53</td>
</tr>
<tr>
<td>Measures</td>
<td>55</td>
</tr>
<tr>
<td>Results</td>
<td>56</td>
</tr>
<tr>
<td>Discussion</td>
<td>58</td>
</tr>
<tr>
<td>Experiment 4: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness</td>
<td>59</td>
</tr>
<tr>
<td>Pretest</td>
<td>60</td>
</tr>
<tr>
<td>Experiment 4A: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness (low-implausible face value)</td>
<td>62</td>
</tr>
<tr>
<td>Participants, design, and procedure</td>
<td>62</td>
</tr>
<tr>
<td>Measures</td>
<td>63</td>
</tr>
<tr>
<td>Results</td>
<td>63</td>
</tr>
<tr>
<td>Discussion</td>
<td>66</td>
</tr>
<tr>
<td>Experiment 4B: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness (plausible face value)</td>
<td>66</td>
</tr>
<tr>
<td>Participants, design, and procedure</td>
<td>66</td>
</tr>
<tr>
<td>Measures</td>
<td>68</td>
</tr>
<tr>
<td>Results</td>
<td>69</td>
</tr>
<tr>
<td>Discussion</td>
<td>71</td>
</tr>
<tr>
<td>Experiment 5: Manipulating multiple social coupon deal condition</td>
<td>71</td>
</tr>
<tr>
<td>Pretest</td>
<td>72</td>
</tr>
<tr>
<td>Participants, design, and procedure</td>
<td>73</td>
</tr>
<tr>
<td>Measures</td>
<td>74</td>
</tr>
<tr>
<td>Results</td>
<td>75</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1. The comparison between social coupons and traditional coupons .........................2
Table 2. Definitions of key terms .........................................................................................12
LIST OF FIGURES

Figure 1. A typical social coupon business model ................................................................. 3

Figure 2. Temporal separation between prepayment and consumption in a social
coupon context ....................................................................................................................... 6

Figure 3. Price psychology approach .................................................................................... 8

Figure 4. Structure of the dissertation and unit of analysis .................................................. 9

Figure 5. Integrative framework of reference price processing during
social coupon purchasing-decision ....................................................................................... 29

Figure 6. Overview of experiments essay 1 ........................................................................... 40

Figure 7. Planned contrasts .................................................................................................. 45

Figure 8. The main effect of coupon price relative to WTPP-SC ........................................ 49

Figure 9. Time pressure present ......................................................................................... 54

Figure 10. Time pressure absent .......................................................................................... 54

Figure 11. The moderating effect of time pressure ............................................................... 57

Figure 12. The moderating effect of semantic cue concreteness
(low-implausible face value) .............................................................................................. 65

Figure 13. Abstract semantic cues ...................................................................................... 67

Figure 14. Concrete semantic cues ..................................................................................... 68

Figure 15. The moderating effect of semantic cue concreteness
(plausible face value) .......................................................................................................... 70

Figure 16. The effect of multiple social coupon deal condition ........................................... 76

Figure 17. Overview of experiments essay 2 ...................................................................... 108

Figure 18. Low-implausible face value .............................................................................. 109
Figure 19. Plausible face value .............................................................................110
Figure 20. The main effect of face value plausibility ........................................114
Figure 21. Low-implausible face value, abstract semantic cues .......................117
Figure 22. Low-implausible face value, concrete semantic cues .......................117
Figure 23. Plausible face value, abstract semantic cues ....................................118
Figure 24. Plausible face value, concrete semantic cues ....................................118
Figure 25. The moderating effect of semantic cue concreteness .......................120
Figure 26. Low-implausible face value ..............................................................124
Figure 27. Plausible face value ...........................................................................124
Figure 28. The moderating effect of temporal distance between purchasing and redeeming a social coupon .................................................................126
ABSTRACT

Traditional economic theory suggests that consumers are likely to prepay for a product/service that appears to be heavily discounted. However, in reality, many consumers do not think and act to achieve that goal. This is evident in consumer’s psychological and behavioral responses toward a new type of price promotion, namely social coupons (SCs) (i.e., online coupons that offer consumers a substantial discount with a long redemption period when they prepay for a retailer’s products/services). Such responses generate vital impacts not only on consumers themselves in terms of saving maximization but also on service retailers (e.g., sit-down dining restaurants) and SC providers (e.g., Groupon and LivingSocial) in terms of revenue maximization generated from offering SC campaigns. This dissertation aims to provide insights to the literature in price promotions, specifically SCs. Guided by mental accounting theory (i.e., consumers open a mental account when costs are incurred and close a mental account when benefits are received), this dissertation is structured in the form of two separate empirical essays. While Essay 1, “Prepaying Less is Preferable to Saving More: The Role of Pain of Prepayment Aversion in Social Coupon Purchasing Decision”, focuses on opening a SC mental account (i.e., cost incurred), Essay 2, “Superfluous Spending: The Role of Neglected Mental Budget Depletion in Spending Decision when Redeeming Social Coupons”, focuses on closing a SC mental account (i.e., benefit received).

Essay 1 explored why consumers purchase SCs featuring a low-implausible face value (i.e., a face value that is lower than the normal price range expected by consumers for a
particular type of service)? Findings across five experiments revealed that consumers’ likelihood of purchasing SCs featuring a low-implausible (vs. plausible) face value was greater when a coupon price for SCs featuring a low-implausible face value was lower than willingness-to-prepay for a SC (WTPP-SC), while a coupon price for SCs featuring a plausible face value was higher than WTPP-SC. Furthermore, consumers’ likelihood of purchasing SCs featuring a low-implausible face value was greater when a coupon price was lower (vs. higher) than WTPP-SC. Pain of prepayment (i.e., the disutility/imputed cost, painful feeling, generated from the thought of prepaying amount of money required for a SC) aversion was an underlying process. That is, consumers experienced greater pain of prepayment when a coupon price was higher (vs. lower) than WTPP-SC. Pain of prepayment, in turns, negatively influenced consumers’ likelihood of purchasing SCs featuring a low-implausible face value. Moreover, consumers’ likelihood of purchasing such SCs was greater when time pressure was present (vs. absent) and when semantic cues were abstract (vs. concrete). Finally, when being exposed to multiple SC deals for the same service, which vary in terms of face value plausibility (Option 1: low-implausible face value vs. Option 2: plausible face value), consumers were more likely to choose a SC deal featuring a low-implausible face value (Option 1) when a coupon price for a SC deal featuring a low-implausible face value was lower than WTPP-SC but a coupon price for a SC deal featuring a plausible face value (Option 2) was higher than WTPP-SC. In contrast, when coupon prices for both SC deal options were lower than WTPP-SC, consumers were more likely to choose a SC deal featuring a plausible face value (Option 2).

Essay 2 explored why consumers spend a great additional amount of money beyond a SC face value? Findings across three experiments revealed that the amount of money spent beyond a SC face value was greater when consumers redeem SCs featuring a low-implausible (vs. plausible) face value.
plausible) face value. Neglected mental budget depletion (i.e., the instance in which consumers neglect the fact that the budget assigned to a particular SC mental account as a spending self-control is already depleted) was an underlying process. That is, consumers had a greater tendency to neglect mental budget depletion when redeeming SCs featuring a low-implausible (vs. plausible) face value. Neglected mental budget depletion, in turns, positively influenced the amount of money spent beyond a SC face value. Furthermore, concrete (vs. abstract) semantic cues and far (vs. near) distance between purchasing and redeeming a SC intensified neglected mental budget depletion effect, which in turns, increased the amount of money spent beyond a SC face value when redeeming SCs featuring a low-implausible face value.

In conclusion, this dissertation provides theoretical insights on consumers’ psychological responses, and their behavioral responses toward SCs during two SC stages, which results in sub-optimal SC decision-makings: (1) purchasing SCs featuring a low-implausible face value (Essay 1); and (2) spending additional money beyond a SC face value when redeeming SCs at a service retailer (Essay 2). The empirical findings across two essays add to the growing body of the literature in price promotions, specifically SCs. This dissertation also provides managerial insights regarding how managers can design and strategically implement SC campaigns that can maximize the number of SC being purchased and the great amount of money consumers spend beyond a SC face value when they redeem a SC at a service retailer.
INTRODUCTION TO DISSERTATION

Background

With the advance of online distribution channels and the popularity of social media, a variety of service retailers (e.g., restaurants, hotels/resorts, spas, hair salons, and ticket events) are now offering a new type of price promotion, *social coupons (SCs)* (Kumar and Rajan 2012), sometimes called online daily deals (Dholokia 2010, 2012) and online discount vouchers (Edelman, Jaffee, and Kominers 2011). SCs are online coupons that offer consumers a substantial discount (typically 50% or more) with a long redemption period (e.g., 3 months up to 1 year) when they prepay for a retailer’s products/services. Specifically, SCs require prepayment using some reference prices, where an offering price (i.e., coupon price) is compared with a higher advertised reference price (e.g., face value). Rather than simply stating the special offering price for a particular product or service, SCs present some comparative price information to illustrate the saving represented by the offering. Table 1 shows the comparison between SCs and traditional coupons.

A typical SC business model consists of three major stakeholders: a *service retailer* (e.g., a local Italian sit-down restaurant); a *SC provider* (e.g., Groupon and Living Social); and a *consumer*. Generally, a service retailer approaches a particular SC provider to feature its SC on a SC provider website (or in some cases, a SC provider performs a search of the specific geographic area, identifies the successful local service retailers, and approaches them). If a SC provider and a service retailer have a mutual agreement, a SC provider will feature a service
retailer’s SC on its website. For consumers, in order to be able to purchase any SC, they have to first register with a particular SC provider.

Table 1. The comparisons between social coupons and traditional coupons

<table>
<thead>
<tr>
<th></th>
<th>Social coupons</th>
<th>Traditional coupons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount size</td>
<td>Large (50% or more)</td>
<td>Small to moderate (25% or less)</td>
</tr>
<tr>
<td>Redemption period</td>
<td>Long (3 months up to 1 year)</td>
<td>Short to moderate (1 month or less)</td>
</tr>
<tr>
<td>Deal framing</td>
<td>Reference prices (comparing a face value with a coupon price)</td>
<td>Only either $ off, % off, or free items</td>
</tr>
<tr>
<td>Deal customization</td>
<td>High</td>
<td>Low to moderate</td>
</tr>
<tr>
<td>Prepayment required</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Coupon redemption method</td>
<td>After making a prepayment, print an SC anytime by logging on a SC provider website or show code in mobile phone application at the service retailer</td>
<td>Receive a coupon via mail, email, text message via mobile device or print a coupon from a service retailer website</td>
</tr>
<tr>
<td>Ability to share a coupon</td>
<td>Yes (very easy via social network websites)</td>
<td>No or more difficult</td>
</tr>
<tr>
<td>Payment incurred after consumption</td>
<td>No to moderate (residual amount after deducting coupon face value)</td>
<td>Large (full amount after deducting discount)</td>
</tr>
</tbody>
</table>

It is important to note that in some cases consumers can purchase SCs by logging on a deal aggregator website such as Yipit. Once they become members, they will regularly receive SC information through emails. Consumers can also see or search for SCs by logging on a SC provider website. Each SC is generally available for a few days. Consumers pay a SC provider to purchase a featured service retailer’s SC using either a debit card or a credit card. Consumers can then print an SC and redeem it at a service retailer anytime during the valid redemption period (e.g., 3 months up to 1 year).

Likewise, consumers can download SC mobile applications to their smartphones. By doing so, they do not need to print their SC. Instead they can just show the virtual SC appeared in their cell phone when they redeem it at a service retailer. In order to reduce consumers’ perceived risk of forgetting to redeem SCs within a valid redemption period, most of SCs allow consumers to redeem expired SCs at a service retailer, but with the coupon price value (i.e.,
amount paid) not face value (i.e., promotional value). For example, if the consumers forget to redeem a SC “$15 for $30 worth of food and drinks for a dinner for two people at a local Italian restaurant” during the redemption validity period (e.g., beyond six month validity period), they will still be able to redeem it at that local Italian restaurant anytime, but with the value of $15, not $30. A SC provider pays a service retailer after taking a share of the revenue generated by a SC. For example, a consumer can purchase a SC by prepaying via either credit or debit card through a SC provider, and then a SC provider and a local Italian restaurant will split $15; that is, a local Italian restaurant gives food and drinks valued at $30 to a consumer and gets approximately $7.50 from a SC provider (i.e., under a 50%/50% split). Figure 1 illustrates a typical SC business model.

![Figure 1](image_url)

**Figure 1.** A typical social coupon business model

From a service retailer perspective, irrespective of the potential ability to advance selling their products as well as reach (e.g., increase brand awareness) and acquire additional consumers (e.g., increase consumer acquisitions), it is important to understand how to effectively attract...
consumers with so many competitors in the market. From a SC provider perspective, due to the typical 50/50 revenue sharing scheme, together with the limited expertise that local retailers have in marketing and advertising, SC providers play an important role in suggesting what SC design features retailers should use. Additionally, due to the fast growing number of not only websites that feature only SCs (e.g., Groupon and LivingSocial), but also other types of websites such as deal aggregators (e.g., Yipit), searches (e.g., Google Offers), travel destinations (e.g., Travelzoo Local), local review websites (e.g., Yelp), e-retailers (e.g., Amazon Local), and local magazines (e.g., Creative Loafing), it is important for SC providers to continuously improve their website features to maintain and attract new members. However, there is limited empirical academic research investigating this issue.

Focusing on group buying, Jing and Xie (2011) examined whether or not group buying facilitates consumer social interaction (i.e., using a group discount to motivate informed consumers to work as sales agents to acquire less-informed consumers via interpersonal information/knowledge sharing). On the other hand, from a retailer perspective, previous studies reveal mixed results in terms of the effectiveness of launching SCs to increase consumer acquisitions and spending behaviors when redeeming a SC (Dholokia 2010, 2012). Dholokia and Kimes (2011) appear to be the only academic research that focuses on a consumer perspective. Dholokia and Kimes (2011) surveyed SC and non-SC users. The objective of this survey was to examine SC users’ experiences with SCs and non-SC users’ perceptions of SCs. The results showed that SC users were still enthusiastic about SCs. Specifically, the heaviest SC users (i.e., those who had purchased 11 or more SCs) were the ones most enthusiastic about them. Additionally, all SCs users indicated high levels of intentions of purchasing SCs again in the near future.
Finally, non-SC users indicated not using SCs primarily because of awareness and access issues. In short, these insights suggest that there are great opportunities for growth of SCs from a consumer perspective. In this dissertation, it is contended that in order to implement SC promotions successfully, it is important to not only understand consumers’ perceptions of SCs, but also clearly understand how consumers deal with SC-related decision scenarios.

**Statement of the problem**

Traditional economic theory suggests that consumers prepay for a new type of price promotion, SCs, in order to receive large savings. However, in reality, many consumers do not think and act to achieve that goal (i.e., make sub-optimal SC-related decisions that result in failure to achieve large savings). It is proposed that these psychological and behavioral responses toward SCs occur mainly due to the unique features of the SC in terms of *prepayment scheme* and *reference price advertising*. These consumers’ psychological and behavioral responses toward SCs generate vital impacts not only on consumers’ saving potential, but also on retailers and SC providers, in terms of revenues and profitability. It is contended that understanding why consumers think and behave in this particular manner is vital in terms of better SC decision-making. This can be beneficial to other stakeholders, SC providers and retailers, especially in terms of SC design and implementation.

**Main theoretical framework**

This dissertation uses mental accounting framework (Thaler 1980) to specifically investigate consumers’ psychological and behavioral responses towards SCs. In short, mental accounting framework (Thaler 1980) uses prospect theory (Kahneman and Tversky 1979) to explain how individuals keep track of their finances. It suggests that consumers mentally frame
and group different outcomes in accordance with certain rules. If outcomes are grouped together, they post to the same mental account. Accordingly, keeping mental accounts allows consumers to track financial activities and control spending behaviors (e.g., if consumers strictly use a transaction-specific SC mental account, they should not spend any additional money beyond a SC face value, assuming that their goal of prepaying for a SC is to receive large savings). Figure 2 shows the temporal separation between prepayment and consumption in a SC context.

**Figure 2.** Temporal separation between prepayment and consumption in a social coupon context

**Research questions and objectives**

This dissertation aims to provide insights about consumers’ psychological and behavioral responses toward SCs during the two key SC decision-making stages: purchasing a SC (cost incurred); and redeeming a SC (benefit received.) This dissertation specifically investigates two types of consumers’ decision-making that seem not to be in their best interests (i.e., goal of receiving large savings): (1) purchasing SCs featuring a low-implausible face value (i.e., a face value that is lower than the normal price range expected by consumers for a particular type of service); and (2) spending a great additional amount of money beyond face value when
redeeming SCs at a service retailer. The two major research questions guiding this dissertation are as follows:

1. Why do consumers purchase SCs featuring a low-implausible face value?
2. Why do consumers spend a great additional amount of money beyond a SC face value?

This dissertation aims to answer the above two research questions by (1) proposing the contextual variables that influence consumers’ decisions to purchase SCs featuring a low-implausible face value and spend a great additional amount of money beyond a SC face value, (2) identifying the underlying process of these two behaviors, (3) empirically testing the predictions via a set of scenario-based experiments, and (4) providing important theoretical and practical insights generated from the results.

**Approach and structure**

**Approach**

There are three major approaches in studying the effect of price on consumer behavior (Manoj 2013). First, the *traditional pricing approach* posits that purchase decisions are based on the principle of rational utility maximization and individuals make tradeoffs between the utility from the product/service and the disutility from price. Second, the *behavioral pricing approach* posits that purchase decisions are based on subjective assessment of value. Individual’s assessments of value are influenced by subjective judgments of the magnitude of a price and the perceived quality of the offering (e.g., Grewal and Compeau 1992; Monroe 1973; Urbany, Bearden, and Weilbaker 1988).

Behavioral pricing researchers focus on characterizing how individuals judge the magnitude of a price and how they make quality assessments. Finally, the *price psychology*
The approach posits that instead of focusing subjective value as the key mediating variable in all purchase decisions, it might be more useful to focus on the different heuristics and feelings that guide purchase decision (Manoj 2013). Figure 3 illustrates the price psychological approach.

Figure 3. Price psychology approach

This dissertation uses a price psychology approach, specifically mental accounting framework, to specifically investigate consumers’ information processing and their psychological and behavioral responses towards SCs. In short, mental accounting framework (Thaler 1980) uses prospect theory (Kahneman and Tversky 1979) to explain how individuals keep track of their finances. It suggests that consumers mentally frame and group different outcomes in accordance with certain rules.

Structure

Guided by mental accounting framework, this dissertation is structured in the form of two separate empirical essays. Essay 1: “Prepaying Less is Preferable to Saving More: The Role of Consumer Aversion to Pain of Prepayment in Social Coupon Purchasing Decision” focuses on opening a SC mental account (i.e., cost incurred when consumers prepay for a SC). Essay 2: “Superfluous Spending: The Role of Neglected Mental Budget Depletion in Spending Decision..."
When Redeeming Social Coupons” focuses on closing that mental account” (i.e., benefits received when consumers redeem a SC).

If outcomes are grouped together, they are assumed to be posted to the same mental account (e.g., a SC mental account for a particular local Italian restaurant). Accordingly, keeping mental accounts allow consumers to track financial activities and control spending behaviors (e.g., if consumers strictly use a transaction-specific social coupon mental account, they should not spend any additional money beyond a social coupon face value, assuming that their goal of purchasing a SC is to receive large savings). Figure 4 shows the structure of the dissertation and unit of analysis.

**Figure 4.** Structure of the dissertation and unit of analysis
Unit of analysis and industry focus

Unit of analysis

This dissertation specifically investigates consumers, their psychological responses, and their behavioral responses toward SCs during two SC stages, which results in sub-optimal SC decision-making: (1) purchasing SCs featuring a low-implausible face value (i.e., a face value that is lower than the normal price range expected by consumers for a particular service and is lower than a price that is meant to be attractive; (i.e., so called, pain of prepayment aversion effect) (Essay 1); and (2) spending additional money beyond face value when redeeming SCs at a service retailer (so called, neglected mental budget depletion effect) (Essay 2). While Essay 1 focuses on consumers, their pain of prepayment, and their SC purchasing behavior, Essay 2 focuses on consumers, their neglected mental budget depletion, and their spending behavior when redeeming a SC.

Industry focus

While the conceptual framework and hypotheses are derived generically (i.e., industry independent), the experimental scenarios describe a SC promotion in a service context, specifically sit-down dining restaurants. The sit-down dining restaurant context is particularly appropriate to test the hypotheses, both from theoretical and practical standpoints. Theoretically, sales promotion research using a behavioral decision approach has mainly applied to consumer packaged goods. On the other hand, empirical investigations from a service context, specifically in SC promotions, are under researched. From a practical standpoint, launching SCs is becoming more popular in discretionary, repeated business service industries. This dissertation focuses on the sit-down dining restaurant industry. It is categorized as discretionary expenses and thus,
consumers’ decision making (i.e., purchasing SCs and spending behaviors when redeeming SCs) toward this type of service are likely to be influenced by emotional-based choice and motivated reasoning (i.e., ability to construct a justification for the desired conclusion).

Importantly, this industry is among the most popular industries currently launching SCs in an effort to acquire new consumers and offer services that are conducive to repeat patronage (Kumar and Rajan 2012). Furthermore, the results from the survey studies collected from service retailers are different from the ones collected from SC consumers. Dholakia (2012) surveyed retailers and found that the sit-down dining restaurant industry was one of the least profitable businesses offering SCs (e.g., 44% profitable). In contrast, Morpace (2012) surveyed SC consumers and found that a sit-down dining restaurant sector was the largest sector (55%) that consumers want to see more SC deals. Accordingly, it is argued that offering SCs that feature appropriate deal claim variables and other vital SC-related variables will enable service retailers to effectively attract new (and/or existing) consumers (e.g., maximizing number of SCs purchased) and increase sales revenues and profit (e.g., additional spending beyond SC face value).

Main methodology

Both Essay 1 and Essay 2 employ a scenario-based experimental design. In Step 1, the academic literature is reviewed to identify the pertinent measures as well as SC provider websites to develop the initial stimuli. In Step 2, the measures are adapted and stimuli are modified to a sit-down dining restaurant context. An initial survey is then developed. In step 3, the initial survey’s results are reviewed by marketing professors, doctoral students, and regular SC consumers. In Step 4, a revised survey is submitted to the Institutional Review Board for
approval (IRB). In Step 5, the survey is pretested with undergraduate students and/or general population. In Step 6, data are collected for the main experiment via online survey with the general population. In Step 7, data are analyzed (ascertain sample characteristics, checks for the reliability and validity of the construct measures, and test the proposed hypotheses via univariate, mediation, and mediated moderation, Hayes (2012), using SPSS 22.

**Delimitations**

Despite the task being as realistic as possible and the use of different populations including undergraduate students and paid online panels, the studies conducted in both essays are scenario-based experiments. While scenario-based experiments allow the testing of the main effects of the contextual variables and potential moderators in a controlled environment, thus, clarifying the theoretical underpinning of my aspects, some aspects of SC purchasing decision (Essay 1); and spending decision when redeeming a SC (Essay 2), are not exhaustively captured. Also, scenario studies cannot capture decision making at multiple time points.

**Definitions of key terms in the dissertation**

There are several key terms that appear throughout the dissertation. Table 2 illustrates these key terms.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coupling</td>
<td>The degree to which thoughts of consumption evokes thoughts of payment and vice versa</td>
<td>Prelec and Loewensten (1998)</td>
</tr>
<tr>
<td>Coupon price</td>
<td>The amount of money that consumers have to prepay for a social coupon</td>
<td>New</td>
</tr>
<tr>
<td>Deal proneness</td>
<td>The psychological propensity of a consumer to respond to promotions because they are in the deal form</td>
<td>Lichtenstein, Netemeyer, and Burton (1990)</td>
</tr>
</tbody>
</table>
Table 2 (Continued)

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double-entry mental accounting</td>
<td>Consumers mentally combine payment and consumption within a single mental account but evaluate the account every time they pay or consume. There are two sets of entries for a particular transaction: one a set for payments and a set of consumptions.</td>
<td>Prelec and Loewenstein (1998)</td>
</tr>
<tr>
<td>Face value</td>
<td>The amount of money that consumers can redeem a service retailer</td>
<td>New</td>
</tr>
<tr>
<td>Face value plausibility</td>
<td>Consumers’ perception of a social coupon face value plausibility</td>
<td>New</td>
</tr>
<tr>
<td>Malleable mental accounting</td>
<td>The instances in which consumers have flexibility either (a) in classifying ambiguous expenses and thus, in assigning them to different mental account, or (b) in constructing mental accounts to accommodate unclassified expenses</td>
<td>Cheema and Soman (2006)</td>
</tr>
<tr>
<td>Mental accounting</td>
<td>The cognitive process whereby individuals treat resources differently depending on how they labeled and grouped both their inflow and outflow of money</td>
<td>Thaler (1980)</td>
</tr>
<tr>
<td>Mental budgeting</td>
<td>Consumers mentally allocating money to mental accounts and resist further purchases when the budget is depleted</td>
<td>Heath and Soll (1996)</td>
</tr>
<tr>
<td>Neglected mental budget depletion</td>
<td>The instance in which consumers neglect the fact that budget assigned to a particular social coupon mental account as a spending self-control is already depleted</td>
<td>New</td>
</tr>
<tr>
<td>Neglected mental budget depletion effect</td>
<td>Mental budget depletion neglect violates spending self-control decision when redeeming social coupons</td>
<td>New</td>
</tr>
<tr>
<td>Order high-price item likelihood</td>
<td>Consumers’ likelihood to order a high-price item</td>
<td>New</td>
</tr>
<tr>
<td>Pain of prepayment</td>
<td>Disutility (imputed cost), painful feeling, generated from the thought of the prepaying amount of money required (i.e., coupon price) to purchase a social coupon</td>
<td>New</td>
</tr>
<tr>
<td>Pain of prepayment aversion effect</td>
<td>Avoiding pain of prepayment influences consumers’ social coupon purchasing decision</td>
<td>New</td>
</tr>
<tr>
<td>Prepayment</td>
<td>The amount of money consumers pay to purchase a social coupon (i.e., equal to coupon price)</td>
<td>New</td>
</tr>
<tr>
<td>Reference price</td>
<td>The price that consumers formulate in their minds by comparing or evaluating observed price of a service against some standard or reference</td>
<td>Monroe (1973)</td>
</tr>
<tr>
<td>Reference price focus</td>
<td>A reference price that consumers focus during a spending decision when redeeming a social coupon</td>
<td>New</td>
</tr>
<tr>
<td>Sales promotion</td>
<td>A short-term incentive to encourage immediate (or near future) purchase of a product or service</td>
<td>Kotler (2008)</td>
</tr>
<tr>
<td>Self-control</td>
<td>The self’s need to exert control over the affective system’s desires that have negative long-term consequences</td>
<td>Hoch and Loewenstien, (1991)</td>
</tr>
</tbody>
</table>
Table 2 (Continued)

| Semantic cues concreteness                  | The degree of detail and specificity about the comparison between face value and coupon price being made | New |
| Skepticism                                  | The general tendency of disbelief of advertising claims                                             | Hardesty, Carlson, and Bearden (2002) |
| Social coupons                              | Online coupons that offer consumers a large discount with a long redemption period when they prepay for a retailer’s products/services | Kumar and Rajan (2012) |
| Social coupon purchase likelihood           | Consumers’ likelihood of purchasing a social coupon                                                 | New |
| Spending amount beyond a social coupon face value | The amount of money consumers spend beyond a social coupon face value                                | New |
| Spending self-control                       | The ability to monitor and regulate one’s spending-related though stand decision in accordance with self-imposed standard | Haws, Bearden, and Nenkov (forthcoming) |
| Temporal distance between purchasing and redeeming a social coupon | The length of the time difference between purchasing and redeeming a social coupon at the service retailer | New |
| Time pressure                               | The time available left for eligibly for purchasing a social coupon                                 | New |
| Willingness-to-prepay for a social coupon (WTPP-SC) | The highest coupon price consumers are willing to prepay to for a social coupon for a particular service | New |

References


ESSAY 1:

Prepaying Less is Preferable to Saving More: The Role of Consumer Aversion to Pain of Prepayment in Social Coupon Purchasing- Decisions

Abstract

Despite the popularity of offering social coupons (SCs) featuring a low-implausible face value (i.e., a face value that is lower than the normal price range expected by consumers for a particular type of service) among service retailers, research investigating why consumers purchase such SCs is limited. In this research, it is proposed that this behavior occurs because consumers also incorporate willingness-to-prepay for a SC (WTPP-SC) in their SC purchasing decisions. Findings across five experiments revealed that consumers’ likelihood of purchasing SCs featuring a low-implausible (vs. plausible) face value was greater when a coupon price for SCs featuring a low-implausible face value was lower than WTPP-SC, while a coupon price for SCs featuring a plausible face value was higher than WTPP-SC. Specifically, consumers’ likelihood of purchasing SCs featuring a low-implausible face value was greater when a coupon price was lower (vs. higher) than WTPP-SC. Pain of prepayment (i.e., the disutility/imputed cost, painful feeling generated from the thought of prepaying an amount of money required for a SC) was an underlying process. Furthermore, consumers’ likelihood of purchasing such SCs was greater when time pressure was present (vs. absent) and when semantic cues were abstract (vs. concrete). Finally, when exposed to multiple SC deals for the same service, which differ in face value plausibility (low-implausible vs. plausible), consumers were more likely to choose a SC deal featuring a low-implausible face value when a coupon price for a SC deal featuring a low-implausible face value was lower than WTPP-SC, while a coupon price for a SC deal featuring a
plausible face value was higher than WTP-SC. In contrast, consumers were more likely to choose a SC deal featuring a plausible face value when coupon prices for a SC deal featuring a low-implausible face value and a SC deal featuring a plausible face value were both lower than WTP-SC. Overall, these findings confirm the vital roles of WTP-SC and pain of prepayment aversion effect, as well as the boundary conditions of such effect, including time pressure, semantic cue concreteness, and multiple SC deal conditions, in consumers’ SC purchasing-decisions.

Introduction

“John and his girlfriend like Italian food. They occasionally dine out together at various local Italian sit-down restaurants with the average total bill including alcoholic drinks (before tip) of $60.

This morning, John received an email from Groupon. The key message in the email is that Beccofino’s, a new local Italian sit-down restaurant, is offering a social coupon:

$15 for $30 worth of food and drinks for a dinner for 2 people, 50% off

John decided to purchase this Beccofino’s social coupon”.

Advertised Reference Prices (ARP), whereby an offering price (i.e., coupon price) is compared with a higher contextual reference price (i.e., face value), is the key deal feature in social coupons (SCs). SCs are online coupons that offer consumers a substantial discount (e.g., typically 50% or more) with a long-redemption period (e.g., 3 months up to 1 year) when they prepay for a retailer’s products or services (Kumar and Rajan 2012). The opening scenario in this research commonly occurs. From a traditional economic perspective, one can argue that the consumers’ goal of prepaying for SCs is to receive large savings. However, in reality, they sometimes make SC purchasing-decisions that seem not to be in their best interests. For example, if John is a purely rational consumer, he should discount the economic value of this SC. In fact,
if he used a pure rational-based calculation, he would realize that he would get only a 25% discount ($15/$60), not a 50% discount (an initial goal of prepaying in order to receive large savings). This is because he will probably end up spending an additional $30 on a typical $60 meal when he has dinner with his girlfriend at any local Italian restaurant: 1 shared appetizer = $7 (e.g., Bruschetta), 2 entrées = $30 ($15 each, e.g., Lasagna and Chicken Alfredo), and 1 shared dessert = $9 (e.g., Tiramisu), 2 glasses of wine = $14 ($7 each, e.g., Cabernet Sauvignon and Chardonnay). As such, he should perceive this SC to be unattractive (i.e., skeptical about face value plausibility) and decide not to purchase it. In this research, it is proposed that consumer aversion to pain of prepayment (i.e., the disutility/imputed cost, painful feeling, generated from the thought of the amount of money required for paying for a SC) would influence the manner in which consumers make SC purchasing-decisions. From the opening scenario, it is contended that John decided to purchase this Beccofino’s SC due to his motivation to avoid pain of prepayment regardless of his skepticism toward a low-implausible face value and potential ultimate greater dollar savings when redeeming a SC at the service retailer, when he is exposed to the same discount size (e.g., 50%). Prepaying for $15 is less painful than prepaying for $30. Specifically, this pain of prepayment is enhanced when the coupon price is higher than the highest coupon price John is willing to prepay for a SC for a dinner for two people at any local Italian sit-down restaurant, which is referred in this paper in the later discussions as willingness-to-prepay for a SC (WTPP-SC)

This emotionally induced decision raises an important, but hitherto unaddressed, question: How does pain of prepayment influence consumers’ SC purchasing-decisions? This is vital because service retailers would want to know the “correct” reference price variables (i.e., face value and coupon price) of their SC that would communicate the value proposition of the
coupon to attract the highest number of SCs purchased, while minimizing the risk of financial loss (i.e., due to offering a large discount size).

The conceptualization and hypotheses in this research draw on three streams of literature. *First*, based on consumer’s reference price (RP) processing literature (Biswas and Blair 1991; Compeau and Grewal 1998; Grewal, Monroe, and Krishnan 1998; Mazumdar, Raj, and Sinha 2005), mental accounting theory (Prelec and Loewenstein 1998), specifically the concept of pain of prepayment, is included in the traditional RP processing framework. Then, it is proposed that consumers consider not only face value plausibility when making their SC purchasing decision, but also WTPP-SC. Specifically, pain of prepayment is enhanced when a coupon price is higher than WTPP-SC. As consumers tend to avoid negative emotion like pain of prepayment, they tend to more positively respond to SCs that feature a low-implausible face value in which a coupon price is lower than WTPP-SC, regardless of their skepticism toward face value plausibility, deal proneness, and variety-seeking orientation. *Second*, based on the literature on consumers’ decision-making under time pressure (Dhar and Nowlis 1999; Jian 2002), it is proposed that consumers’ likelihood of purchasing SCs featuring a low-implausible face value will be greater when time pressure is present (vs. absent). *Third*, based on the literature on semantic cues effect in advertised reference prices (ARPs) (Biswas and Burton 1993; Biswas et al. 1999; Grewal and Compeau 1992; Lichtenstein, Burton, and Karson 1991), different semantic cues in SCs are discussed, it is proposed that likelihood of purchasing SCs featuring a low-implausible face value will be greater when semantic cues are abstract (vs. concrete). *Finally*, based on the literature on multiple ARPs (Biswas et al. 1999; Biswas et al. 2000; Gotlieb and Dubinsky 1991), it is proposed that when consumers are exposed to multiple deals for the same service, which vary in face value plausibility (plausible and low-implausible), consumers’ likelihood of choosing a SC
deal featuring a low-implausible face value will be greater when a coupon price for a SC deal featuring a low-implausible face value is lower than WTPP-SC, while a coupon price for a SC deal featuring a plausible face value is higher than WTPP-SC (vs. when coupon prices for both deals are lower than WTPP-SC).

The conceptualization and empirical results in this research add to the growing body of the literature in how consumers respond to price promotions, specifically SCs. Due to the unique nature of SCs that require prepayment, this research demonstrates how WTPP-SC and pain of prepayment aversion influence consumers’ SC purchasing decision. Furthermore, the present research adds to the literature in contextual cues in ARP by showing how and when time pressure, semantic cue concreteness, and multiple SC deal conditions intensify or attenuate this pain of prepayment aversion effect.

The rest of this research progresses as follows. First, the conceptual framework leading to the hypotheses is discussed. Then, the methods and results of the five experiments that test these hypotheses are presented. Finally, the theoretical and practical implications of the findings from the five experiments, a statement of the limitation of this paper and suggestions for future research are provided.

**Conceptual framework and hypotheses**

**Reference price (RP)**

*Reference price* (RP) is the price that consumers formulate in their minds by comparing or evaluating the observed price of a product against some standard or reference (Monroe 1973). In other words, consumers not only respond to absolute prices, but also some internal and external comparison standards in judging the absolute prices (Briesch et al. 1997; Kalyanaram
and Winer 1995; Mazumdar, Raj, and Sinha 2005). There are multiple conceptualizations of RP. For example, a normative RP views a reference price as a “fair” or “just” price, where “fair” and “just” may be determined by past prices, prices of similar other products/services, prices paid by other consumers, or the retailer’s costs (Bolton et al. 2003; Xie, Monroe, and Cox 2004).

An aspiration-based RP views a RP as prices similar consumers pay for the same or similar products/services (Mezias, Chen, and Murphy 2002). An expectation-based RP, the most commonly used conceptualization of RP, views a RP as a predictive price expectation (Kalynaram and Winer 1995). Previous RP research mostly adopts one conceptualization of a RP in order to limit the scope of their investigation within that conceptualization. Mazumdar, Raj, and Sinha (2005) suggested that an aspiration-based RP tends to be evoked in the industry in which companies use discriminatory pricing or dynamic pricing that lacks transparency (e.g., negotiated pricing, airline pricing, and hotel pricing), which results in significant variation in prices paid across consumers. A normative RP tends to be evoked in the monopolistic industry or the industry that consist of few competitors, when prices charged by competitors lack transparency, and when consumers are locked into the category because of the vital nature of the product (e.g., gasoline and medicine) or long-term contracts. Finally, an expectation-based RP tends to be evoked in high-competition industries (i.e., many companies offer the same or similar products/services), where prices are transparent and relatively stable over time. In this research, final conceptualization of a reference price is adopted as this present research focuses on a service industry (i.e., sit-down dining restaurants), which consists of many competitors and employs a transparent-stable pricing strategy.
**Face value as an advertised reference price (ARP)**

Many retailers advertise their offering price in conjunction with the higher products/service’ regular/past prices or priced charged for the same products by competing retailers. Such higher price accompanying lower advertised offering price is commonly referred to as, an *advertised reference price (ARP)* (Mazumdar, Raj, and Sinha 2005). This is because ARP is used to serve as a reference against how consumers are expected to evaluate the offering price (Grewal and Compeau 2007). In a SC context, comparing an offering price (i.e. *coupon price* or dollar amount that consumers have to prepay for a SC) with the retailer’s normal price (i.e. *face value* is dollar amount that consumers can eligibly spend at a particular service retailer who offers the SC) is the major format of reference price advertising due to the nature of most of services, foods, and drinks offered by each sit-down dining restaurants being uniquely different from each other in certain aspects, thus, offering prices that cannot be explicitly compared with the other sit-down dining restaurants. Accordingly, it is proposed that an SC face value acts as a higher ARP while a coupon price acts as a lower offering price.

**Theories related to reference price processing in social coupon purchasing-decisions**

A substantial body of literature in reference price processing has evolved to address the importance of ARP and the theories on which it is based (See also Biswas, Wilson, and Licata 1993 for discussion). The three theories that are most commonly used in ARP are *adaptation-level theory* and *assimilation-contrast theory*. The following section provides the discussions regarding (1) these two commonly used theories in relations to SC purchasing context, (2) mental accounting theory as another theory that will be used in this present research to investigate consumers’ RP processing during SC purchasing-decisions, (3) the concept of pain of prepayment and the contention that consumers’ aversion of pain of prepayment mediates the
effect of face value plausibility and WTPP-SC on SC purchase likelihood, and (4) time pressure and semantic cue concreteness as the boundary conditions of pain of prepayment aversion effect.

**Adaptation-level theory.** Adaptation-level theory (Helson 1964) posits that all judgments are relative to the current adaptation level. The adaptation level depends on the magnitude, range, and dispersion of stimuli from the mean. These stimuli many happen in the past or present. Accordingly, based on adaptation-level theory, it seems that consumers typically have a range of acceptable face value for any given type of sit-down dining restaurants (e.g. a typical total diner bill for a dinner for two people at an Italian restaurant is $55- $200; while a typical total lunch bill for two people at a sandwich shop is $15-$40). Thus, the exposure to any face value information is considered as believable or unbelievable against the adaptation level. In other words, the exposure to any face value may upwardly/ downwardly adjust or even replace the original price.

**Assimilation-contrast theory.** Assimilation-contrast theory (Sherif and Hovland 1961) posits that consumers have a latitude of acceptance; a subjective internal acceptable price range. A price falling within the range is accepted and assimilated into the range; while a price falling outside of the range becomes noticeable and contrasted with the range. Thus, based on assimilation-contrast theory, it is argued that the plausibility of a face value is a vital factor influencing the price perception. When the face value is introduced at (or near) the upper limit of a consumer’s perceived range of the normal price (e.g., the average total bill for a dinner for two people for a particular type of sit-down dining restaurants), it is perceived as plausible and is thus assimilated into the range. This assimilation effect results in a shift of the product/service (e.g., a dinner for two people at a particular type of sit-down dining restaurant for a particular type of meal) toward a face value, and thus results in an increase in the favorability of a purchase
decision. In contrast, a face value immensely exceeds the highest expected regular price is likely to be perceived as implausible (i.e., unbelievable) and contrasted with an original price standard; the contrast effect. When the contrast effect occurs, the entire original price standard range would shift in response to an implausible face value and produce different evaluations and product/service categories. Alternatively, the implausible face value might be ignored and would not shift the original price standard at all (i.e., an original reference price stored in the memory = a new reference price).

If a face value is lower than the highest expected normal market price, it is perceived as believable, but does not have a strong effect on cognitions and evaluations because of a lack of impact on a SC coupon price. Assimilation-contrast theory suggests an inverted U-shaped pattern of results for both the subsequent cognitive and evaluative-based variables. The assimilation effect of a plausible reference price is well documented in reference price research such that an advertised reference price that is high-plausible will have a stronger positive effect on the cognitive based variable (e.g., an internal reference price) and evaluative variables (e.g., perception of deal value and attitude toward the deal, and subsequently likelihood to purchase) than an advertised reference price that is high-implausible (sometimes called exaggerated), low-plausible, or no reference price (Lichtenstein, Burton, and Karson 1991).

In a SC purchasing context, it is proposed that when consumers making a SC purchasing decision they consider not only face value plausibility (i.e., consumers’ perception of whether or not a SC face value falls within the normal price range consumers expect to pay at a particular type of sit-down dining restaurant for a particular type of meal) but also willingness-to-prepay for a SC (WTPP-SC) (i.e., consumers’ perception of whether or not the coupon price is lower than the highest coupon price they are willing to prepay for a particular meal at a particular type
of restaurant). If yes (i.e., below WTPP-SC), a purchase is made. If not, consumers will search for other SCs and compare a particular SC with other SCs (when consumers have high-motivation to purchase a SC such that consumers log on a SC provider website in an attempt to search and purchase a SC that best meets their predetermined preference). Consumers might even disregard that SC completely (when consumers have low-motivation to purchase SC; for example, in the situation in which that they just receive a SC from a SC provider via email with no intention of purchasing any specific SC).

There is no previous research that focuses on low-implausible ARP. However, in a SC context, due to the unique nature of SCs that requires prepayment, numerous service retailers use a low-implausible ARP (i.e. face value) to attract consumers to purchase their SCs by lowering the face value of a SC; while still offering a large discount size (e.g., 50% off). The key reason that many service retailers using low-implausible ARP in their SCs is that they intend to lower the consumers’ cost of prepayment as well as increase the retailers’ profits (e.g., by expecting that consumers are likely to spend more than an SC face value). From the opening scenario, “$15 for $30 worth of food and drinks at Beccofino’s for a dinner for two people, 50% off” is considered a SC featuring a low-implausible face value because the face value (i.e., redemption value) of $30 is much less than the average total bill John expects to pay ($60) when he has dinner with his girlfriend at a local Italian sit-down restaurant. In contrast, a SC “$30 for 60 worth of food and drinks for a dinner for two people at Beccofino’s, 50% off” is considered a SC featuring a plausible face value, because the amount of face value ($60) is within the range of the average total bill John expects to pay. Thus, it results in providing him with an optimal purchasing decision in terms of maximizing his monetary saving, achieving his initial goal of saving 50% off from prepaying to purchase a social coupon (i.e, no or very low additional
money that he has to spend when redeeming a social coupon at Beccofino’s). It is proposed that this phenomenon can be explained by mental accounting theory.

**Mental accounting theory.** Mental accounting theory (Thaler 1980) posits that consumers create a mental (i.e., psychological account for the cost (i.e., payment) and benefit (i.e., consumption) associated with a particular purchase transaction. This mental account will remain open until consumers have completed a transaction and obtained the consumption benefit. Consumers typically use mental accounting to help them monitor their expenditures and regulate their consumption (Read, Loewenstein, and Kalyanaraman 1999). Consumers may evaluate the overall experience as either gain (i.e., pleasurable), if the positive utility of consumption is greater than the negative utility of payment, or loss (painful) if the positive utility of consumption is lower than the negative utility of payment (Prelec and Loewenstein 1998). Based on mental accounting theory, it is proposed that in a SC context, a consumer opens a SC mental account on when making a prepayment for a SC(cost incurred) and closes this mental account when redeeming a SC at a service retailer (benefit received).

Prelec and Loewenstine (1998) further proposed that consumers combine payment(s) and consumption(s) for a specific purchase within a single mental account. However, they evaluate that mental account every time they pay or consume. Accordingly, consumers feel a net pain or pleasure at the moment of payment or consumption depending on whether the mental account is perceived as loss or gain at that particular moment. Prelec and Loewenstein (1998) found that consumers generally have an aversion to make a payment when the utility from consumption is forgone, and to avoid this pain of payment; they prefer prepayment to post-payment. The key reason is explained by prospective accounting (i.e., expected utility or disutility from future
payment and consumption is given more weight than utility or disutility from past payment and consumption experiences).

Prospective accounting (Prelec and Loewenstein 1998) posits that the consumption experience is heightened by pre-payment. The imputed costs are highest if the payment is made right after consumption and they will gradually decrease as payment is pushed to the future. This tendency to accelerate payment in order to enhance consumption enjoyment is likely to be greater for purchases that are inherently enjoyable and associated with pleasure during or after consumption, so called hedonic purchase.

Patrick and Park (2006) extended the findings in Prelec and Lowenstein (1998) by comparing consumers’ preference for payment timing for products that vary by type (hedonic vs. utilitarian) and durability (non-durable vs. durable). The results indicate that only hedonic-non-durable goods encourage consumers’ preference for prepayment. However, consumers’ preference for prepayment for hedonic-non-durable goods is robust only under favorable transaction conditions (e.g., a focal consumer learns that the price he paid for the product/service is much lower than what his friend paid for the same product/service), but not under unfavorable transaction conditions (e.g., a focal consumer learns that the price he paid for the product/service is much higher than what his friend paid for the same product/service).

These insights from academic research are in line with the current SC statistics, in that the majority of the retailers offering SCs are classified as hedonic-nondurable goods such as restaurants and spas. Recently, many high-end (luxurious) service retailers are increasingly promoting their services via social coupons (Rueter 2011). This is an interesting phenomenon as
it is widely known that most of the target consumers for high-end services are less sensitive to price promotions.

**Figure 5.** Integrative framework of reference price processing during social coupon purchasing-decision

**Ex:** A SC featuring “$15 for 30 worth of food and drinks for a dinner at Restaurant A for two people”. Face value = The amount of money that consumers can redeem at the Restaurant A ($30); Coupon price = The amount of money that consumers have to prepay for a SC ($15); Face value plausibility = Consumers’ perception of whether a face value is lower than the average total bill or equal to or higher than the average but lower than the highest total bill they expect to pay for a dinner for two people at a Restaurant A; WTPP-SC (willingness-to-prepay for a SC) = The highest coupon price consumers are willing to prepay for a SC for a particular service; Pain of prepayment = The disutility (imputed cost), painful feeling, generated from the thought of the amount of money required to prepay for an SC. Social coupon purchase likelihood = Consumers’ likelihood of purchasing a SC.
Furthermore, previous SC research indicates that increasing discount size does not help attract more consumers (Dholakia 2010). This may be due to the fact that most of SCs offer large discount (50% or more) and consumers are more susceptible to an extremely large discount size. Accordingly, it is argued that it is important to focus on offering the appropriate level of face value and coupon price that most effectively enhance consumers’ likelihood to purchase their SCs. For example, consider that if controlling for the discount size of 50%, setting the different levels of face value will correspond with the different levels of coupon prices.

From a price psychology perspective (Manoj 2013), one arising issue when studying reference price processing during SC purchasing decision is that subjective feeling might occur when consumers are exposed to a SC featuring a coupon price that exceeds their WTPP-SC. It is proposed that pain of prepayment is such subjective feeling, which is likely to influence consumers to make a SC purchasing-decision that does not result in their best interests (i.e., achieve large savings). Figure 5 shows the integrative framework of RP processing during SC purchasing-decision.

**Pain of prepayment**

Prelec and Lowenstein (1998) proposed that consumers experience pain of payment when they part with money. This pain of paying is a learned adaptive response that enables individuals to deal with everyday decisions. Consumers make purchase decisions by comparing the pleasure of consumption with the pain of payment. Previous literature suggests the existence of pain of payment (i.e., a negative emotion or disutility that consumers attempt to avoid) as well as provide support to the claim that pain of payment mediates the effect of price on consumer responses. For example, Samanez-Larkin et al. (2008) identified a region of the human brain that activates to aversive stimuli- the anterior insula (i.e., a portion of the cerebral cortex folded deep
within the lateral sulcus between the temporal lobe and the frontal lobe. Insula is activated while experiencing or anticipating diverse aversive states such as anticipation of electric shocks (Chua et al. 1999), risk-taking decision-making (Paulus et al. 2003), loss prediction (Paulus and Stein 2006), and anticipation of aversive visual stimuli (Nitschke et al. 2006).

Knutson et al. (2007) examined how consumers respond to price while having their brains scanned with functional magnetic resonance imaging (fMRI). In this study, participants first see its price, and finally decide whether or not to purchase the product. This study shows that excessive prices are associated with activation in the insula. Furthermore, activation in the insula is significantly greater for products that are ultimately not purchased than for products that are ultimately purchased. Based on these results, they conclude that the effect of price on purchase decisions is mediated by emotional responses in the brain. Plassman, Mazar and Rangel (2011) also used fMRI to examine how the human brain processes different types of costs during purchase decisions, specifically whether the neural representation of costs differs between abstract costs (e.g., paying money) and somatosensory costs (e.g., tolerating electronics shocks). Although the results show that purchase decisions involving money and electronic shocks are similar in a behavioral level, they are significantly different at a neural level. Also, making decisions involving somatosensory costs involves in pain processing, while making decisions involving monetary prices does not. This implies that the pain of payment involving money is not experienced the same as physical pain.

Using behavioral experiments, Mazar et al. (2011) investigated whether the pain of payment is experienced as a physical pain, psychological pain, or whether it is not experienced as pain at all. In two studies, the results show that making psychological pain more salient decreases consumers’ willingness to pay for hedonic as well as utilitarian products, and these
differences are not driven by consumer’s liking of the products, their mood, or their arousal levels. In short, Mazar et al. (2001) added to Plassman, Mazar, and Rangel (2011) by suggesting that pain of payment is more closely related to psychological pain (e.g., sorrow, grief, and heartbreak), than physical pain (e.g., aching, soar, cramps).

This present research focuses on pain of payment prior to consumption, namely pain of prepayment. This is because SCs require prepayment, and conceptualize pain of prepayment as imputed cost (disutility), painful feeling, generated from the thought of the amount of money required for paying for a product/service prior to consumption.

**Willingness-to-prepay for a social coupon (WTPP-SC)**

ARPs have been broadly categorized as plausible or implausible, depending on their approximate to the offer prices and their relationship to consumers’ price estimates (Urbany, Bearden, and Weilbaker 1988). In a SC context, a face value acts as a higher ARP. Differed from other types of ARP that typically use plausible or high-implausible (sometime called exaggerated) ARPs, a large number of SCs feature a low-implausible ARP (i.e., face value).

In this paper, low-implausible face value is conceptualized as the face value that is lower than the normal price (total bill before tip) range consumers expect to pay for a particular meal at a particular type of restaurant). The interesting issue is how would consumers evaluate SCs featuring a low-implausible face value? This is important because SCs differ from other price promotions (e.g., coupons and special-priced items) in that they require prepayment in order to receive substantial discount. Accordingly, it is contended that consumers may use different strategies to cope with subjective feeling related to prepayment, specifically pain of prepayment. Further, it is argued that a coupon price will play an important role on how consumers evaluate
SC deals. Specifically, consumers have their own highest coupon price that they are willing-to-prepay for SCs (WTPP-SC) offered for a particular meal at a particular type of restaurant.

It is important to note that there is the difference between the concepts of willingness-to-pay (WTP) and willingness-to-accept (WTA). In the broad sense, WTP is defined as to the maximum amount of money an individual is willing to pay to receive a product/service (gain) or avoid something undesired (loss). In the more specific sense, as suggested by Hicksian welfare theory (Hicks 1943) (i.e., there are four different measures of welfare change). There are two types of WTP and two types of WTA: (1) WTP for a gain; (2) WTP to avoid a loss; (3) WTA compensation in lieu of a gain; and (4) WTA compensation to suffer a loss (Bateman et al. 2000). The compensating variation in terms of gain or loss is the amount of income that should be taken away from or paid to the consumers to allow them to remain at the initial level of welfare. Equivalent variation in terms of gain or loss is the amount of income that should be given to or received by the consumers to make them as comfortable as with the change (Varian 1992).

Applying this postulation to a SC purchasing-decision context, it is argued that purchasing a SC is considered as payment for gain. Accordingly, this present research adopts the first definition of WTP. Also, due to payment to receive a large discount (gain) occurs prior to consumption, this present research proposes the concept of WTPP-SC, and conceptualizes it as the highest coupon price consumers are willing-to-prepay for a particular type of meal at a particular type restaurant. Based on the premise of pain of prepayment in that consumers are motivated to avoid such negative subjective feeling (Prelec and Loewenstein 1998), it is contended that consumers’ likelihood of purchasing SCs featuring a plausible (vs. low-implausible) face value is greater only when a coupon price for SCs featuring a plausible face
value is lower than WTPP-SC. However, when a coupon price for SCs featuring a plausible face value is higher than WTPP-SC, while a coupon price for SCs featuring a low-implausible face value is lower than WTPP-SC, consumers’ likelihood of purchasing a SC is greater for SCs featuring a low-implausible (vs. plausible) face value. Furthermore, consumers’ likelihood of purchasing SCs featuring a low-implausible face value is greater when a coupon price is lower (vs. higher) than WTPP-SC. Finally, based on the integrative framework of RP processing during SC purchasing discussed earlier, it is proposed that pain of prepayment is underlying processes.

\( H_1 \): Consumers’ likelihood of purchasing SCs featuring a low-implausible (vs. plausible) face value is greater when a coupon price for SCs featuring a low-implausible face value is lower than WTPP-SC, while a coupon price for SCs featuring a plausible face value is higher than WTPP-SC.

\( H_2 \): Consumers’ likelihood of purchasing SCs featuring a low-implausible face value is greater when a coupon price is lower (vs. higher) than WTPP-SC.

\( H_3 \): Pain of prepayment mediates the effect coupon price relative to WTPP-SC on consumers’ likelihood of purchasing SCs featuring a low-implausible face value.

**Time pressure**

Decision-making research suggests that time pressure constrains consumers’ cognitive resources (Dhar and Nowlis 1999). When cognitive resources are constrained, consumers tend to accept messages at face value in order to cope with the perceived deadline (Maule, Hocke, and Bdzola 2000). Focus on online shopping context, Jiang (2002) showed that under the high pressure, consumers have a tendency to have less efficiency in searching for potential better deals (Jiang 2002). This contention is in line with assimilation-contrast theory (Sherif and Hovland 1961) and economics of information theory (Stigler 1961) which together suggest that consumers will perceive a deal to be beneficial if the discount size is large and if the deal reduces further search benefits the consumers get. As time pressure increases, it becomes difficult for
consumers to embark on further price search due to contextual constraints. Accordingly, they will ultimately settle for the best available deal giving maximum benefits with respect to their internal frame of price reference. Previous ARP research demonstrates that time pressure increases the effectiveness of high-implausible ARP (i.e., ARP that is higher than the normal price range expected by consumers for a product/service) on consumers’ deal-related perception (Krishnan, Dutta, and Jha 2006) by motivating heuristic-based motivation. Consumers are more prone to using substantial discount size associated with a high-implausible ARP as a heuristic and less skeptical about the face value plausibility and consequently more positively respond to such ARP than when time pressure is absent.

In a SC context, some of SC providers do not have time pressure features on their websites (e.g., Travelzoo and Creative Loafing of Tampa Bay). However, some of SCs do (e.g., Groupon, LivingSocial, and Guilt City, and Half-of-Deal). Time pressure features that are commonly used are ‘time left to purchase’ and ‘number of SC remaining for purchase’. Thus, it is contended it is important to understand how time pressure influences consumers’ likelihood of purchasing SCs featuring a low-implausible face value. By applying the insights from the literature on time pressure, it is predicted that time pressure (e.g., time left to buy: 1 hours) will generate the same effect as high-implausible ARP. This is because under time pressure consumers tend to be less skeptical about low-implausible face value and thus will increase consumers’ perception of value of the deal and their likelihood to purchase an SC featuring a low-implausible face value in which a coupon price lower than WTPP-SC.

$H_4$: Consumers’ likelihood of purchasing SCs featuring a low-implausible face value in which a coupon price is lower (vs. higher) than WTPP-SC is greater when time pressure is present (vs. absent).
**H5:** Pain of prepayment mediates the interaction of coupon price relative to WTPP-SC and time pressure on consumers’ likelihood of purchasing SCs featuring a low implausible face value.

**Semantic cue concreteness**

*Semantic cue concreteness* represents the degree of the detail and specificity about the price comparison in ARP (Biswas et al. 1999). For example, in the traditional RP advertising, semantic cues such as “Regular Price $___, Sale Price $___” are considered concrete as they are specific about the nature of the price comparison. On the other hand “A $___ Value, Sale Price $___” are more abstract in nature. The effect of semantic cues depends on the meaning ascribed to those cues by consumers (Berkowitz and Walton 1980). Specifically, semantic cue concreteness provides consumers with different levels of information and clarity of the deal, which in turn influence their perceived value of the deal and behavioral responses toward the deal (Grewal and Compeau 1992). In general, consumers are more skeptical towards abstract or ambiguous advertising claims (Ford, Smith, and Swasy 1990). However, previous research on the concreteness of semantic cues on deal effectiveness shows mixed results. While Mobley, Bearden, and Teel (1988) showed that consumers perceived abstract/ambiguous discounts (compared to concrete/specific deals) to be less believable and less effective, Biswas and Burton (1993) shows that abstract discounts are as effective as specific discounts in some cases.

In a SC context, while some service retailers offer SCs using abstract semantic cues, some others offer SCs using more concrete semantic cues. For example, some sit-down dining restaurants use abstract semantic cue like “$___ for $___ deal” or “$___ for $____ worth of food and drinks for two people or more”. Some other sit-down dining restaurants use more concrete semantic cues such as “$___ for $____ worth of food and drinks for two people” “$___ for a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two
glasses of wine, regular $___”. It can be seen that the latter deal semantics is much more concrete than the first two cues. By applying the concept of consumer psychological response to semantic cue concreteness, it is contended that when consumers are exposed to a SC featuring abstract deal semantics are more likely to focus on abstract deal information (e.g., discount size in percentage) rather than more concrete/specific deal information (e.g., SC face value) and consequently, more likely to positively respond to SCs featuring a low-implausible face value than when they are exposed to SCs featuring equivalent coupon face value, coupon price and percentage off with higher level of semantic cues concreteness. However, I contend that concrete (vs. abstract) semantic cues will influence consumers’ likelihood of purchasing SCs featuring a plausible face value in a different direction especially when a coupon price is higher (vs. lower) than WTPP-SC. When semantic cues for SCs featuring a plausible face value are concrete, consumers pay more attention to the deal specificity rather than their emotions.

**H₆a:** When a coupon price is lower (vs. higher) than WTPP-SC, consumers’ likelihood of purchasing SCs featuring a low-implausible face value is (not) greater when semantic cues are abstract (vs. concrete).

**H₆b:** When a coupon price is higher (vs. lower) than WTPP-SC, consumers’ likelihood of purchasing a SC featuring a plausible face value is (not) greater when semantic cues are concrete (vs. abstract).

**H₇a:** Pain of prepayment mediates the interaction of coupon price relative to WTPP-SC and semantic cue concreteness on consumers’ likelihood of purchasing a SC featuring a low-implausible face value.

**H₇b:** Pain of prepayment mediates the interaction of coupon price relative to WTPP-SC and semantic cue concreteness on consumers’ likelihood of purchasing a SC featuring a plausible face value.

**Multiple social coupon deals**

When consumers are visiting some major SC provider websites (e.g., Groupon), they are exposed to not only a single SC deal but also multiple SC deals (e.g., 2-3 options) offered by a
particular service retailer. For example, the deals feature the same large discount size but vary in terms of SC face value and respective coupon price. For example, a local American sit-down dining restaurant is offering a SC with two options for consumers. **Option 1**: “$15 for $30 worth of food and drinks for two people or more” and **Option 2**: “$25 for $50 worth of food and drinks for two people or more”. ARP research shows that consumers are likely to use readily available price information for similar brands to evaluate the target offer (Gotlieb and Dubinsky 1991).

Focusing on consumer evaluation of ARP effects of other brands’ prices, Biswas et al. (1999) showed that consumer evaluations of target offer are influenced by other ARP information within a plausible RP range but not when the other ARPs are implausible or highly implausible. In a SC context, it is contended that when consumers are exposed to multiple deals offered by the same brand for the same service, in which face values vary in terms of face value plausibility (i.e., one option features a low-implausible and another option features a plausible face value), consumers will be more likely to use rational-based decision making. However, it is contended that consumers will still incorporate coupon price relative to WTPP-SC into their SC choice. In other words, consumers will be more likely to choose SCs featuring a plausible face value (vs. low-implausible in which a coupon price is lower than WTPP-SC) only when such SCs’ coupon price is also lower than WTPP-SC.

**H₈ₐ**: When coupon prices for both SC deals are lower than WTPP-SC, consumers are more likely to purchase a SC deal featuring a plausible (vs. low-implausible) face value.

**H₈ₑ**: When a coupon price for a SC featuring a low-implausible face value is lower than WTPP-SC while a coupon price for a SC featuring a plausible face value is higher than WTPP-SC, consumers are more likely to purchase a SC deal featuring a low-implausible (vs. plausible) face value.

**H₉**: Pain of prepayment mediates the effect of multiple SC deal condition on consumers’ choice of SC deals.
In the following section, five experiments that test the proposed nine hypotheses are reported.

**Overview of experiments**

In Experiment 1, face value plausibility (plausible vs. low-implausible) and coupon price relative to WTPP-SC (lower vs. higher) were manipulated. In Experiment 2, coupon price relative to WTPP-SC (lower, vs. higher vs. control) was manipulated. In Experiment 3, coupon price relative to WTPP-SC (lower vs. higher) and time pressure (present vs. absent) were manipulated. In Experiment 4, coupon price relative to WTPP-SC (lower vs. higher) and semantic cue concreteness (concrete vs. abstract) were manipulated. While Experiment 4A focuses on SCs featuring a low-implausible face value, Experiment 4B focuses on SCs featuring a plausible face value. In Experiment 5, manipulated multiple SC deal condition was manipulated (Condition 1: both the SC deal featuring a low-implausible face value (Option 1) and the SC deal featuring a plausible face value (Option 2) are lower than WTPP-SC vs. Condition 2: the SC deal featuring a low-implausible face value (Option 1) is lower than WTPP-SC; while the SC deal featuring a plausible face value (Option 2) is higher than WTPP-SC vs. control). It is important to note that while Experiments 1, 2, and 3 focus on unplanned SC purchase (i.e., receiving information about a SC via email), Experiments 3 and 4A, 4B, and 5 focus on planned SC purchase (i.e., visit a SC provider website, searching for a particular type of a SC). Having a dinner with participants’ significant other at an Italian sit-down restaurant, having a dinner with participants’ close friend at a Mexican sit-down restaurant, having a dinner with participants’ significant other at a fine-dining steak and seafood restaurant, having a dinner with participants’ sister at an American casual sit-down restaurant were stimuli for Experiments
1 and 2, Experiment 3, Experiment 4, and Experiment 5 respectively. Figure 6 illustrates an overview of experiments.

**Figure 6. Overview of experiments**

**Experiment 1: Manipulating face value plausibility and coupon price relative to WTPP-SC**

Experiment 1 tests the contentions that consumers’ likelihood of purchasing a SC featuring a low-implausible (vs. plausible) face value is greater when a coupon price for SCs featuring a low-implausible face value is lower than WTPP-SC, while a coupon price for SCs featuring a plausible face value is higher than WTPP-SC (H1a). On the other hand, consumers’ likelihood of purchasing a SC featuring a plausible (vs. low-implausible) face value is greater when a coupon price for a SC featuring a plausible face value and a coupon price for SCs...
featuring a plausible face value and a coupon price for SCs featuring a low-implausible are both lower than WTPP-SC (H1b).

**Pretest**

A pretest was conducted to select an appropriate SC face value. It is important to note that 50% discount was chosen as it is the most common discount size offered in SCs. Furthermore, Italian sit-down restaurant was selected as a stimuli context it is known as one of the most popular types of sit-down restaurants that are currently offering SCs. To determine an average price consumers expect to pay for a particular type of service and a face value that would be perceived as low-implausible, relative to constant discount size (50%), 88 online individuals who had dinner experiences at Italian sit-down restaurant and were 21 years old or older (Age range: 21-64, M_{Age} = 31.38, 38.60% female) recruited from Amazon Mechanical Turk (MTurk) online panel with an exchange for a small incentive, were asked to type their best estimate of the average total bill including alcoholic drinks (before tip) they expected to pay for a dinner for two people at a sit-down Italian restaurant. The results show that the mean estimate of the average was $57.35. Thus, $57.35 was rounded up to $60. Thus, $60 was used as a representative for the average total bill including alcoholic drinks (before tip) consumers expected to pay for a dinner for two people at any Italian sit-down dining restaurant and $30 was used as a representative for a low-implausible face value. The justification for this decision is that a face value of $30 is significantly lower than the average price consumers expect to pay of $60 (50% lower). Additionally, $30 is a face value that is commonly appears in SCs offered by Italian sit-down dining restaurants.
Participants, design, and procedure

This experiment employed a 2 (face value plausibility: low-implausible vs. plausible) x 2 (coupon price relative to WTPP-SC: higher vs. lower) between-subject design. Participants were 153 online individuals who had heard about SCs, had dinner experiences at Italian sit-down restaurant, and were 21 years old or older (Age range: 21-66, M_Age = 33.65, 56.20% female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the four conditions (cell size: 37-39). All participants were asked to imagine that they were in a SC purchasing situation. A coupon price lowers (higher) than WTPP-SC was manipulated at $5 lower (higher) than the highest coupon price you are willing to prepay for a social coupon for a dinner for two people at any Italian sit-down restaurant.

“Imagine that you and your significant other like Italian food. Both of you occasionally have dinners together at various local Italian restaurants with an average total bill including alcoholic drinks (before tip) of $60. You each take turns paying the bill and the next meal is your turn.

This morning, you received an email from a social coupon provider website that you are currently a member of. The key message in the email is that Beccofino’s, a new local Italian sit-down restaurant, is offering a social coupon $15 for $30 [$30 for $60] worth of food and drinks for a dinner for two people, 50% off”. You realize that this coupon price is $5 lower [higher] than the highest coupon price you are willing to prepay for a social coupon for a dinner for two people at any Italian sit-down restaurant”.

After reading the scenario, participants completed measures related to the scenario and personal information

Measures

Dependent variable. SC purchase likelihood was measured with three items, seven-point scale with end points (1=very unlikely; 7=very likely), (1=very improbable, 7= very probable), and (1=will definitely not purchase, 7=will definitely purchase) adapted from Netemeyer and
The result from the reliability analysis showed a high level of reliability across the three items (Cronbach’s α=.98). Thus, the three items were combined and averaged to form a composite variable SC purchase likelihood. The higher score indicates the higher consumers’ likelihood of purchasing a SC.

**Manipulation checks.** The manipulation check for face value plausibility was measured with a single-item, seven-point Likert scale with ends points (1=a lot lower than, 2=equal to) “The face value of this social coupon is _____ the average total bill including alcoholic drinks (before tip) you would expect to pay for a dinner for two people offered by any Italian sit-down restaurant”. The manipulation check for a coupon price relative to WTPP-SC was measured with a single-item, seven-point scale with ends point (1=lower than, 7=higher than) “The price of this social coupon is _____ the highest coupon price you would be willing to prepay for a social coupon for a dinner for two people offered by any Italian sit-down restaurant”.

**Other measures.** Realism of the scenario was measured with two items, seven-point Likert scale (1=strongly disagree, 7 = strongly agree) “It is easy to imagine being in the situation described in the scenario” and “The scenario is realistic.” The result from the reliability analysis showed a high level of reliability between the two items (Cronbach’s α=.88). Thus, the two items were combined and averaged to form a composite variable for realism of the scenario. The higher score indicates the higher realism of the scenario. Brand familiarity was measure with a single item, seven-point scale with end points (1=not familiar at all, 7=very familiar) “How familiar are you with Beccofino’s?” Finally, participants provided their personal information regarding dining experiences at Italian sit-down restaurant, gender and age.
Results

The manipulation check for face value plausibility was successful where the majority of the participants (88.24%) in a plausible face value and a low-implausible face value conditions correctly indicated whether or not a face value is a lot lower than or equal to the average total bill including alcoholic drinks (before tip) they expect to pay for a dinner for two people at any Italian sit-down restaurant. The manipulation check for coupon price relative to WTPP-SC was also successful where the majority of the participants (82.35%) in a coupon price lower than WTPP-SC and a coupon price higher than WTPP-SC conditions correctly indicated whether a coupon price is lower or higher than WTPP-SC. Finally, participants indicated low scores for brand familiarity (M\text{Familiarity}=1.17) and a high score for realism of the scenario (M\text{Realism}=6.09).

As expected, planned contrasts show that consumers’ likelihood of purchasing a SC is greater for participants in a SC featuring a low-implausible face value and a coupon price lower condition than WTPP-SC than those in a SC featuring a plausible face value and a coupon price higher than WTPP-SC conditional (M_{Low-Implausible face value, Lower than WTPP-SC}=5.24; M_{Plausible face value, Higher than WTPP-SC}=4.48; t(149)=2.10, p=.037). Thus, H\textsubscript{1} is supported.

Furthermore, even though not hypothesized, the results reveal that consumers’ likelihood of purchasing a SC is lowest for participants who were in a SC featuring a low-implausible face value and a coupon higher than WTPP-SC condition (M_{Low-Implausible face value, Higher than WTPP-SC}=4.29). This is not surprised and can be explained by the predictions of contrast effect and pain of prepayment aversion effect. Finally, as there was an oversampling of females (56.20%) in the sample, gender effect was examined. The results indicated that gender did not have a significant influence on likelihood of purchasing SCs featuring a low-implausible face value (p=.20), thus, confirming that there was no gender effect. Figure 7 illustrates the results from planned contrasts
(a SC featuring a plausible face value and a coupon price lower than WTPP-SC vs. a SC featuring a plausible face value but a coupon price is higher than WTPP-SC vs. a SC featuring a low-implausible face value but a coupon price is lower than WTPP-SC).

![Figure 7](image)

**Figure 7.** Planned contrasts

**Discussion**

The results from Experiment 1 supported $H_{1a}$ and $H_{1b}$ that consumers’ likelihood of purchasing SCs featuring a low-implausible (vs. plausible) face value was greater when a coupon price for SCs featuring a low-implausible face value was lower than WTPP-SC, while a coupon price for SCs featuring a plausible face value was higher than WTPP-SC. In contrast, consumers’ likelihood of purchasing SCs featuring a plausible (vs. low-plausible) face value was greater when a coupon price for SCs featuring a plausible face value and a coupon price for SCs featuring a low-implausible face value are both lower than WTPP-SC. Overall, these findings support the contention regarding the important role of coupon price relative to WTPP-SC in influencing consumers’ likelihood of purchasing SCs featuring a low-implausible (vs. plausible) face value. In the next experiment, the focuses are on consumers’ SC purchasing-decision for
SCs featuring a low-implausible face value and the role of pain of prepayment as an underlying process.

**Experiment 2: Manipulating coupon price relative to WTPP-SC**

Experiment 2 tests the predictions that consumers’ likelihood of purchasing SCs featuring a low-implausible face value is greater when a coupon price is lower (vs. higher) than WTPP-SC (H$_2$) and pain of prepayment is mediates the effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing a SC featuring a low-implausible face value (H$_3$).

**Participants, design, and procedure**

This experiment employed a 1 factor, 3 levels (coupon price relative to WTPP-SC: higher vs. lower vs. control) between-subject design. Participants were 92 online individuals who had heard about SCs, had dinner experiences at Italian sit-down restaurant, and were 21 years old or older (Age range: 21-67, M$_{Age} = 34.68$, 62% female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the three conditions (cell size: 30-30). All participants were asked to imagine that they were in a SC purchasing situation identical to the ones used in Experiment 1. A coupon price lower (higher) than WTPP-SC was manipulated at ‘$20’(‘$10’). Participants in a control condition did not see the information regarding a coupon price relative to WTPP-SC.

“Imagine that you and your significant other like Italian food. Both of you occasionally have dinners together at various local Italian restaurants with an average total bill including alcoholic drinks (before tip) of $60. You each take turns paying the bill and the next meal is your turn. This morning, you received an email from a social coupon provider website that you are currently a member of. The key message in the email is that Beccofino’s, a new local Italian sit-down restaurant, is offering a social coupon $15 for $30 [$30 for $60] worth of food and drinks for a dinner for two people, 50% off”. You realize that the highest coupon price you are willing to prepay for a social coupon for a dinner for two people at any Italian sit-down restaurant is $20 [10]”.

46
Measures

All measures for dependent variable- SC purchase likelihood (Cronbach’s α = .97), and other measures- realism of the scenario (Cronbach’s α = .92), brand familiarity, dining experience at Italian sit-down restaurant, age, and gender used in this experiment were identical to the ones used in Experiment 1. The additional measures used in this experiment are as follows.

Process evidence. Pain of prepayment was measured with a single-item, seven-point scale with end points (1=not painful at all, 7=very painful); “Please indicate how would you feel about prepaying for this social coupon at this coupon price,” adapted from Kamleitner and Erki (2013). The higher score indicates the higher pain of prepayment. The justification for using a single item is that a single item captures the concept of painful feeling (Bieri et al. 1990). Also, a verbal pain scale was used instead of a face pain scale because the participants in this experiment are adults (i.e., 21 years old or older). A face pain scale is recommended for children 3-8 years old; while verbal pain scale is recommended for individuals over 8 years (Chambers et al. 1999).

Covariates. Deal proneness (i.e., the psychological propensity of a consumer to respond to promotions because they are in the deal form) is measured with eight items, seven-point Likert scale (1=strongly disagree, 7=strongly agree): “I enjoy purchasing a brand that is on a deal,” “Beyond the money I save, purchasing brands on a deal makes me happy,” “Compared to other people, I am very likely to purchasing brands that come with promotional offers,” “Receiving a promotional deal with a product purchase makes me feel like I am a good shopper,” “I am usually motivated to respond to promotional deals on products,” “When I purchase a brand that is offering a special promotion, I feel that it is a good purchase,” “I feel like a successful shopper when I purchase products that offer special promotions,” and “I love special promotional offers for products,” adopted from Lichtenstein, Netemeyer, and Burton (1995). The result from the
reliability analysis showed a high level of reliability across the eight items (Cronbach’s $\alpha=.94$). The eight items were combined and averaged to form a composite variable for deal proneness. The higher score indicates the higher deal proneness. *Variety-seeking orientation* (i.e., the tendency of choosing an alternative behavior to experience product/service and/or brand diversity) was measured with three items, seven-point Likert scale (1=strongly disagree, 7=strongly agree): “I enjoy eating out at different restaurants for the sake of comparison,” “If I have a choice when I eat out, I would rather try a new restaurant than eat out at the restaurants I have already been to,” and “I tend to eat out at a lot of different restaurants just for the sake of a change of pace,” adapted from Wakefield and Barnes (1996). The result from the reliability analysis showed a high level of reliability across the three items (Cronbach’s $\alpha=.84$). Thus, the three items were combined and averaged to form a composite variable for variety-seeking orientation. The higher score indicates the higher variety-seeking orientation. *Skepticism* (i.e., the general tendency of disbelief of advertising claims) was measured with two items, seven-point Likert scale (1=strongly disagree, 7=strongly agree): “I am skeptical that I will save as much as this social coupon says,” and “I do not believe that the face value of this social coupon is a truthful claim,” adapted from Krishnan, Dutta, and Jha (2013). The result from the reliability analysis showed a high level of reliability between the two items (Cronbach’s $\alpha=.92$). Thus, the two items were combined and averaged to form a composite variable for skepticism. The higher score indicates the higher consumers’ skepticism. Deal proneness and variety-seeking orientation did not significantly influence SC purchase likelihood; thus, only skepticism was used as a covariate for further analysis.

**Attention check.** *Attention check* was measure with a single item, seven-point Likert scale (1=strongly disagree, 7=strongly agree): “Please choose strongly disagree.”
Results

The manipulation check for a coupon price relative to WTPP-SC was successful where participants in a coupon price lower than WTPP-SC condition indicated lower scores than those in a coupon price higher than WTPP-SC condition ($M_{\text{Lower than WTPP-SC}}=3.03; M_{\text{Higher than WTPP-SC}}=4.47$; $t(60) = -5.41, p=.000$). As expected, this score for participants in the control condition was not significantly different from those of participants in a coupon price lower than WTPP-SC condition ($M_{\text{Control}}=3.50; M_{\text{Lower than WTPP-SC}}=3.03; t(58)=-1.8, p=.077$); while this score was significantly lower than those of participants in a coupon price higher than WTPP-SC condition ($M_{\text{Control}}=3.50; M_{\text{Higher than WTPP-SC}}=4.47; t(60)=3.16, p=.002$). Furthermore, the manipulation check for low-implausible face value was successful where all participants across conditions indicated a relatively low score for face value plausibility ($M_{\text{Face value plausibility}}=2.74$). Finally, participants indicated low scores for brand familiarity ($M_{\text{Familiarity}}=1.35$) and a high score for realism of the scenario ($M_{\text{Realism}}=5.75$). Figure 8 shows the main effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing a SC featuring a low-implausible face value.

Figure 8. The main effect of coupon price relative to WTPP-SC
A one-way ANCOVA conducted on SC purchase likelihood with skepticism as a covariate reveals significant effect of coupon price relative to WTPP-SC ($F(1, 58)=4.41, p=.04, \eta^2=.07$). As hypothesized in $H_2$, planned contrasts showed that likelihood of purchasing SCs featuring a low-imausible face value was greater for those who were exposed to a coupon price lower (vs. higher) than WTPP-SC ($M_{\text{Lower than WTPP-SC}}=5.39; M_{\text{Higher than WTPP-SC}}=4.32; t(89)=2.80, p=.011$). To gain more insight, the results of experiment groups were compared with the control group where no WTPP-SC was presented. As expected consumers’ likelihood of purchasing SCs featuring a low-imausible face value was not significantly different between those in a control group and those who were exposed to a coupon price lower than WTPP-SC and ($M_{\text{Control}}=5.82; M_{\text{Lower than WTPP-SC}}=5.39; t(89)=1.12, p=.265$); while significantly higher than those who were exposed to a coupon price higher than WTPP-SC ($M_{\text{Control}}=5.82; M_{\text{Higher than WTPP-SC}}=4.32; t(89)=-3.94, p=.000$). Thus, $H_2$ is supported. Furthermore, as there was an oversampling of females (62%) in the sample, gender effect was examined. The results indicated that gender did not have a significant influence on likelihood of purchasing SCs featuring a low-imausible face value ($p=.40$), thus, confirming that there was no gender effect. Figure 8 shows the main effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing a SC featuring a low-imausible face value (See Table B1, Appendix B for the ANCOVA results).

The procedure proposed by Hayes (2012) was conducted to test the mediating effect of pain of prepayment on the effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing a SC featuring a low-imausible face value ($H_3$). In this analysis, a coupon price relative to WTPP-SC was an independent variable, SC purchase likelihood was a dependent variable, pain of prepayment was a mediator, and skepticism was a covariate. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000
samples. The results show a mean indirect effect of coupon price relative WTPP-SC on SC purchase likelihood through pain of prepayment with a 95% confidence interval excluding zero ($B = -1.00; SE = .44; CI = -1.94$ to $-.32$). Thus, H$_3$ is supported.

**Discussion**

The results from Experiment 2 support H$_2$ that consumers’ likelihood of purchasing SCs featuring a low-implausible face value was greater when a coupon price is lower (vs. higher) than WTPP-SC. H$_3$ is also supported, where pain of prepayment mediates the effect of coupon price relative to WTPP-SC on consumers’ SC purchase likelihood. That is, the lower the feeling of pain of prepayment, the greater the consumers’ likelihood of purchasing a SC. Overall, these results support the contention about the important role of coupon price relative to WTPP-SC and the existence of pain of prepayment aversion effect during consumers’ SC purchasing-decisions for SCs featuring as low-implausible face value. *Time pressure* is one of contextual cues that commonly used in SCs. Thus, in the next experiment, the focuses are on the moderating effect of time pressure on the effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing SCs featuring a low-implausible face value as well as the mediated moderation effect of pain of prepayment.

**Experiment 3: Manipulating coupon price relative to WTPP-SC and time pressure**

Experiment 3 tests the predictions that consumers’ likelihood of purchasing SCs featuring a low-implausible value in which a coupon price lower (higher) than WTPP-SC is greater when time pressure is present (vs. absent) (H$_4$). Also, pain of prepayment mediates the interaction of coupon price relative to WTPP-SC and time pressure on consumers’ likelihood of purchasing SCs featuring a low-implausible face value (H$_5$). Experiment 3 differed from
Experiments 1 and 2 in several aspects. First, Mexican sit-down restaurant was used as a stimuli context instead of Italian sit-down dining restaurant. The justification for the choice of a Mexican sit-down restaurant is that Mexican sit-down restaurants are another type of restaurant that are popularly offer SCs. Second, this experiment used different SC purchasing-situation. The scenario describes the situation in which having a dinner with participants’ close friend instead of their significant other for the generalizability purpose. Third, there is no information about “the upcoming meal is your turn”. This is to avoid the confounding issue between time pressure generated from purchasing for the upcoming meal and time pressure generated from having to making a SC purchasing decision within time available left to purchase. Finally, participants evaluated a SC that was professionally developed (i.e., with the graphics and information similar to the ones Groupon and LivingSocial use) instead of purely descriptive texts used in Experiment 1 and Experiment 2.

**Pretest**

Similar to Experiment 1, a pretest was conducted to select an appropriate SC face value in relation to a 50% discount. Participants were 85 individuals who have heard about SCs, have dining experiences at Mexican sit-down dining restaurant, and are 21 years old or older (M<sub>Age</sub> = 31.40, 45.90% female), recruited from MTurk online panel with an exchange for a small incentive. They were asked to type their best estimate of the average total bill including alcoholic drinks (before tip) they expected to pay for “food & drinks for a dinner for two people at a Mexican sit-down restaurant”. The results show that the mean estimate of the average was $40.62. Thus, $20 was used as a representative of low-implausible face value; while $40 was used as the representative of the average total bill including alcoholic drinks (before tip) consumers expected to pay for a dinner for two people at any Mexican sit-down dining
restaurant. The justification for this decision is that a face value of $20 is significantly lower than the average price consumers expected to pay of $40 (50% lower). Furthermore, $20 is a face value that is commonly appears in SCs offered by Mexican sit-down dining restaurants.

Another pretest was also conducted to choose an appropriate time pressure. Participants were 58 individuals who had heard about SCs recruited from MTurk online panel with an exchange for a small incentive. They were asked to evaluate four presentations of time constraint (‘no time constraint’, ‘21 days remaining’, ‘5 days remaining’, ‘1 hour 10 minutes remaining’). Then, they indicated their felt time pressure for each of the time constraint, with a single-item, seven-points scale with end points (1= no time pressure at all, 7= very much time pressure) adopted from Krishnan, Dutta, and Jha (2013): “How much time pressure would you feel when making the social coupon purchasing-decision, knowing that _______?” The results from a paired-samples t-test show that ‘1 hour 1 minutes left to buy’ has the highest mean score; while ‘no time constraint’ has the lowest mean score ($M_{1 \text{ hour 10 minutes remaining}}=5.19, M_{\text{No time constraint}}=1.88, t(57)=15.62, p=.000$). Thus, ‘1 hour 10 minutes remaining’ and ‘no time constraint’ were selected as time pressure present and time pressure absent respectively.

**Participants, design, and procedure**

This experiment employed a 2 (coupon price relative to WTPP-SC: higher vs. lower) x 2 (time pressure: present vs. absent) between-subject design. Participants were 122 individuals who had heard about SCs, had dinner experiences at Mexican sit-down restaurant, were 21 years old or older, and correctly answered attention check question (Age range: 21-62, $M_{Age} = 33.35, 51.60\%$ female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the four conditions (cell size: 29-33). Similar to
previous experiments, all participants were asked to imagine that they were in a SC purchasing situation. Coupon price lower (higher) than WTPP-SC was manipulated at ‘$15’(‘$5’).

“Imagine that you and your close friend occasionally have dinners together at various local Mexican sit-down restaurants with an average total bill including alcoholic drinks (before tip) of $40. You each take turns paying the bill.

Today, you received an email from a social coupon provider website that you are currently a member of. In the email, you notice that El Tipico, a new local Mexican sit-down restaurant, is offering the following social coupon.

Figure 9 and Figure 10 show the stimuli for time pressure present and time pressure absent respectively.

![Figure 9](image1.png)

**Figure 9.** Time pressure present

![Figure 10](image2.png)

**Figure 10.** Time pressure absent
After reading the scenario, participants completed measures related to the scenario and personal information.

*Measures*

All measures for dependent variable- *SC purchase likelihood* (Cronbach’s α = .97)-, manipulation checks for low-implausible face value and coupon price relative to WTPP-SC, process evidence- *pain of prepayment*-, covariates- *deal proneness* (Cronbach’s α = .93), *skepticism* (Cronbach’s α = .85), and *variety-seeking orientation* (Cronbach’s α = .72)-, and other measures- *realism of the scenario* (Cronbach’s α = .80), *brand familiarity*, *dining experience at Mexican sit-down restaurant*, *age*, and *gender* used in this experiment are identical to the ones used in previous experiments. It is important to note that as deal proneness and variety-seeking orientation did not significantly influence SC purchase likelihood, only skepticism is used as a covariate for further analysis.

The additional measure used in this experiment is the manipulation check for *felt time pressure*, which is measured with a single-item, seven-points scale with end points (1=no time pressure at all, 7=very much time pressure) adopted from Krishnan, Dutta, and Jha (2013): “How much time pressure would you feel when making this social coupon purchasing-decision?” Also, as anticipated regret (i.e., a counterfactual thinking that individuals experienced in the current situation when imagining about the result of the future outcome, which has high uncertainties or when decisions are important and/or difficult to make) is a potential confounding factor, anticipated regret was measured with two items, seven-point scale: “Please indicate to what extent you would feel if you did not purchase this social coupon.” (1=I would definitely not feel regret, 2=I would definitely feel regret) (1=I would definitely not feel upset, 7=I would definitely feel upset) (reverse coded) adapted from (Abraham and Sheeran 2003). The result from the
reliability analysis showed a high level of reliability between the two items (Cronbach’s $\alpha=.85$). Thus, the two items were combined and averaged to form a composite variable for anticipated regret. The higher score indicates the higher anticipated regret from prepaying for the SC.

**Results**

The manipulation check for a coupon price relative to WTPP-SC was successful where participants in a coupon price lower than WTPP-SC condition indicated lower scores than those in a coupon price higher than WTPP-SC condition ($M_{\text{Lower than WTPP-SC}}=2.97; M_{\text{Higher than WTPP-SC}}=4.68; F(1, 118) = 104.99, p=.000$). The interaction between a coupon price relative to WTPP-SC and time pressure was not significant ($F(1, 118) = 1.14, p=1.144$). Also, the manipulation check for time pressure was successful where participants in time pressure present condition indicated higher scores than those in time pressure absent condition ($M_{\text{Time pressure present}}=4.97; M_{\text{Time pressure absent}}=2.19; F(1, 118) = 168.88, p=.000, \eta^2=.59$). The interaction between a coupon price relative to WTPP-SC and time pressure was not significant ($F(1, 118), p=.446$).

Furthermore, the manipulation check for low-implausible face value was also successful where all participants across conditions indicated a relatively low score for face value plausibility ($M_{\text{Face value plausibility}}=2.93$). Finally, participants indicated a low score for brand familiarity ($M_{\text{Familiarity}}=1.32$) and a high score for realism of the scenario ($M_{\text{Realism}}=6.01$).

A two-way ANCOVA conducted on SC purchase likelihood with skepticism as a covariate revealed significant interaction of coupon price relative to WTPP-SC and time pressure ($F(1, 117)=6.41, p=.013, \eta^2=.05$). As hypothesized in H₃, planned contrasts show that time pressure present (vs. absent) significantly increases consumers’ likelihood of purchasing SC featuring a low-implausible face value only when a coupon price is lower than WTPP-SC ($M_{\text{Lower than WTPP-SC, Time pressure present}}=6.25, M_{\text{Lower than WTPP-SC, Time pressure absent}}=5.12, t(118)=3.26,$
\( p = .001 \), but not when a coupon price is higher than WTPP-SC (\( M_{\text{Higher than WTPP-SC, Time pressure absent}} = 3.82, M_{\text{Higher than WTPP-SC, Time pressure absent}} = 3.63, t(118) = .54, p = .591 \)). Thus, \( H_4 \) is supported. Figure 11 shows the moderating effect of time pressure on the effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing a SC (See Table B2, Appendix B for the ANCOVA results).

![Figure 11. The moderating effect of time pressure](image)

**Figure 11.** The moderating effect of time pressure

Similar to Experiment 2, the procedure proposed by Hayes (2012) was conducted to test the mediated moderation effect of pain of prepayment on the interaction of coupon price relative to WTPP-SC and time pressure on SC purchase likelihood (\( H_5 \)). In this analysis, coupon price relative to WTPP-SC was an independent variable, time pressure was a moderator, SC purchase likelihood was a dependent variable, pain of prepayment was a mediator, and skepticism was a covariate. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results show the means indirect effect of the interaction between WTPP-SC and time pressure on SC purchase likelihood through pain of prepayment with a 95% confidence interval excluding zero for both time pressure present (\( B = - \)
.84; SE = .27; CI = -1.42 to -.40) and time pressure absent (B = -.80; SE = .26 ; CI= -1.43 to -.38) conditions.

As it is contended that anticipated regret is a potential confounding factor, another mediation test was examined with the similar procedure by also entering anticipated regret as another mediator. The results show the means indirect effect of the interaction between WTPP-SC and time pressure on consumers’ likelihood of purchasing SCs featuring a low-implausible face value through anticipated regret with a 95% confidence interval including zero for both time pressure present (B = .01; SE = .04; CI = -.04 to .14) and time pressure absent (B = .02; SE = .06; CI= -.05 to .18) conditions. That is, anticipated regret does not mediate the interaction of coupon price relative to WTPP-SC and time pressure on consumers’ likelihood of purchasing SCs featuring a low-implausible face value. Thus, H5 is supported.

Discussion

The results from Experiment 3 support H4 that consumers’ likelihood of purchasing SCs featuring a low-implausible value in which a coupon price lower (higher) than WTPP-SC is greater when time pressure is present (vs. absent). Also, H5 is supported; whereby pain of prepayment mediates the interaction of coupon price relative WTPP-SC and time pressure on consumers’ likelihood of purchase SCs. Overall, these results support the contention about the important role of time pressure as a contextual cue that intensifies pain of prepayment aversion effect. In the next experiment, the focus is on another contextual cue that commonly used in SCs, *semantic cue concreteness*, which is expected to intensify pain of prepayment aversion effect.
Experiment 4: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness

While Experiment 4A focuses on SCs featuring a low-implausible face value, Experiment 4B focuses on SCs featuring a plausible face value. Specifically, Experiment 4A tests the predictions that consumers’ likelihood of purchasing SCs featuring a low-implausible face value in which a coupon price lower than WTPP-SC is (is not) greater when semantic cues are abstract (vs. concrete) (H_{6a}) and Experiment 4B tests the predictions that consumers’ likelihood of purchasing SCs featuring a plausible face value in which a coupon price higher (vs. lower) than WTPP-SC is (is not) greater when semantic cues are concrete (vs. abstract) (H_{6b}).

Experiments 4A & 4B differ from previous experiments in several aspects. First, fine-dining steak and seafood restaurants are used as a stimuli context. The justification for the choice of fine-dining steak and seafood restaurant is that this type of restaurant can be classified as a fine-dining restaurant, which is typically more expensive than both Italian and Mexican sit-down restaurants. Furthermore, fine-dining steak restaurants are unique from other type of restaurants as consumers generally go to fine-dining steak and seafood restaurants only for special occasions. Specifically, this type of restaurant commonly offers SCs featuring plausible face value with concrete semantic cues.

In a SC purchasing context, there are two major types of SC purchase motivation: unplanned; and planned. Unplanned SC purchase motivation occurs when consumers do not have any specific plan to purchase a SC and when they do not know specifically when they are going to redeem the SC. They just receive an email from a SC provider informing them about a new attractive SC and then decide to purchase it. Alternatively, they might just routinely log onto a SC provider website and recognize one SC that seems to be attractive and then purchase it
without a specific plan about when to redeem it. In contrast, planned SC purchase motivation occurs when consumers have predetermined preferences regarding SCs they want to purchase and when they will redeem it. They then purposely log onto a particular SC provider website (e.g. Groupon and LivingSocial) to search for a SC offered by a particular type of service and purchase a SC that best meets their preference (e.g., plan to have a dinner with a partner at a fine-dining steak and seafood restaurant in a specific time frame, this evening). Thus, unlike Experiments 1, 2 and 3 that focused on unplanned SC purchase motivation, Experiments 4A&4B focused on planned SC purchase motivation.

Pretest

Similar to previous experiments, a pretest was conducted to select an appropriate SC face value in relation to a 50% discount. Participants were 122 individuals who had dining experiences at fine-dining steak and seafood restaurants and were 21 years old or older (MAge = 30.32, 35.20% female) recruited from MTurk online panel with an exchange for a small incentive. They were asked to type their best estimate of the average total bill (before tip) they expected to pay for ‘a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine’. The results show that the mean estimate of the average was $101.02. Thus, $50 was used as a representative of a low-implausible face value and $90-$110 was used as a representative of the average total bill (before tip) consumers expect to pay for “a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine”. Furthermore, $100 was used as a representative of a plausible face value. The justification for this decision is that a face value of $50 is significantly lower than the average price consumers expected to pay of $90-$110 (50% lower than the average of the expected total bill of $100, which is the mid-point between $90 and $110). It is important to note that, as there
was an oversampling of males (64.80%) in the sample, gender effect was examined. The results indicated that gender did not have a significant on the estimated of the average total bill (before tip) they expected to pay for ‘a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine influence on (p > .05), thus, confirming that there was no gender effect.

Also, the same group of participants were asked to evaluate the four presentations of semantic cues (‘$___ for $___ deal’, ‘$___ for $___ worth of food and drinks’, ‘$___ for $___ worth of food and drinks for two people’, and ‘$___ for a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine. Regular $___’. Then, they indicated their perception of concreteness/abstractness, with a single-item, 7-points scale with end points (1=very abstract, 7=very concrete) adopted from Biswas, Pullig, Krishnan, and Burton (1999). The results from a paired-samples t-test showed that (‘a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine, Regular $___’) had the highest mean score; while (‘$___ for $___ deal’) had the lowest mean score (M3 course dinner for 2 people=5.90, M$ for $ deal=3.73, t(121)=13.01, p=.000). Thus, ‘a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine, Regular $___’ and ‘$___ for $___ deal’ were selected as concrete semantic cues and abstract semantic cues respectively.

Finally, participants evaluated the picture of food items served by ‘Neil’s Steakhouse and Seafood’ and indicated the extent to which they agreed or disagreed that ‘Neil’s Steakhouse and Seafood’ could be classified as a fine-dining restaurant (1=strongly disagree, 7=strongly agree). As expected, participants agreed that ‘Neil’s Steakhouse and Seafood’ can be classified as a fine-dining restaurant (M=5.70). Thus, this picture was used as a stimulus in Experiment 4B.
Experiment 4A: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness (low-implausible face value)

Participants, design, and procedure

This experiment employed a 2 (coupon price relative to WTPP-SC: higher vs. lower) x 2 (semantic cue concreteness: abstract vs. concrete) between-subject design. Participants were 123 individuals who had heard about SCs, had dinner experiences at fine-dining Steak and Seafood restaurant, were 21 years old or older, and correctly answered attention check question (Age range: 21-66, M_Age = 33.59, 45.90% female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the four conditions (cell size: 28-33). Similar to previous experiments, all participants were asked to imagine that they were in a SC purchasing situation. Coupon price lower (higher) than WTPP-SC was manipulated at ‘$30’ (‘$20’). Abstract (concrete) semantic cues were manipulated at ‘$25 for $50 worth of food and drinks’ (‘$25 for a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine, Regular $50’). Similar to previous experiments, all participants were told to imagine that they were in a SC purchasing situation. All participants read.

“Imagine that you and your significant other like steak and seafood. Both of you occasionally have dinners together at a fine-dining steak and seafood restaurant with an average total bill including alcoholic drinks (before tip) of $90-$110. You each take turns paying the bill and the next meal is your turn.

Today, while you are visiting a social coupon provider website that you are currently a member of in order to search for a social coupon offered by a local steak & seafood restaurant, you notice that Davis’s Steakhouse & Seafood, a new local fine-dining restaurant, is offering a social coupon: $25 for $50 worth of food and drinks [Regular $50]

You realize that the highest coupon price you are willing to prepay for a social coupon for a dinner for two people at any fine-dining steak and seafood restaurant is $30[20].”
After reading the scenario, participants completed measures related to the scenario and personal information.

**Measures**

All measures for dependent variable - *SC purchase likelihood* (Cronbach’s α = .98), manipulation checks for low-implausible face value and coupon price relative to WTPP-SC, process evidence- *pain of prepayment*, covariates- *deal proneness* (Cronbach’s α = .92), *skepticism* (Cronbach’s α = .95), and *variety-seeking orientation* (Cronbach’s α = .86), and other measures- *realism of the scenario* (Cronbach’s α = .95), *brand familiarity*, *dining experience at fine-dining steak and seafood restaurant*, *age*, and *gender* used in this experiment are identical to the ones used in previous experiments. Again, as deal proneness and variety-seeking orientation did not significantly influence SC purchase likelihood, only skepticism was used as a covariate for further analysis.

The additional measure used in this experiment was the manipulation check for semantic cue concreteness, which was measured with two items, seven-points scale with end points (1=abstract, 7=concrete) and (1=ambiguous, 7=unambiguous) adopted from Biswas, Pullig, Krishnan, and Burton (1999). The result from the reliability analysis showed a high level of reliability between the two items (Cronbach’s α=.96). Thus, the two items were combined and averaged to form a composite variable for a manipulation for semantic cue concreteness. The higher score indicates the higher level of semantic cue concreteness.

**Results**

The manipulation check for coupon price relative to WTPP-SC was successful where participants in a coupon price lower than WTPP-SC condition indicated lower scores than those
in a coupon price higher than WTPP-SC condition ($M_{\text{Lower than WTPP-SC}}=2.65; M_{\text{Higher than WTPP-SC}}=4.91; F(1, 121)=221.11, p=.000$). The interaction between a coupon price relative to WTPP-SC and semantic cue concreteness was not significant ($F(1, 121)=.04, p=.844$). Also, the manipulation check for semantic cue concreteness was successful where participants in a concrete semantic cue condition indicated higher score than those an abstract semantic cue condition ($M_{\text{Concrete}}=6.22; M_{\text{Abstract}}=3.68; t(121)=-16.33, p=.000$); Furthermore, the manipulation check for low-plausible face value was also successful where all participants across conditions indicated a relatively high score for face value plausibility check ($M_{\text{Face value plausibility check}}=5.50$). Finally, participants indicated a low score for brand familiarity ($M_{\text{Familiarity}}=1.45$), and a high score for realism of the scenario ($M_{\text{Realism}}=5.18$).

A two-way ANCOVA conducted on SC purchase likelihood with skepticism as a covariate revealed significant interaction of coupon price relative to WTPP-SC and semantic cue concreteness ($F(1, 118)=76.58, p=.000, \eta^2=.39$). As hypothesized in $H_{6a}$, planned contrasts showed that concrete (vs. abstract) semantic cues significantly decreases consumers’ likelihood of purchasing SC featuring a low-implausible face value only when a coupon price is lower than WTPP-SC ($M_{\text{Lower than WTPP-SC, Concrete semantic cues}}=2.48, M_{\text{Lower than WTPP-SC, Abstract semantic cues}}=5.34, t(119)=-12.66, p=.000$) but not when a coupon price is higher than WTPP-SC ($M_{\text{Higher than WTPP-SC, Concrete semantic cues}}=1.98, M_{\text{Higher than WTPP-SC, Abstract semantic cues}}=2.37, t(119)=-1.64, p=.104$). Thus, $H_{6a}$ is supported (See Table B3, Appendix B for the ANCOVA results).

To gain more insights, an independent $t$-Test conducted on skepticism with semantic cue concreteness as an independent variable was analyzed. The results shows that participants in a concrete semantic cue condition indicate higher skepticism than those in an abstract semantic cue condition ($M_{\text{Concrete}}=5.63; M_{\text{Abstract}}=4.40; t(121)=7.28, p=.000$). Finally, as there was an
oversampling of males (54.10%) in the sample, gender effect was examined. The results indicated that gender did not have a significant influence on likelihood of purchasing SCs featuring a low-implausible face value ($p=.245$), thus, confirming that there was no gender effect. Figure 12 shows the moderating effect of semantic cue concreteness on the effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing SCs featuring a low implausible face value.

![Figure 12](image.png)

**Figure 12.** The moderating effect of semantic cue concreteness (low-implausible face value)

Similar to previous experiments, the procedure proposed by Hayes (2012) was conducted to test the mediating effect of pain of prepayment on the interaction of coupon price relative to WTPP-SC and semantic cue concreteness on SC purchase likelihood ($H_{7a}$). In this analysis, coupon price relative to WTPP-SC was an independent variable, semantic cue concreteness was a moderator, SC purchase likelihood was a dependent variable, pain of prepayment was a mediator, and skepticism is a covariate. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results revealed the means indirect effect of the interaction between WTPP-SC and semantic cue concreteness on SC
purchase likelihood through pain of prepayment with a 95% confidence interval including zero for both abstract (B = .02; SE = .21; CI = -.36 to .46) and concrete (B = .01; SE = .15; CI = -.26 to .35) semantic cues. Thus, H7a is not supported.

Discussion

The results from Experiment 4A support H6a that consumers’ likelihood to purchase SCs featuring a low-implausible value in which a coupon price lower (higher) than WTPP-SC is lower when semantic cues are concrete (vs. abstract). However, H7a is not supported; whereby pain of prepayment does not mediate the interaction of coupon price relative to WTPP-SC semantic cue concreteness on consumers’ likelihood of purchasing SCs featuring a low-implausible face value. This may be to the fact that skepticism plays greater role than pain of prepayment in influencing consumers’ likelihood purchasing SCs featuring a low-implausible face value with concrete semantic cue. This is consistent with the real situation that a fine-dining steakhouse and seafood restaurant is one type of service retailer that commonly offers SCs featuring a plausible face value with concrete semantic cues. Thus, Experiment 4B, I focus on SCs featuring a plausible face value and manipulating coupon price relative to WTPP-SC and semantic cue concreteness.

Experiment 4B: Manipulating coupon price relative to WTPP-SC and semantic cue concreteness (plausible face value)

Participants, design, and procedure

This experiment employed a 2 (coupon price relative to WTPP-SC: higher vs. lower) x 2 (semantic cue concreteness: abstract vs. concrete) between-subject design. Participants were 148 individuals who had heard about SCs, had dinner experiences at fine-dining Steak and Seafood restaurant, were 21 years old or older, and correctly answered attention check question (Age
range: 21-64, $M_{Age}$ = 33.28, 41.90% female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the four conditions (cell size: 36-39). Similar to previous experiments, all participants were asked to imagine that they were in a SC purchasing situation. Coupon price lower (higher) than WTPP-SC was manipulated at ‘$60’ (‘$40’). Abstract (concrete) semantic cues were manipulated at ‘$50 for $100 worth of food and drinks’ (‘$50 for a three-course dinner for two people (two appetizers, two entrees, and two desserts) with two glasses of wine, Regular $100’). All participants read the scenario identical to the one used in Experiment 4A except the name of the restaurant is Neil’s Steakhouse and Seafood and instead of Davis’s Steakhouse and Seafood. Also, they were shown with the picture of a SC, varying in terms of semantic cue concreteness, instead of descriptive words as follows: Figure 13 and Figure 14 show a SC featuring a plausible face value with abstract semantic cues and a SC featuring a plausible face value with concrete semantic cues respectively.

Figure 13. Abstract semantic cues
Figure 14. Concrete semantic cues

After reading the scenario, participants completed measures related to the scenario and personal information.

Measures

All measures for dependent variable- *SC purchase likelihood* (Cronbach’s α =.98)-, manipulation checks for low-implausible face value and coupon price relative to WTPP-SC, process evidence- *pain of prepayment*-, covariates- *deal proneness* (Cronbach’s α =.92), *skepticism* (Cronbach’s α =.78), and *variety-seeking orientation* (Cronbach’s α =.84)-, and other measures- *realism of the scenario* (Cronbach’s α =.81), *brand familiarity, dining experience at fine-dining steak and seafood restaurant, age, and gender* used in this experiment are identical to the ones used in Experiment 4A. Again, as with deal proneness, variety-seeking orientation did not significantly influence SC purchase likelihood, only skepticism was used as a covariate for further analyses.

The different measure used in this experiment is the manipulation check for a plausible face value was measure with a single-item, 7-point Likert scale (1=strongly disagree, 7=strongly agree) “Based on the scenario you just read, to what extent you agree or disagree that the face
value of this social coupon is a lot lower than the average total bill including alcoholic drinks (before tip) you would expect to pay for a dinner for two people at any fine-dining steak and seafood restaurant.”

**Results**

The manipulation check for a coupon price relative to WTPP-SC was successful where participants in the coupon price lower than WTPP-SC condition indicated lower score than those in the coupon price higher than WTPP-SC condition ($M_{\text{Lower than WTPP-SC}}=2.89; M_{\text{Higher than WTPP-SC}}=4.93; F(1, 144) = 222.65, p=.000$). The interaction between a coupon price relative to WTPP-SC and semantic cue concreteness was not significant ($F(1, 144) = .11, p=.743$). Also, the manipulation check for semantic cue concreteness was successful where participants in a concrete semantic cue condition indicated higher scores than those in an abstract semantic cue condition ($M_{\text{Concrete}}=6.19; M_{\text{Abstract}}=3.20; F(1, 144) = 144.52, p=.000$). The interaction between a coupon price relative to WTPP-SC and semantic cue concreteness was not significant ($F(1, 144) = .013, p=.909$). Furthermore, the manipulation check for plausible face value was also successful where all participants across conditions indicated a relatively low score for face value plausibility check ($M_{\text{Face value plausibility check}}=2.64$). Finally, participants indicated a high score for perception of a fine-dining restaurant ($M=5.78$), a low score for brand familiarity ($M_{\text{Familiarity}}=1.43$), and a high score for realism of the scenario ($M_{\text{Realism}}=5.98$).

A two-way ANCOVA conducted on SC purchase likelihood with skepticism as a covariate revealed significant interaction of coupon price relative to WTPP-SC and semantic cue concreteness ($F(1, 143)=8.18, p=.005, \eta^2=.054$). As hypothesized in H6b, planned contrasts showed that concrete (vs. abstract) semantic cues significantly increases consumers’ likelihood of purchasing SCs featuring a plausible face value only when a coupon price is higher than
WTPP-SC (MHigher than WTPP-SC, Concrete semantic cues=5.22, MHigher than WTPP-SC, Abstract semantic cues=4.00, t(144)=4.65, p=.000) but not when a coupon price is lower than WTPP-SC  (MLower than WTPP-SC, Concrete semantic cues=6.11, MLower than WTPP-SC, Abstract semantic cues=5.89, t(144)=.90, p=.370). Finally, as there was an oversampling of males (58.10%) in the sample, gender effect was examined. The results indicated that gender did not have a significant influence on likelihood of purchasing SCs featuring a low-implausible face value (p=.911), thus, confirming that there was no gender effect. Thus, H6b is supported. Figure 15 shows the moderating effect of semantic cue concreteness on the effect of coupon price relative to WTPP-SC on consumers’ likelihood of purchasing SCs featuring a plausible face value (See Table B4, Appendix B for the ANCOVA results).

Figure 15. The moderating effect of semantic cue concreteness (plausible face value)

Similar to previous experiments, the procedure proposed by Hayes (2012) was conducted to test the mediating effect of pain of prepayment on the interaction of coupon price relative to WTPP-SC and semantic cue concreteness on SC purchase likelihood (H7b). In this analysis, coupon price relative to WTPP-SC was an independent variable, semantic cue concreteness was a moderator, SC purchase likelihood was a dependent variable, pain of prepayment was a
mediator, and skepticism was a covariate. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results show the means indirect effect of the interaction between WTPP-SC and semantic cue concreteness on SC purchase likelihood through pain of prepayment with a 95% confidence interval including zero for both abstract (B = -.32; SE = .13; CI = -.65 to -.11) and concrete (B = -.65; SE = .22; CI = -1.16 to -.25) semantic cue conditions. Thus, H7b is supported.

Discussion

The results from Experiment 4B support H6b that consumers’ likelihood to purchase SCs featuring a plausible value in which a coupon price higher (lower) than WTPP-SC is greater when semantic cues are concrete (vs. abstract). Also, H7b is supported; whereby pain of prepayment mediates the interaction of coupon price relative to WTPP-SC and semantic cues concreteness on consumers’ likelihood of purchasing SCs featuring a plausible face value. Overall, these results support the contention about the important role of semantic concreteness as a contextual cue that attenuates pain of prepayment aversion effect. In the next experiment, the focus is on another contextual cue that also commonly used in SCs, multiple SC deal condition.

Experiment 5: Manipulating multiple social coupon deal condition

Experiment 5 tests the predictions that when consumers are exposed to multiple SC deals (e.g., SC deal Option 1 & SC deal Option 2) for the same service (e.g., a dinner for two people) offered by the brand, they are more likely to choose a SC deal featuring a lower plausible (vs. plausible) face value only when a coupon price for a SC deal featuring a plausible face value is higher than WTPP-SC, while a coupon price for a SC featuring a low-implausible face value is lower than WTPP-SC (H8a) (i.e., multiple SC deal Condition 2). However, consumers are less to
choose a SC featuring a low-implausible face value but when coupon prices for both options are lower than WTPP-SC (H$_{8b}$) (i.e., multiple SC deal Condition 1). This experiment also tests the mediating effect of pain of prepayment (H$_9$).

Similar to Experiments 4A and 4B, Experiment 5 focuses on planned SC purchase. Experiment 5 differs from previous experiments in several aspects. First, American casual sit-down restaurant is used as a scenario stimuli context. This is because American casual sit-down restaurant is another type of restaurant that is popularly offers SCs. Second, different SC purchasing-situation in which having a dinner with participants’ sister is used instead of their close friend instead and their significant other for the generalizability purpose. Finally, the focus in this experiment is on the situation that consumers are about the purchase SCs offered by a particular brand.

Pretest

Similar to previous experiments, a pretest was conducted to select an appropriate SC face value in relations to 50% discount. 71 individuals who had dining experiences at American casual sit-down restaurants and were 21 years old or older ($M_{Age} = 30.76$, 43.70% female) recruited from MTurk online panel with an exchange for a small incentive were asked to type their best estimate of the average total bill including alcoholic drinks (before tip) they expected to pay for a dinner for two people at American casual sit-down restaurants. They were shown with a list of American casual sit-down dining restaurants and then clicked the ones that they have been to. The purpose of including this question was to make sure that participants understand the concept of American casual sit-down dining restaurant correctly. The results showed that the mean estimate of the average was $49.32. Thus, $20 was used as a representative of a low-implausible face value, while using $45-$55 as the representative of the
average total bill (before tip) consumers expected to pay for a dinner for two people at an American casual sit-down restaurant and $50 was used as a representative of a plausible face value.

**Participants, design, and procedure**

This experiment employed a 1 factor, 3 levels (SC deal condition: Condition 1: coupons prices for both a SC featuring a low-implausible face value and a SC featuring a plausible face value are lower than WTPP-SC vs. Condition 2: a coupon price for a SC featuring a low-implausible face value is lower than WTPP-SC; while a coupon price for a SC featuring a plausible face value is higher than WTPP-SC vs. Control) between-subject design. Participants were 115 individuals who had heard about SCs, had dinner experiences at American casual sit-down restaurants, were 21 years old or older, and correctly answer an attention check question (Age range: 21-70, $M_{Age} = 34.30$, 44.30% female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the three conditions (cell size: 37-39). All participants were asked to imagine that they were in a SC purchasing situation identical to the ones used in Experiment 1. All participants were told to imagine that they are in a SC purchasing situation. All participants read.

“Imagine that and your sister occasionally have dinners together at various local American casual sit-down restaurants with an average total bill including alcoholic drinks (before tip) of $45-$55. You each take turns paying the bill and the next meal is your turn.

Today, you visited a social coupon provider website that you are currently a member of, searching for a social coupon offered by a local American casual sit-down restaurant.

After narrowing down the restaurant choices that meet your preferences, you notice that ‘The Kitchen’, a new local American casual sit-down restaurant is offering a social coupon that you can choose between two options:

*Option 1*: $10 for $20 worth of food and drinks for two people  
*Option 2*: $25 for $50 worth of food and drinks for two people”
Finally, participants in a coupon price for a SC featuring a low-implausible face value is lower than WTPP-SC while a coupon price for a SC featuring a plausible face value is higher than WTPP-SC (coupons prices for both a SC featuring a low-implausible face value and a SC featuring a plausible face value are lower than WTPP-SC) condition read “you realize that the highest coupon price you are willing to prepay for a social coupon for a dinner for two people at any American casual sit-down restaurant is $30 (15)”. Participants in a control condition did not see the information about coupon price relative to WTPP-SC.

After reading the scenario, participants completed measures related to the scenario and personal information.

Measures

A dependent variable was a choice between SC options (Option 1: “$10 for $20 worth of food and drinks for two people” or Option 2: “$25 for $50 worth of food and drinks for two people”. All measures for process evidence (i.e., pain of prepayment), covariates (i.e., deal proneness, skepticism, and variety-seeking tendency) and other measures (i.e., realism of the scenario, brand familiarity, dining experience at American casual sit-down restaurants, age, and gender) used in this experiment were identical to the ones used in previous experiments.

The differences were the manipulation checks for a coupon price relative to WTPP-SC and for face value plausibility. The manipulation check for a coupon price relative to WTPP-SC was measured with a single, choice item. Participants were asked to choose between either “coupon prices for Option 1 and Option 2 are both lower than the highest coupon price you are willing to prepay for a social coupon for a dinner for two people at any American casual sit-down restaurants” or “a coupon price for Option 1 is lower than; while a coupon price for Option 2 is higher than the highest coupon price you are willing to prepay for a dinner for two people at
any American casual sit-down restaurants”. The manipulation check for face value plausibility was measures with two items, 7-point Likert scale (1=strongly disagree, 7=strongly agree).

Based on the scenario you just read, “The face value of Option 1 is a lot lower than the average total bill including alcoholic drinks (before tip) you expect to pay for a dinner for two people at American casual sit-down restaurants” and “The face value of Option 2 is a lot lower than the average total bill including alcoholic drinks (before tip) you expect to pay for a dinner for two people at American casual sit-down restaurants”.

**Results**

The manipulation check for a coupon price relative to WTPP-SC was successful where the majority of participants (93%) in the condition in which coupon prices for both Option 1 and Option 2 lower than WTPP-SC condition and those in the condition in which a coupon price for Option 1 lower than WTPP-SC; while a coupon price for Option 2 higher than WTPP-SC correctly answer this manipulation check question. Six participants who failed to answer this manipulation check correctly were excluded from further analysis. Also, the manipulation check for face value plausibility was successful. The results from paired-samples t-test show that the score for low-plausible face value is significantly higher than that of plausible face value ($M_{\text{Low-implausible}}=5.95$, $M_{\text{Plausible}}=2.88$, $t(114)=18.09$, $p=.000$). Finally, participants indicated a low score for brand familiarity ($M_{\text{Familiarity}}=1.58$) and a high score for realism of the scenario ($M_{\text{Realism}}=5.91$).

The effect of coupon price relative to WTPP-SC condition (coupon prices for both options lower than WTPP-SC (i.e., Multiple SC deal Condition 1) vs. a coupon price for Option 1 lower than; while a coupon price for Option 2 higher than WTPP-SC (i.e., Multiple SC deal
Condition 2) on consumers’ choice between an Option 1 (i.e., a SC deal featuring a low-implausible) and Option 2 (i.e., a SC deal featuring a plausible face value (Option 2) was tested using logistic regression. The results indicated a significant coefficient for coupon price relative to WTPP-SC condition at a 0.01 level ($\beta_{\text{Coupon price relative to WTPP-SC condition}} = -3.62; \text{Wald}(1) = 30.76; p=.000$). Specifically, a greater percentage of participants in Condition 2 chose Option 1 (i.e., a SC deal featuring a low-implausible) than those in Condition 1 ($P_{\text{Condition 2}} = 84.6\%$ vs. $P_{\text{Condition 1}} = 12.8\%$, $\chi^2(1)=40.23, p=.000$) and those in Control condition ($P_{\text{Condition 2}} = 84.6\%$ vs. $P_{\text{Control}}=16.2\%, \chi^2(1)=4.55, p=.000$). There was no difference in percentage of participants choosing Option 1 between those in Condition 1 and Control condition ($P_{\text{Condition 1}} =12.8\%$ vs. $P_{\text{Control}}=16.2\%, \chi^2(1)=.18, p=.752$). Thus, $H_8a$ and $H_8b$ are supported. Figure 16 shows the effect multiple SC deal condition on the choice of SC deal varying in coupon price relative to WTPP-SC on the choice of SC deal (Option 1: a SC deal featuring a low-implausible face value vs. Option 2: a SC deal featuring a plausible face value)

![Figure 16](image)

**Figure 16.** The effect of multiple social coupon deal condition

Similar to previous experiments, the procedure proposed by Hayes (2012) was conducted to test the mediating effect of pain of prepayment on the effect of multiple SC deal condition on
consumers’ choice of SCs deal (Option 1: a SC deal featuring a low-implausible face value vs. Option 2: a SC deal featuring a plausible face value). In this analysis, a multiple deal condition was an independent variable SC deal choice was a dependent variable, and pain of prepayment was a mediator. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results showed the means indirect effect of multiple deal condition on SC purchase likelihood through pain of prepayment with a 95% confidence interval excluding zero (B = .67; SE = .45; CI = .10 to 1.57). Thus, \( H_9 \) is supported.

**Discussion**

The results from Experiment 5 support \( H_{8a} \) that when coupon prices for both SC deals are lower than WTPP-SC, consumers are more likely to purchase a SC deal featuring a plausible (vs. low-implausible) face value, \( H_{8a} \) that When a coupon price for a SC featuring a low-implausible face value is lower than WTPP-SC while a coupon price for a SC featuring a plausible face value is higher than WTPP-SC, consumers are more likely to purchase a SC deal featuring a low-implausible (vs. plausible) face value. Also, \( H_9 \) is supported where pain of prepayment mediates the effect of multiple SC deal condition on consumers’ choice of SC deals.

**General discussions**

**Conclusion**

While there is a growing usage of SCs featuring a low-implausible face value among service retailers (e.g., sit-down dining restaurants), less is known about why consumers are willing to prepay for such SCs. From a traditional economic approach, this behavior results in sub-optimal SC purchasing-decisions in terms of achieving large savings (e.g., 50% or more). This research explores this issue based on the price psychology approach (Manoj 2013) and
mental accounting framework (Prelec and Lowenstein 1998). It is proposed that this behavior occurs because consumers incorporate not only face value plausibility but also coupon price relative to WTPP-SC into their SC purchasing-decisions. Specifically, the higher the coupon price greater than WTPP-SC, the higher the pain of prepayment and the lower the consumers’ likelihood of purchasing a SC.

Across five experiments involving unplanned SC purchase motivation (Experiments 1, 2 & 3) and planned SC purchase motivation (Experiments 4A, 4B, & 5) as well as different types of sit-down dining restaurants such as Italian (Experiments 1&2), Mexican (Experiment 3), Fine-Dining Steak and Seafood (Experiments 4A & 4B), and American casual (Experiment 5), and different dinner situation such as having dinner with a significant other (Experiments 1, 2, 4A, & 4B), having a dinner with a close friend (Experiment 3), and having a dinner with a sister (Experiment 5), it was found that consumers’ likelihood of purchasing SCs featuring a low-implausible (vs. plausible) face value is greater when a coupon price for SCs featuring a low-implausible face value is lower than WTPP-SC, while a coupon price for SCs featuring a plausible face value is higher than WTPP-SC. Specifically, consumers’ likelihood of purchasing SCs featuring a low-implausible face value is greater when a coupon price is lower (vs. higher) than WTPP-SC. Furthermore, consumers’ likelihood of purchasing such SC is greater when time pressure is present (vs. absent) and when semantic cues are abstract (vs. concrete). Moreover, with exposure to multiple SC deals for the same service offered by the same brand, which vary in terms of face value plausibility (low-implausible vs. plausible), consumers are more likely to choose a SC deal featuring a low-implausible face value only when a coupon price for a SC deal featuring a low-implausible face value is lower than WTPP-SC, while a coupon price for a SC deal featuring a plausible face value is higher than WTPP-SC, but not when coupon prices for
both SC deals are lower than WTPP-SC. Finally, these experiments provide process evidence for
pain of prepayment aversion as well as rule out alternative explanations including skepticism
(Experiments 2-4) and anticipated regret (Experiment 3).

Theoretical contributions

Overall, these empirical findings highlight important yet under examined effects of
coupon price relative to WTPP-SC and pain of prepayment aversion on consumers’ SC
purchasing-decisions. This research advances the marketing literature in four important ways.
First, this research complements prior ARP research that has identified the positive effects of
high-plausible and high-implausible (sometimes called exaggerated) ARP on the consumers’
purchase likelihood (Biswas and Blair 1991; Compeau and Grewal 1998; Grewal, Monroe, and
Krishnan 1998; Mazumdar, Raj, and Sinha 2005). None of the research in this stream of
literature focuses on a low-implausible ARP. This is because a low-implausible ARP does not
create the perception of large monetary savings. Specifically, it does not reflect the true value of
a particular product/service that is deemed to be attractive. However, SCs uniquely differ from
other price promotions in that they require prepayment (i.e., at coupon price) in order to receive
large savings. This research shows the interesting results that many consumers positively
respond to SCs featuring low-implausible face value as a justification mechanism to avoid pain
of prepayment, specifically when a coupon price is higher than WTPP-SC.

Second, previous research in payment timing (Patrick and Park 2006; Prelec and
Lowenstein 1998) suggests that consumers prefer prepayment for non-durable hedonic goods but
prefer post-payment for durable-utilitarian goods. This research focuses on non-durable hedonic
goods (i.e., sit-down dining restaurants) so, intuitively, one should expect that consumers would
being willing to make a full prepayment by willing to prepay only for SCs featuring a plausible
face value (i.e., reflects the true expenditure) but not the ones featuring a low-implausible face value (i.e., does not reflect the true expenditure, results in failure in achieving large savings). The results from Experiments 1 and 2 add to this stream of literature by confirming that consumers prefer to prepay for non-durable hedonic goods (e.g. sit-down dining restaurants) by prepaying SCs offered by such type of goods. However, the primary objective of prepaying is to receive a large discount (e.g., 50% off). Accordingly, some consumers are more willing to make a full prepayment by purchasing SCs featuring a plausible face value. Instead, they tend to prefer to purchase SCs featuring a low-implausible face value and are willing to pay an additional amount of money beyond a SC face value when redeeming SCs at a service retailer (i.e., payment after consumption) in an attempt to avoid pain of prepayment generated from the amount of money paid for a SC (i.e., at coupon price). Furthermore, results from Experiment 3 add to the literature on consumers’ decision-making under time pressure (Dhar and Nowlis 1999; Jian 2002) by revealing interesting results that show that time pressure increases consumers’ likelihood of purchasing SCs featuring a low-implausible face value, in which a coupon price lower than WTPP-SC.

Third, the results from Experiments 4A and 4B add to the literature in semantic cue concreteness (Biswas and Burton 1993; Biswas et al. 1999; Grewal and Compeau 1992; Lichtenstein, Burton, and Karson 1991) by showing the different effects of semantic cue concreteness on purchase likelihood for SCs featuring a low-implausible (vs. plausible) face value in which a coupon price is lower than WTPP-SC. That is, concrete (vs. abstract) semantic cues decrease (increase) consumers’ likelihood of purchasing SCs featuring a low-implausible (plausible) face value in which a coupon price is lower than WTPP-SC. Interestingly, pain of prepayment does not mediate the interaction of coupon price relative to WTPP-SC and semantic
cue concreteness for SCs featuring a plausible (low-implausible) face value. The insignificant mediated moderation effect of pain of prepayment for SCs featuring a low-implausible face value may be due to the fact that consumers highly skeptical about the value of such SCs. That is, skepticism plays a greater role than pain of prepayment in the purchasing-decision for such SC.

Finally, Experiment 5 demonstrates interesting findings that the exposure of multiple SC deals, in which the deals vary in face value plausibility, influences consumers to become more rational in SC purchasing-decisions. That is, when exposed to multiple deals varying in face value plausibility, they are more likely to choose a SC deal featuring a plausible (vs. low-implausible) face value which will provide them with greater ultimate monetary reward. However, consumers still incorporate coupon price relative to WTPP-SC in their SC purchasing decision. Also, pain of prepayment aversion still plays an important role in a SC choice. Furthermore, when participants are manipulated to also think about WTPP-SC, they are more likely to choose a SC deal featuring a low-implausible face value only when a coupon price for a SC deal featuring a low-implausible face value is lower than WTPP-SC, while a coupon price for a SC deal featuring a plausible face value is higher than WTPP-SC but not when coupon prices for both SC deals are lower than WTPP-SC.

**Practical implications**

Given that coupon price relative to WTPP-SC and pain of prepayment aversion play a vital role in influencing consumers’ SC purchasing-decisions, the findings from the present research have certain practical implications for consumers and service retailers. From a consumer’s standpoint, the findings from this research suggest that consumers can optimize their
SC purchasing-decisions if they based their decisions on criteria most relevant to ultimate monetary savings rather than on their emotion (i.e., pain of prepayment). That is, consumers should exercise caution when exposed to SCs featuring a low-implausible face value, if achieving large monetary savings is their primary objective of purchasing SCs.

From a service retailer’s standpoint, this research suggests that service retailers should pay attention to the vital roles of WTPP-SC and pain of prepayment in consumers’ SC purchasing-decisions. Specifically, the results from Experiment 3 suggest that if service retailers want to offer SCs featuring a low-implausible face value, they should consider offering their SCs on SC provider websites that not only feature reference price-related information (e.g., a face value and a coupon price) but also feature time constraint information. For example, while Groupon and LivingSocial feature time constrain information, some other SC providers do not (e.g., Creative Loafing), so they should prefer the former. Furthermore, the results from Experiments 4A and 4B suggest that service retailers should use abstract semantic cues if they want to offer SCs featuring a low-implausible face value. On the other hand, they should use concrete semantic cues if they want to offer SCs featuring a plausible face value. Finally, because different consumers seem to have different WTPP-SC the results from Experiment 5 suggest that if the objective of service retailers is to maximize the numbers of SCs featuring a plausible face value, they should offer multiple SC deal options, in which at least one SC deal option features a low-implausible face value.

**Limitations and future research**

*First,* this present research focuses on examining certain price cues (e.g., face value and coupon price) so it might be interesting to investigate other price cues such as price endings (e.g.,
$19 for $40 worth of food and drinks). Furthermore, only certain contextual cues (i.e., time pressure, semantic cue concreteness, and multiple SC deals) were examined. As most of the major SC providers feature social cues such as consumer rating and number of SCs being purchased by other consumers, it is fruitful for future research to empirically investigate how these social cues influence consumers’ SC purchasing-decisions.

Second, this paper employs scenario-based experiments. Although all participants had heard about SCs and had related sit-down dining restaurant experiences, it does not ensure that these participants have adequate purchase knowledge and experience. Future research should incorporate this issue by employing non-experimental research with the data collected from consumers who recently purchased SCs. Also, it is worthwhile to conduct in-depth interviews and/or focus groups with SC consumers regarding how they make their SC purchasing-decisions.

Third, this present research is built on the premise that the consumer objective of prepaying for SCs is to receive large savings. However, one might argue that consumers might be willing to prepay for SCs, even though they realize that they will not receive large savings. That is, their SC purchasing-decisions are less influenced by pain of prepayment aversion. Instead, consumers just want to try new services, brands, and/or experiences. Acknowledging this phenomenon, consumers’ variety-seeking orientation was measured across five experiments. However, this variety-seeking orientation did not significantly influence consumers’ SC purchasing-decisions in any of the five experiments. This might due to the characteristics of the stimuli used in this research (i.e., Italian, Mexican, Steak and Seafood, and American sit-down dining restaurants) that are not uniquely new to the participants. Thus, it is worthwhile for future research to replicate the findings from this present research in other type of services that are new
to the participants (e.g., Ethiopian restaurants) and quick service restaurants that tend to offer SCs with cheaper coupon prices. Furthermore, this research did not directly measure consumers’ perceptions of monetary savings. Even though skepticism was used as a covariate, some consumers might think that 30% or even 25% is attractive enough to convince them to prepay for a SC. Thus, it is fruitful for future research to incorporate this issue.

Fourth, transaction utility theory (Thaler 1985) suggests that the overall value of a SC offer is contingent on two comparisons. The value of the acquisition of the product or service itself; acquisition value (or acquisition utility); involves the comparison of what benefits consumers receive from the purchase of product or service relative to what consumers pay to purchase a social coupon. In other words, acquisition value occurs at the time of consumption (i.e., when consumers use a social coupon at a service retailer). The value of the deal itself; transaction value (or transaction utility); involves the comparison of a face value with a coupon price. In other words, transaction value occurs at the time of payment (i.e., when consumers purchase a social coupon). Thus, it is worthwhile for future research also measure consumers’ perceived transaction value as another consumers’ psychological response and test the relationships among pain of prepayment, perceived transaction utility, and SC purchase likelihood.

Fifth, Experiment 3 focuses only on either time pressure present or absent information. Recently, certain SC providers (e.g., LivingSocial) website also feature more vivid time pressure cues such as an image of clock with decreasing time left available to purchase. Furthermore, LivingSocial is currently featuring the information that if consumers purchase this SC within a short period of time, they will receive larger discounts (e.g., 65% off instead of 50% off). This
might be interesting for future research to develop the mock website that mimic LivingSocial and then empirically examines the interactions of coupon prices relative WTPP-SC, time pressure, and discount size on consumers’ SC purchasing-decisions.

Sixth, Experiment 5 focuses only on the options that offer exactly the same deal. The only difference between the two options is face value that corresponds with coupon price. In many situations, the two options are not the same. For example, the larger discount for the plausible SC featuring a plausible face value option and the two options differ in terms of semantic cue concreteness. Thus, it is worthwhile for future research to incorporate an investigation of this issue.

Seventh, While Experiments 1, 2, and 3 focus on unplanned SC purchase (i.e., receiving information about an SC via email), Experiments 4A, 4B and 5 focus on planned SC purchases (i.e., visiting a SC provider website to search for a particular type of a SC). However, this research did not directly examine the effect of SC purchasing motivation (planned vs. unplanned) on consumers’ SC purchasing-decision. This is important regarding planned motivation, because consumers might be more specific about the characteristics of a SC they want to purchase and about when they plan to redeem it at a service retailer. This might result in more rational SC purchasing-decisions and less aversion to pain of prepayment.

Eighth, this present research has attempted to rule out other confounds by controlling for individual differences in deal proneness and variety-seeking orientation. However, other individual differences might play an important role in consumers’ SC purchasing-decision as well. For example, Rick, Cryder, and Lowenstein (2008) contended that consumers differ in their sensitivity of pain of paying. Some are chronically more sensitive to pain of paying than others.
Based on this contention, they suggest that consumers can be identified as tightwads or spendthrifts. *Tightwads* are consumers whose affective reaction to spending may lead them to spend less than their more deliberative selves would prefer. In contrast, *spendthrifts* are those consumers whose experience minimal pain of paying and, thus, end up spending more than they themselves would consider as normatively appropriate. Also, Dholokia and Kimes (2011) suggest that SC consumers differ in terms of their SC purchasing-behaviors (e.g., heavy or those who have purchased 11 SCs or more vs. light users or those who have purchased 1-2 SCs). Thus, it is worthwhile for future research to investigate the roles individual difference in sensitivity to pain of paying and SC purchasing-behavior in in SC purchasing-decisions. Additionally, participants across experiments are 21 years or older because it is expected that the total bill will be much different for those who order alcoholic drinks and those who do not. This is important because face value plausibility is manipulated in the scenario. However, SCs consumers also consist of a younger population. Future research might consider collecting data from participants who are 18-20 years old and controlled for age.

*Ninth*, previous research has identified perceived risk (i.e., the amount of uncertainty or consequences experienced by consumers in contemplating a particular purchase decision) (Cox and Rich 1964) as an important factor influencing consumers’ purchasing-decision for new products/services. As SCs are typically offered by small service retailers, it is likely that consumers have a high level of perceived risk toward such SCs. Thus, it might be worthwhile for future research to investigate the role of perceived risk in consumers’ SC purchasing-decision. This is very interesting because due to the prepayment scheme and long redemption period, it is likely that consumers may positively respond to SCs featuring a low-implausible face value, which in turns have lower coupon price. This is because the lower coupon price results in the
lower perceived risk in potential loss if they forget or do not have a chance to redeem a SC at a service retailer. Another aspect of perceived risk that might be beneficial to investigate is that the level of perceived risk could be reduced by redeeming the SC very quickly after it is purchased.

*Finally*, this research does not incorporate sensory aspects of SCs. Previous research suggests that the sensory aspects (e.g., color) in demonstrating the discount can make a difference on consumer judgment and decision-making. For example, the color red leads to lower price-consciousness and therefore leads consumers to choose more expensive options (Mandel and Johnson 2002; Puccinelli, Chandrashekaran, Grewal, and Suri 2013). In addition, Coulter and Coulter (2005) show that when discount prices are demonstrated with a smaller font than the regular prices, consumers perceive a greater value of the deal compared to a situation where discount price is demonstrated in a larger font. Future research should examine whether such sensory aspects of demonstration will influence consumers’ SC purchasing-decisions. One example of this is the growing usage of mobile technology. Due to the smaller screen of mobile phones compared to laptops, consumers’ judgments on the attractiveness of SCs could be altered as all cues are presented in a smaller size.

**References**


ESSAY 2:
Superfluous Spending: The Role of Neglected Mental Budget Depletion in Spending Decision When Redeeming Social Coupons

Abstract

Despite the growing phenomenon whereby consumers spend additional money beyond a social coupon (SC) face value, which results in consumers failing to achieve large savings, research investigating why consumers behave in such a way is limited. In this research, it is proposed that this behavior occurs because malleability in mental accounting decreases the effectiveness of mental budgeting as a spending self-control mechanism. Face value plausibility (i.e., perception of whether a SC face value is either lower than the average or higher than the average but lower than the highest expense consumers expect to pay for a particular type of service) is the key contextual factor that influences such behavior. Findings across three experiments revealed that the amount of money spent beyond a SC face value was greater when redeeming SCs featuring a low-implausible (vs. plausible) face value. Neglected mental budget depletion (i.e., the instance in which consumers neglect the fact that the budget assigned to a particular SC mental account as a spending self-control is already depleted) was an underlying process. Furthermore, the amount of money spent beyond a SC face value was greater when SCs featuring a low-implausible face value and semantic cues were concrete (vs. abstract). Finally, the amount of money spent beyond a SC face value was greater when redeeming SCs featuring a low-implausible face value and the temporal distance between purchasing and redeeming a SC was far (vs. near). Overall, these findings confirm the contentions regarding the important roles
of face value plausibility and neglected mental budget depletion effect as well as the boundary
conditions of such effect including semantic cue concreteness and temporal distance between
purchasing and redeeming a SC.

Introduction

“John and his girlfriend like Italian food. They occasionally dine out together at various
local Italian sit-down restaurants with the average total bill including alcoholic drinks
(before tip) of $60.

Several weeks ago, John purchased a social coupon offered by L’Opera Italian
Restaurant via Groupon.

$15 for $30 worth of food and drinks for a dinner for two people, 50% off

This evening, John took his girlfriend out for a dinner at L’Opera. As usual, he ordered
two glasses of wine, a shared appetizer, two entrees, and a shared dessert.

When John and his girlfriend finished the dinner, the waitress gave John the bill showing
the amount of $60 before deducting $30 face value. Thus, he ended up with paying
additional $30 (before tip).”

Prepayment to receive a substantive discount (e.g., 50% or more) is the unique feature of
social coupons (SCs) (Kumar and Rajan 2012). That is, consumers incur costs (i.e., prepayment
at a lower SC coupon price) first and receive benefits later (e.g., consumption at a greater SC
face value). From a traditional economic perspective, one can argue that if the goal of prepaying
for a SC is to receive substantive savings (i.e., truly save 50% off), consumers should not spend
any additional money beyond the face value when redeeming a SC at a service retailer. However,
the opening scenario commonly occurs, whereby consumers end up with paying great additional
money beyond the SC face value when redeeming a SC at a service retailer.

Mental accounting research suggests that consumers typically use mental accounts as
spending self-control mechanisms by allocating budget limits to certain mental accounts (Heath
and Soll 1996). Consumers can also control their spending by setting up a transaction-specific mental account, debit the costs, and credit the benefits generated from the consumption (e.g., a L’Opera’s SC mental account) (Prelec and Loewenstein 1998). In a SC redemption context, it is contended that spending great additional money beyond a SC face value violates not only the principle of economic maximization (i.e., failing to achieve large savings), but also the use of a mental budget as a spending control mechanism (Heath and Soll 1996). For instance, if John is a completely rational consumer and strictly uses L’Opera SC mental account as a spending self-control, he should not spend any additional money (before tip) beyond the SC face value (or at most spend only a small additional amount) in order to maximize monetary saving. This issue is vital for not only consumers themselves in terms of failing to achieve large savings, but also for service retailers. This is because the amount of additional money spent beyond a SC face value will compensate the forgone benefits (i.e., offering a large discount size) and will subsequently lead to greater sales revenues and profitability generated from offering the SC campaign (Edelman, Jaffee, and Kominers 2010; Kumar and Rajan 2012).

This issue raises important, but heretofore undressed research question: Why do consumers spend a great amount of money beyond an SC face value? In this present research, it is contended that consumers’ use of a transaction-specific mental budget as a spending self-control mechanism plays a vital role in their spending decision when redeeming a SC at a service retailer. However, under certain contextual conditions, the application of spending self-control by using the mental budget principle is violated (i.e., imperfect); thus, resulting in loss of spending self-control in term of superfluous spending. Specifically, it is proposed in this research that neglected mental budget depletion neglect (i.e., the instance in which consumers neglect the fact that budget assigned to a transaction-specific mental account as a spending self-control is
already depleted) influences the manner in which consumers make spending-decisions when redeeming a SC at a service retailer. For example, in the opening scenario, John’s decision of ordering food and drinks with the total bill (before tip) of $60 signifies that John neglected the fact that a mental budget for a L’Opéra SC was already depleted at the time he prepaid for this SC (e.g., several weeks ago). In other words, if he strictly used mental budget as a spending self-control mechanism, he should not or did any foods/ drinks beyond the SC face value (i.e., $30). With this respect, the objectives of this research are proposing the contextual variables that influence consumers’ decisions to spend additional amount of money beyond a SC face value, identifying the underlying process of this behavior, empirically testing the predictions, and providing important theoretical and practical insights from the findings.

The conceptualization and hypotheses in this present research draw on three streams of literature. First, based on the literature in malleable mental accounting (e.g. Cheeman and Soman 2006; Heath and Soll 1996; Hsee 1995, 1996; Kunda 1990), it is contended that consumers do not always strictly use mental budget allocated to a SC mental account (i.e., SC face value) as a spending self-control. This is because motivated reasoning biases a spending self-control decision in that it constrains consumers’ ability to construct a justification for the desired conclusion. Thus, they are likely to justify their decision to neglect mental budget depletion and are willing to spend a great deal more of money beyond the SC face value (i.e., superfluous spending), specifically for SCs featuring a low-implausible face value (i.e., a face value that is lower than the normal price range expected by consumers for a particular type of service).

Second, based on the literature in in-store decision making (e.g., Inman and Winer 1998; Neff 2007; Stilley, Inman, and Wakefield 2010) and semantic cue concreteness (Biswa and
Burton 1993; Biswas et al. 1999; Grewal and Compeau 1992; Lichtenstein, Burton, and Karson 1991), this research discusses different semantic cues which are varied in terms of concreteness and posit that the amount of money spent beyond a SC face value for SCs featuring a low-implausible face value will be greater when semantic cues are concrete (vs. abstract).

Finally, based on the literature in prepayment depreciation (e.g., Gourville and Soman 1998; Prelec and Lowenstein 1998), it is argued that due to the unique characteristics of a long redemption period, it is predicted that the consumers’ likelihood of neglecting mental budget depletion and the amount of money spent beyond a SC face value for SCs featuring a low-implausible face value will be intensified when a SC mental account is loosely coupled (i.e., long distant between purchasing and redeeming a SC) due to the perception of prepayment less salient and perceived that the SC is free.

The conceptualization and empirical results in this research add to the growing body of the literature in consumers’ spending decision when redeeming coupons, specifically SCs. Due to the unique nature of SCs that require prepayment, this research shows how face value plausibility and neglected mental budget depletion influence consumers’ spending-decision when redeeming SCs. Furthermore, the present research adds to the literature in contextual cues in ARP by demonstrating how semantic cue concreteness intensifies this mental budget depletion effect. Finally, this present research adds to the literature in situational factors in consumer spending behaviors by showing how temporal distance between purchasing and redeeming an SC intensifies this mental budget depletion effect.

This present research progresses as follow. First, the conceptual framework leading to hypotheses are discussed. Then, the methods and results of three experiments that test these
hypotheses are presented. Finally, the theoretical and practical implications of the findings from the three experiments, stating the limitation of this paper and offering suggestions for future research are provided.

Conceptual framework and hypotheses

Malleability in mental accounting decreases the effectiveness of mental budgeting as a spending self-control mechanism

Ideally, mental budgeting (i.e., the instance in which a consumer allocates money to a particular mental account and resist further purchases when the budget is depleted) could serve as a rigid spending self-control mechanism (Heath and Soll 1996). Such that, mental budgeting prevents consumers from doing what they want to do (e.g., order an extremely expensive bottle of wine) and convince them to do what they should do (e.g., order moderate price bottle of wine) (Shefrin and Thaler 1988). Accordingly, mental budgeting seems to be an effective spending self-control mechanism because consumers do not arbitrarily choose tempting alternatives exclusively on the basis of their attractiveness (Shefrin and Thaler 1988). However, in many circumstances, mental budgeting is not rigid and imprecise. Consumers typically use any imprecision or ambiguity to find loopholes (i.e., situations in which consumers can legitimately indulge in otherwise undesirable behavior) in the mental budgeting process (Cheema and Soman 2006). For example, Thaler (1985) examined a couple returning from a fishing-trip where their fish are lost by the airline. The couple spends the compensation (i.e., money) received from the airline on an unusual expensive meal by coding it as both windfall and as food. Coding this compensation as food instead of a vacation enables a couple to justify spending it on the dinner. This suggests that ambiguity in the interpretation of costs and benefits enables consumers to
conduct mental budgeting (i.e., allocate money or expenses) in various ways to justify their desired consumption experience.

Read, Lowenstein, and Rabin (1999) suggested that consumers have flexibility in constructing mental accounts. The duration of mental accounts can be varied by the consumers’ desire to achieve ultimate outcomes, because consumers typically do not want to close a mental account with loss (i.e., positive balance mental account) (Prelec and Lowenstein 1998). Furthermore, mental accounts can be constructed in terms of either general (e.g., sit-down dining restaurants) or specific (e.g., Italian sit-down restaurants). This implies that the balance in a general mental account may differ from the balance in a more specific account (e.g., no budget left for Italian sit-down restaurants but still have budget left for sit-down dining restaurants in general). Consumers with predefined budgetary accounts might assign desirable expenses to either a general mental account or more specific one, depending on which assignment is more likely to justify the outcome (Cheema and Soman 2006). Finally, under predetermined budgetary accounts, consumers who consider an attractive expense might construct a mental account that is customized for the expense, and has a positive balance, and thus enables them to justify the spending.

In an investigation of consumers’ formulation of a specific grocery shopping trip mental account, Stilley, Inman, and Wakefield (2010) showed that consumers have a mental budget for the amount of money they plan to spend on a specific grocery-shopping trip. However, this mental budget is malleable (i.e., flexible) to include room for unplanned purchase items. This finding is in line with the concept of malleable mental accounting (Cheema and Soman 2006) which posits that under certain conditions of ambiguity, the mental accounting process is malleable; that is, consumers have flexibility in assigning expenses to different mental accounts.
or in constructing mental accounts to accommodate unclassified expenses. This flexibility enables consumers to find loopholes and to circumvent the self-control imposed by a mental budget. From the opening scenario, it can be seen that the mental budgeting process is flexible allowing John to have flexibility in constructing a new mental budget (i.e., expenditure occurs at the moment he is at L’Opera) to accommodate unclassified expenses (i.e., neglect the fact that an L’Opera SC mental budget is already depleted since the time he purchased L’Opera SC several weeks ago).

**Justifying spending decision of tempting expenditures**

Malleable mental accounting posits that when tempting expenditure choices can be interpreted in multiple ways, consumers tend to interpret them in a way that enables them to justify their spending (Cheema and Soman 2006). Motivated reasoning research suggests that consumers typically choose an option that they want over an option that they should choose only when they are able to justify their reason for spending for that option (Hsee 1995; 1996). *Self-control* is conceptualized as a the need to exert control over the affective system’s desires that have negative long-term consequences (Hoch and Loewenstein 1991). Previous research suggests that self-control depends on the interplay between desire and willpower (Hoch and Loewenstein 1991) with the ability to exert willpower varying both across individuals (Puri, 1996) and across time depending on the availability of self-control resources (Muraven and Baumeister 2000). In-store research reveals that a great amount of the spending decision occurs while consumers are in-store (Stilley, Inman, and Wakefield 2010). Accordingly, it is argued that spending decision when redeeming SC at a service retailer is influenced by several contextual variables. Specifically, it is contended that when the criteria for evaluating a tempting expenditure choice is ambiguous, SC consumers are able to construct a justification, and thus,
are more likely to choose the tempting option (e.g., order higher-tier expensive menu items spend an additional money beyond an SC face value, so called superfluous spending).

**Neglected mental budget depletion**

In this present research, neglected mental budget depletion is conceptualized as the instance in which consumers neglect the fact that budget assigned to a specific mental account as a spending self-control is already depleted. It is contended that in a SC context, neglected mental budget depletion can occur because of two key reasons. First, some SC consumers may neglect budget depletion because they know that they are unable to completely plan all the specific items they are going to purchase when redeeming a SC due to limited prediction about exact future expenses (i.e., total bill before tip). Second, some SC consumers may neglect budget depletion because they purposely leave themselves some extra budget since they want to have financial flexibility to make the spending decision when redeeming an SC. These two reasons lead to the contention that under certain conditions, SC consumers are likely to neglect mental budget depletion and thus lead to a greater amount of money spent beyond an SC face value when redeeming an SC at a service retailer.

**Face value plausibility**

As suggested by malleable mental accounting, consumers typically find loopholes (i.e., situations in which consumers can legitimately indulge in otherwise undesirable behavior) in their mental budgeting process (Cheema and Soman 2006). In this present research, it is contended that in a spending decision when redeeming an SC, consumers use face value plausibility (i.e., consumers’ perception of the plausibility of an SC face value) as a major loophole in the justification to spend additional money beyond a coupon face value when
redeeming it at a service retailer. As can be illustrated from the opening scenario, a SC “$15 for $30 worth of food and drinks for a dinner for two people” is considered a SC featuring a low-implausible face value because the face value (i.e., redemption value) of $15 is much less than the average total bill before tip ($60) John expects to pay when he has a dinner with his girlfriend at a local Italian sit-down restaurant. In contrast, a SC “$30 for $60 worth of food and drinks for a dinner for two people” is considered a SC featuring a high-plausible face value because the amount of face value ($60) is equal to an average total bill before tip John expects to pay for this type of meal, thus providing him with an optimal purchasing decision in terms of maximizing monetary saving (i.e, no or very low additional money that he has to spend when redeeming a SC at L’Opera).

Because John expects the addition money when redeeming an SC featuring a low-implausible face value ($30), he is likely to neglect the fact that the mental budget he allocated to an L’Opera SC is already depleted at the time he purchased this SC (e.g., he expects that the typically average bill before tip is $60 so he might mentally create a new $30 mental budget, so called spending amount when redeeming a SC at L’Opera), which results in a greater amount of money beyond an face value. In contrast, in the case that John redeems a SC featuring a plausible face value (e.g., $60), there will be no additional or very low amount of money spent beyond an SC face value.

**H1:** The amount of money spent beyond a SC face value is greater when redeeming SCs featuring a low-implausible (vs. plausible) face value.

**H2:** Neglected mental budget depletion mediates the effect of face value plausibility on the amount of money spent beyond a SC face value.
**Semantic cue concreteness**

*Semantic cues* are specific wordings that appear in reference price advertising (Lichtenstein, Burton, and Karson 1991). Semantic cue concreteness represents the degree of the detail and specificity about the price comparison in reference price advertising (Biswas et al., 1999). In a SC context, while some service retailers offer SCs using abstract semantic cues, some others offer SCs using more concrete semantic cues. For example, some sports bars use an abstract semantic cue like $___ for $___ worth of food and drinks $___, while, some other sit-down dining restaurants might use more concrete semantic cues such as “$___ for 10 chicken wings and a pint of beer”. It can be seen that the latter SC features semantic cues representing higher level of semantic cues concreteness.

Previous semantic cue concreteness in advertised reference price (ARP) research suggests that abstract semantic cues represent a high-level of ambiguity; while concrete semantic cues represent a low-level of ambiguity (Lichtenstein, Burton, and Karson 1991). Thus, in this present research I contend that it is likely that consumers have a greater ability to justify additional spending when redeeming SC featuring a plausible face value and semantic cues are abstract (vs. concrete). However, the direction of the moderating effect of semantic cue concreteness depends on face value plausibility. When redeeming SCs featuring a plausible (vs. low-implausible) face value, concrete semantic decreases (increases) the amount of money spent beyond a SC face value. Neglected mental budget depletion is an underlying process.

**H₃ₐ:** The amount of money spent beyond a SC face value is greater when redeeming SCs featuring a *low-implausible face value* and semantic cues are concrete (vs. abstract).

**H₃ᵦ:** The amount of money spent beyond a SC face value is lower when redeeming SCs featuring a *plausible face value* and semantic cues are concrete (vs. abstract).
H₄: Neglected mental budget depletion mediates the interaction of face value plausibility and semantic cue concreteness on the amount of money spent beyond a SC face value.

**Temporal distance between purchasing and redeeming a social coupon**

In every purchase transaction, consumers create a psychological link between costs and benefits of that particular transaction; i.e., coupling (Prelec and Loewenstein 1998). Coupling is the degree to which thoughts of consumption evoke thoughts of payment and vice versa (Prelec and Loewenstein 1998). Consumption and payment are tightly coupled when it is clear what consumption is financed by a particular payment and what payment is financing each act of consumption (Prelec and Loewenstein 1998). For example, when a consumer pays $5 for a sandwich in cash, there is clear linkage between cost and benefit. However, perfect coupling does not exist in all transactions. In purchase transactions where costs occur prior to benefits, this can lead to a systematic and economically irrational to sunk cost, so called sunk-cost effect (i.e., the instance in which a consumption decision is influenced by previously paid investment costs, even though only the future costs and benefits should matter at the time of consumption (Arkes and Blumer 1985; Thaler 1980).

Gourville and Soman (1998) added to this stream of literature by proposing that in the case that payment occurs much prior to the benefits received, sunk-cost effect will be depreciated over time, so called payment depreciation. In other words, a longer distance between prepayment and consumption reduces the consumers’ ability to track the cost. As mental budgeting research suggests that the mental budgeting process will work effectively as a spending self-control mechanism if it is precise, allowing consumers to track the costs. In this research, it is argued that consumers’ spending decision when redeeming SCs at a service retailer is influenced by the temporal distance between purchasing and redeeming a SC. Furthermore, the imprecision of
budgeting process (i.e., imperfect ability to track cost/ prepayment) is greater for the longer temporal distance between purchasing and redeeming a SC. Accordingly, SC consumers have a greater tendency to justify a spending decision for tempting expenditures (i.e., due to the lack of tracking prepayment for purchasing a social coupon), neglect mental budget depletion, and consequently spend additional money beyond face value when purchasing occurs a long time before redeeming a SC. However, this moderating effect of temporal distance between purchasing and redeeming a SC holds only when redeeming SCs featuring a low-implausible face value, but not when redeeming SCs featuring a plausible face value.

**H₅:** The amount of money spent beyond a SC face value is (is not) greater when redeeming SCs featuring a low-implausible (plausible) face value and the temporal distance between purchasing and redeeming a SC is far (vs. near).

**H₆:** Neglected mental budget depletion mediates the interaction of face value plausibility and temporal distance between purchasing and redeeming a SC on the amount of money spent beyond a SC face value.

The following section reports the three experiments that test the proposed six hypotheses.

**Overview of experiments**

In Experiment 1, face value plausibility (plausible vs. low-implausible) and face value plausibility explicitly (yes vs. no) were manipulated. In Experiment 2, face value plausibility (low-implausible vs. plausible) and semantic cue concreteness (concrete vs. abstract) were manipulated. In Experiment 3, face value plausibility (plausible vs. low-implausible) and temporal distance between purchasing and redeeming a SC (near vs. far) were manipulated. Having a dinner with participants’ significant other at an Italian sit-down restaurant, by participants themselves at a sports bar, and with participants’ sister at Mexican sit-down restaurant were stimuli for Experiment 1, Experiment 2, and Experiment 3 respectively. Data
collections for all of the three experiments occurred during February. Figure 17 illustrates overview of experiments.

**Figure 17.** Overview of experiments essay 2

**Experiment 1: Manipulating face value plausibility**

Experiment 1 tests the predictions that the amount of money spent beyond an SC face value will be greater when consumers redeem SCs featuring a low-implausible (vs. plausible) face value (H₁) and neglected mental budget depletion is an underlying process (H₂).

**Participants, design, and procedure**

This experiment employed a 2 (face value plausibility: low-implausible, “30 for $30” vs. plausible/ “$30 for $60”) + 2 controls between-subject design. Participants were 160 individuals who had heard about SCs, had dinner experiences at Italian sit-down restaurant, were 21 years old or older, and correctly answered attention check questions (Age range: 21-67, Mₐₐₓ = 35.39, 50.60% female) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the four conditions (cell size: 39-42). All
participants were asked to imagine that they were in a SC redeeming situation. Low-implausible (plausible) was manipulated at ‘$15 for $30 worth of food and drinks’ (‘$30 for $60 worth of food and drinks’). Participants in the two control groups did not see the information ‘with an average total bill including alcoholic drinks (before tip) of $60’.

"Imagine that you and your significant other like Italian food. Both of you occasionally dine out together at various local Italian sit-down restaurants [with an average total bill including alcoholic drinks (before tip) of $60].

You have purchased a Groupon ‘$15 for $30 [$30 for $60] worth of food and drinks for a dinner for two people, 50% off’ offered by L’Opera, a new local Italian sit-down restaurant several days ago. So, you planned to redeem this L’Opera by going to L’Opera with your significant other this evening.

This evening, after both of you arrived at L’Opera and were seated, you gave the waitress the following Groupon certificate.

Figure 18 and Figure 19 shows the stimuli for a SC featuring a low-implausible face value and a SC featuring a plausible face value respectively.

Figure 18. Low-implausible face value
Figure 19. Plausible face value

“The waitress took the Groupon certificate from you and gave you the following menu.”

See Figure A1 for L’Opera menu. After reading the scenario, participants chose the items they wanted to order for themselves and for their significant other as well as completed measures related to the scenario and personal information.

Measures

Dependent variable. The amount of money spent beyond a SC face value was calculated based on the prices of the all the food and drink items ordered (before tip) minus the SC face value.

Process evidence. Neglected mental budget depletion was measured with three items, seven-point Likert scale with end points (1=strongly disagree, 7=strongly disagree): (1) “When selecting food and drink items, it was important to me that the total bill (before tip) did not exceed this social coupon face value;” (2) “When selecting food and drink items, I used this social coupon face value as a spending limit for this meal;” and (3) “When selecting food and drink items, I tried not to order any food and drink items that would result in the total bill (before tip) exceeding this social coupon face value.” All three items were reversed coded. The result
from the reliability analysis showed a high level of reliability across the three items (Cronbach’s $\alpha=.97$). Thus, the three items were combined and averaged to form a composite variable for neglected mental budget depletion. The higher score indicates the greater neglected mental budget depletion.

**Manipulation checks.** The manipulation check for face value plausibility was measured with a single-item, seven-point Likert scale with ends points (1=strongly disagree, 7 =strongly agree) “The face value of this social coupon is a lot lower than the average total bill including alcoholic drinks (before tip) you would expect to pay when having a dinner with your significant other at any Italian sit-down restaurant”.

**Covariates.** *Hunger* was measured with a single item, seven-point scale with end points (1=Extremely Hungry, 7=Extremely Full) adopted from Merill et al. (2002). The higher score indicates the greater hunger. *Spending self-control* was measured with 10 items, seven-point Likert scale with end points (1=strongly disagree, 7=strongly agree): (1) “I closely monitor my spending behavior;” (2) “I am able to work effectively toward long term financial goals;” (3) “I carefully consider my needs before making purchases;” (4) “I often delay taking action until I have carefully considered the consequences of my purchase decisions;” (5) “When I go out with friends, I keep track of what I am spending;” (6) “I am able to resist temptation in order to achieve my budget goals;” (7) “I know when to say when regarding how much I spend;”, (8) “In social situations, I am generally aware of what I am spending;” (9) “Having objectives related to spending is important to me;” and (10) “I am responsible when it comes to how much I spend.” adopted from Haws, Bearden, and Nenkov (2012). The result from the reliability analysis showed a high level of reliability across the three items (Cronbach’s $\alpha=.93$). Thus, the ten items were combined and averaged to form a composite variable for spending self-control. The higher
score indicates the higher spending self-control. *Perception of cheapness* was measured with three items, seven-point Likert scale with end points (1=strongly disagree, 7=strongly agree): (1) “I ordered such food and drink items because I don’t want to look cheap;” (2) I ordered such food and drink items because I don’t want to look stingy;” and (3) I ordered such food and drink items because I want to look generous.” adapted from Ashworth, Darke, and Schaller (2005). The result from the reliability analysis showed a high level of reliability across the three items (Cronbach’s \(\alpha=.91\)). Thus, the three items were combined and averaged to form a composite variable for perception of cheapness. The higher score indicates the higher perception of cheapness. *Italian sit-down restaurant involvement* was measured with a single item, multiple choice question (1=everyday, 2=4-6 times a week, 3=2-3 times a week, 4=once a week, 5=2-3 times a month, 6=once a month, 7=only a special occasion).

**Other measures.** *Realism of the scenario* was measured with two items, seven-point Likert scale (1=strongly disagree, 7 = strongly agree): “It is easy to imagine being in the situation described in the scenario” and “The scenario is realistic.” The result from the reliability analysis showed a high level of reliability across the three items (Cronbach’s \(\alpha=.78\)). Thus, the two items were combined and averaged to form a composite variable for realism of the scenario. The higher score indicates the higher realism of the scenario. *Brand familiarity* was measure with a single item, seven-point scale with end points (1=not familiar at all, 7=very familiar) “How familiar are you with L’ Opera?” The higher score indicates the higher brand familiarity.

*Attention checks* were measured with two items. The fist item was a single item, seven-point Likert scale (1=strongly disagree, 7=strongly agree) “Please choose strongly disagree”. The second item is a multiple-choice question: “Based on the scenario you just read, you are having a dinner at L’Opera this evening with my __________. (1= significant other, 2=sister). Finally,
participants also provided their personal information regarding dining experiences at Italian sit-down restaurant, gender, and age.

**Results**

The manipulation check for face value plausibility was successful where participants in a low-implausible face value condition indicated greater score than those in a plausible face value condition ($M_{Low-implausible face value}=5.69; M_{Plausible face value}=2.67; t(79)=13.73, p=.000$). Furthermore, participants across conditions indicated a low score for brand familiarity ($M_{Familiarity}=1.33$) and a high score for realism of the scenario ($M_{Realism}=5.85$).

A one-way ANOVA conducted on the amount of money spent beyond face value with face value plausibility as an independent variable revealed significant effect of face value plausibility ($F(1,158)=119.48, p=.000, \eta^2=.43$). As hypothesized in H1, planned contrasts showed that the amount of money spent beyond a SC face value was greater for those who are in a SC featuring a low-implausible (vs. plausible) face value condition ($M_{Low-implausible face value}=$29.80; $M_{Plausible face value}=$6.91; $t(158)=10.93, p=.000$) (See Table B5, Appendix B for the ANOVA results).

To gain more insight, the results of experiment groups were compared with the control group in which no information regarding the average expenditure was explicitly stated. As expected the amount of money spent beyond a SC face value was not significantly different between those who were in a control group for SCs featuring a plausible face value and those who were in an experiment group for SC featuring a plausible face value ($M_{Control, Plausible face value}=$5.38; $M_{Plausible face value}=$8.32; $t(156)=-1.04, p=.320$). Also, the amount of money spent beyond a SC face value was not significantly different between those who were in a control
group for SCs featuring a plausible face value and those who were in an experiment group for SC featuring a plausible face value ($M_{\text{Control, Low-implausible face value}}$=$28.18; M_{\text{Low-implausible face value}}$=$31.46; t(156)=-1.0, p=.271). Finally, the amount of money spent beyond a SC face value was significantly different between those who were in a control group for SCs featuring a low-implausible face value and those who were in a control group for SCs featuring a plausible face value ($M_{\text{Control, Low-implausible face value}}$=$28.18; M_{\text{Control plausible face value}}$=$5.38; t(156)=7.65, p=.000$). Thus, $H_1$ is supported. Figure 20 shows the main effect of face value plausibility on the amount of money spent beyond a SC face value.

![Figure 20](image)

**Figure 20.** The main effect of face value plausibility

Even though not hypothesized, whether SC face value plausibility itself influenced the amount of total bill was explored. The results from a planned contrast with a total bill as a dependent variable and face value plausibility as an independent variable showed that the total bill before deducting SC face value was greater for those who were exposed to a SC featuring a plausible (vs. low-implausible) face value ($M_{\text{Low-implausible face value}}$=$59.80; M_{\text{Plausible face value}}$=$66.91; t(158)=-3.40, p=.001$).
The procedure proposed by Hayes (2012) was conducted to test the mediating effect of neglected mental budget depletion on the amount of money spent beyond a SC face value (H2). In this analysis, face value plausibility is an independent variable, amount of money spent beyond an SC face value was a dependent variable, and neglected mental budget depletion was a mediator. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results showed a mean indirect effect of face value plausibility on the amount of money spent beyond a SC face value through neglected mental budget depletion with a 95% confidence interval excluding zero (B = -3.83; SE = 1.05; CI = -6.32 to -2.13). Thus, H2 is supported.

**Discussion**

The results from Experiment 1 support H1 that the amount of money spent beyond a SC face value is greater when redeeming SCs featuring a low-implausible (vs. plausible) face value. Furthermore, this experiment also showed some interesting findings that SC face value plausibility itself also positively influences the amount of total bill before deducting a SC face value. That is, the larger the face value, the greater the amount of total bill.

Finally, H2 is supported, whereby neglected mental budget depletion mediates the effect of face value plausibility on the amount of money spent beyond an SC face value. That is, the lower the face value plausibility, the greater the neglected mental budget depletion, and the greater the amount of money spent beyond an SC face value. Overall, these results support the contentions about the important roles face value plausibility and the existence of neglected mental budget depletion effect during consumers’ SC spending-decisions when redeeming a SC. Next experiment focuses on one contextual cue that commonly used in SCs, which would potentially intensify this neglected mental budget depletion effect, so called *semantic cue concreteness*. 
Experiment 2: Manipulating face value plausibility and semantic cue concreteness

Experiment 2 tests the predictions that the amount of money spent beyond a SC face value is greater when consumers redeems SCs featuring a low-implausible face value and semantic cues are concrete (vs. abstract) (H3a), the amount of money spent beyond a SC face value is greater when consumers redeeming SCs featuring a plausible face value and semantic cues are abstract (H3b), and neglected mental budget depletion mediates the interaction of face value plausibility and semantic cue concreteness on the amount of money spent beyond an SC face value (H4).

Experiment 2 differs from Experiment in two major aspects. First, a sports bar is used instead of Italian sit-down dining restaurant. The justification for the choice of sports bar is that a sport bar is another type of restaurants that are popularly offering SCs. Second, a different SC purchasing-situation is used. The scenario describes the situation in which having a dinner by participants themselves instead of their significant other for the generalizability purpose.

Participants, design, and procedure

This experiment employed a 2 (face value plausibility: low-implausible vs. plausible) x 2 (semantic cue concreteness: abstract vs. concrete) between-subject design. Participants were 127 males who had heard about SCs, had dinner experiences at sport bars, were 21 years old or older, and correctly answered attention check questions (Age range: 21-66, M_{Age} = 31.43) recruited from MTurk online panel with an exchange for a small incentive. Participants were randomly assigned to one of the four conditions (cell size: 28-39). This experiment used only male participants because the majority of people who go to sports bars are males. Similar to Experiment 1, all participants were asked to imagine that they were in a SC redeeming situation.
Low-implausible (plausible) face value was manipulated at ‘$8’ (‘$16’). Abstract (concrete) semantic cues were manipulated at ‘$___ for food and drinks’ (‘$___ for ___’).

“Imagine that you are now at Kelly’s Sports Bar, a new local sports bar that you have never been to, for a dinner. After you were seated, you gave the waitress the following Kelly’s Sports Bar Groupon certificate.”

Figures 21-24 show a SC featuring a low-implausible face value with abstract semantic cues, a SC featuring a low-implausible face value with concrete cues, a SC featuring a plausible face value with abstract semantic cues, and a SC featuring a plausible face value with concrete semantic cues respectively.

**Figure 21.** Low-implausible face value, abstract semantic cues

**Figure 22.** Low-implausible face value, concrete semantic cues
Figure 23. Plausible face value, abstract semantic cues

Figure 24. Plausible face value, concrete semantic cues

“The waitress took the Groupon certificate from you and gave you the following menu.”

See Figure A2 for the menu for Kelly’s Sports Bar. After reading the scenario, participants chose the items they wanted to order for themselves as well as completed measures related to the scenario and personal information.

Measures

All measures for dependent variable (i.e., the amount of money spent beyond and SC face value), a manipulation check for face value plausibility, process evidence-neglected mental
depletion (Cronbach’s α=.96), covariates- hunger, spending self-control (Cronbach’s α=.91), and sports bar involvement- and other measures- realism of the scenario (Cronbach’s α=.86), brand familiarity, and age- used in this experiment were identical to the ones used in Experiment 1. Spending self-control did not have a significant influence on the amount of money spent beyond a SC face value, so only hunger and sports bar involvement were used as covariates in further analyses. The additional measure used in this experiment was the manipulation check for semantic cue concreteness, which is measured with a single-item, seven-points scale with end points (1=very abstract, 7=very concrete). The higher score indicates the higher level of semantic cue concreteness.

Results

The manipulation check for face value plausibility is successful where participants in a low-implausible face value condition indicated greater score than those in a plausible face value condition (MLow-implausible face value =6.05; MPlausible face value=3.11; F(1, 123) = 220.17, p=.000); while the interaction between face value plausibility and semantic cue concreteness was not significant (F(1, 123) = .20, p=.658). Also, the manipulation check for semantic cue concreteness was successful where participants in a concrete semantic cue condition indicated higher score than those in an abstract semantic cue condition (MAbstract semantic cues=2.21; MConcrete semantic cues=6.10; F(1, 123) =188.82, p=.000); while the interaction between face value plausibility and semantic cue concreteness was not significant (F(1, 123) = 1.33, p=.163. Finally, participants indicated low scores for brand familiarity (MFamiliarity=1.43) and a high score for realism of the scenario (MRealism=5.88).

A two-way ANCOVA conducted on the amount of money spent beyond a SC face value with face value plausibility as an independent variable, semantic cue concreteness as a
moderator, and sports bar involvement and hunger, as covariates reveals significant effect of face value plausibility ($F(1,121)=67.71, p=.000, \eta^2=.36$) and the interaction effect of face value plausibility and semantic cue concreteness. ($F(1,121)=6.49, p=.012, \eta^2=.05$).

Figure 25. The moderating effect of semantic cue concreteness

As hypothesized in $H_{3a,3b}$, planned contrasts showed that the amount of money spent beyond face value is greater for those who are exposed to a SC featuring a low-implausible face value and concrete (vs. abstract) semantic cues ($M_{\text{Low-implausible face value, abstract semantic cues}}=9.85; M_{\text{Low-implausible face value, concrete semantic cues}}=14.18; t(123)=-2.88, p=.005$). Thus $H_{3a}$ is supported. However, the amount of money spent beyond a SC face value was not significantly lower for those who are exposed to an SC featuring plausible face value and concrete (vs. abstract) semantic cues ($M_{\text{Plausible face value, abstract semantic cues}}=3.58; M_{\text{Plausible face value, concrete semantic cues}}=3.27; t(123)=.21, p=.834$). Thus, $H_{3b}$ is not supported. Figure 25 shows the moderating effect of semantic cue concreteness on the effect of face value plausibility on the amount of money spent beyond a SC face value (See Table B6, Appendix B for the ANCOVA results).
Similar to Experiment 1, whether a SC face value itself influenced the amount of total bill was explored. The results from a planned contrast with a total bill as a dependent variable and face value plausibility as an independent variable showed that total bill was greater for those who were in a SC featuring a plausible (vs. low-implausible) face value condition ($M_{\text{Low-implausible face value}} = 16.24; M_{\text{Plausible face value}} = 11.29; t(125) = 3.33, p = .001$).

Similar to Experiment 1, the procedure proposed by Hayes (2012) was conducted to test the mediating effect of neglected mental budget depletion on the interaction of face value plausibility and semantic cue concreteness on the amount of money spent beyond a SC face value ($H_4$). In this analysis, face value plausibility was an independent variable, semantic cue concreteness was a moderator, the amount of money spent beyond a SC face value was a dependent variable, neglected mental budget depletion was a mediator, and sports bar involvement and hunger were covariates. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results showed the means indirect effect of the interaction between face value plausibility and semantic cue concreteness on the amount of money spent beyond a SC face value through neglected mental budget depletion with a 95% confidence interval including zero for both abstract ($B = -1.75; SE = .76; CI = -3.45$ to $-1.42$) and concrete semantic ($B = -2.93; SE = .71; CI = -4.53$ to $-1.70$) cue conditions. Thus, $H_4$ is supported.

**Discussion**

The results from Experiment 2 support $H_{3a}$ that the amount of money spent beyond an SC face value is greater when consumers redeems SCs featuring a low-implausible face value and semantic cues are concrete (vs. abstract). However, the $H_{3b}$ is not supported, whereby the amount of money spent beyond a SC face value is not lower when consumer redeems SCs featuring a
plausible face value and semantic cues are concrete (vs. abstract). Furthermore, consistent with the findings from Experiment 1, the results showed that that face value positively influenced the amount of the total bill. The larger the face value, the larger the amount of the total bill. Finally, H₄ is supported whereby neglected mental budget depletion mediates the interaction of face value plausibility and semantic cue concreteness on the amount of money spent beyond a SC face value. Overall, these results support my contention about the important role of concrete semantic cues in increasing neglected mental budget depletion effect when consumers redeem SCs featuring a low-implausible face value. Next experiment focuses on one situation factor that unique for SCs, *temporal distance between purchasing and redeeming a SC*, which would potentially enhance this neglected mental budget depletion effect.

**Experiment 3: Manipulating face value plausibility and temporal distance between purchasing and redeeming a social coupon**

Experiment 3 tests the predictions that the amount of money spent beyond a SC face value is (is not) greater when consumers redeems SCs featuring a low-implausible (plausible) face value when the temporal distance between purchasing and redeeming a SC is far (vs. near) (H₅) and neglected mental budget depletion mediates the interaction of face value plausibility and temporal distance between purchasing and redeeming an SC on the amount of money spent beyond a SC face value (H₆). Experiment 3 differs from Experiments 1 and 2 in two major aspects. First, a Mexican sit-down restaurant was used instead of an Italian sit-down dining restaurant in Experiment 1 and a sports bar in Experiment 2. The justification for the choice of Mexican sit-down restaurant is that Mexican sit-down restaurant is another type of restaurants that are popularly offering SCs. Second, a different SC purchasing-situation was used. The scenario describes the situation in which having a dinner with participants’ sister instead of their
significant other in Experiment 1 and by participants themselves in Experiment 2 for the
generalizability purpose.

**Participants, design, and procedure**

This experiment employed a 2 (face value plausibility: low-implausible vs. plausible) x 2
temporal distance between purchasing and redeeming and SC: near vs. far) between-subject
design. Participants were 149 individuals who had heard about SCs, had dinner experiences at
Mexican sit-down restaurant, were 21 years old or older, and correctly answered attention check
questions (Age range: 21-70, M<sub>Age</sub> = 34.39, 40.90% female) recruited from MTurk online panel
with an exchange for a small incentive. Participants were randomly assigned to one of the four
conditions (cell size: 35-38). Similar to previous experiments, all participants were asked to
imagine that they were in a SC purchasing situation. Low-implausible (plausible) face value was
manipulated at ‘$20’(‘$40’). Near (far) distance between purchasing and redeeming a SC was
manipulated at ‘this morning’ (‘3 months ago). Figure 26 and Figure 27 show the stimuli for a
SC featuring a low-implausible face value and a SC featuring a plausible face value respectively.

“Imagine that you and your sister like Mexican food. Both of you occasionally dine out
together at various local Mexican sit-down restaurants with an average total bill
including alcoholic drinks (before tip) of $40.

This morning [3 months ago] you purchased a Groupon ‘$10 for $20 [$20 for $40]
worth of food and drinks for a dinner for two people, 50% off’ offered by Dos Caminos, a
new local Mexican sit-down restaurant. You planned to redeem this Dos Caminos
Groupon by going to Dos Caminos with your sister this evening.

This evening, after both of you arrived at Dos Caminos and were seated, you gave the
waitress the following Groupon certificate.
Figure 26. Low-implausible face value

![Groupon Certificate](image1)

Figure 27. Plausible face value

“*The waitress took the Groupon certificate from you and gave you the following menu.*”

See Figure A3 for Dos Caminos menu. After reading the scenario, participants chose the items they wanted to order for themselves and for their sister as well as completed measures related to the scenario and personal information.

**Measures**

All measures for dependent variable (i.e., *the amount of money spent beyond a SC face value*), a manipulation check for face value plausibility, process evidence-*neglected mental depletion* (Cronbach’s α=.98), covariates- *hunger, spending self-control* (Cronbach’s α=.93),
perception of cheapness (Cronbach’s \( \alpha = .89 \)) and Mexican sit-down restaurant involvement- and other measures- realism of the scenario (Cronbach’s \( \alpha = .79 \)), brand familiarity, age, and gender-used in this experiment were identical to the ones used in previous experiments. Hunger was the only one that significantly influenced the amount of money spent beyond a SC face value, so it is further used as a covariate in further analysis. The additional measure used in this experiment is the manipulation check for temporal distance between purchasing and redeeming a SC, which was measured with a single-item, seven-points scale with end points (1=very near, 7=very far). The higher score indicates the greater distance between purchasing and redeeming a SC.

**Results**

The manipulation check for face value plausibility was successful where participants in a low-implausible face value condition indicated greater score than those in a plausible face value condition (\( M_{\text{Low-implausible face value}} = 5.53; M_{\text{Plausible face value}} = 2.68; F(1, 145) = 229.82, p = .000 \)); while the interaction between face value plausibility and temporal distance between purchasing and redeeming a SC was not significant (\( F(1, 145) = .897, p = .409 \)). Also, the manipulation check for temporal distance between purchasing and redeeming an SC is successful where participants in a far distance condition indicated higher score than those in a near condition (\( M_{\text{Near}} = 1.53; M_{\text{Far}} = 4.96; F(1, 145) = 391.12, p = .000 \)); while the interaction between face value plausibility and time temporal distance between purchasing and redeeming a SC was not significant (\( F(1, 145) = .33, p = .565 \)). Finally, participants indicated a low score for brand familiarity (\( M_{\text{Familiarity}} = 1.57 \)) and a high score for realism of the scenario (\( M_{\text{Realism}} = 6.17 \)).

A two-way ANCOVA conducted on the amount of money spent beyond face value with face value plausibility as an independent variable, temporal distance between purchasing and redeeming an SC as a moderator, and hunger as a covariate revealed significant effect of face
value plausibility ($F(1,144)=215.85, \ p=.000, \ \eta^2=.60$) and the interaction effect of face value plausibility and temporal distance between purchasing and redeeming an SC. ($F(1,144)=6.29, \ p=.013, \ \eta^2=.04$).

**Figure 28.** The moderating effect of temporal distance between purchasing and redeeming a social coupon

As hypothesized in H5, planned contrasts showed that the amount of money spent beyond face value was greater for those who were exposed to a SC featuring a low-implausible face value and far (vs. near) distance between purchasing and redeeming a SC ($M_{\text{Low-implausible face value, near}}=15.63; \ M_{\text{Low-implausible face value, far}}=21.64; \ t(145)=-3.49, \ p=.001$); while the amount of money spent beyond and SC face value was not significantly greater for those who were exposed to a SC featuring plausible face value and far (vs. near) temporal distance between purchasing and redeeming a SC ($M_{\text{Plausible face value, near}}=.48; \ M_{\text{Plausible face value, far}}=.64; \ t(145)=-.09, \ p=.925$).

Furthermore, as there was an oversampling of males (59.10%) in the sample, gender effect was examined. The results indicated that gender did not have a significant influence on likelihood of purchasing SCs featuring a low-implausible face value ($p=.646$), thus, confirming that there was no gender effect. Thus, H5 is supported. Figure 28 shows the moderating effect of temporal
distance between purchasing and redeeming a SC on the effect of face value plausibility on the amount of money spent beyond a SC face value (See Table B7, Appendix B for the ANCOVA results).

Similar to previous experiments, the procedure proposed by Hayes (2012) was conducted to test the mediating effect of neglected mental budget depletion on the interaction of face value plausibility and temporal distance between purchasing and redeeming a SC on the amount of money spent beyond a SC face value (H6). In this analysis, face value plausibility was an independent variable, temporal distance between purchasing and redeeming a SC was a moderator, the amount of money spent beyond a SC face value was a dependent variable, neglected mental budget depletion was a mediator, and hunger was a covariate. The bootstrap confidence interval of indirect effect was estimated using a level of confidence of 95% and 5,000 samples. The results showed the means indirect effect of the interaction between face value plausibility and temporal distance between purchasing and redeeming a SC on the amount of money spent beyond a SC face value through neglected mental budget depletion with a 95% confidence interval including zero for both near distance (B = -4.26; SE = .95; CI= -6.40 to -2.62) and far distance (B = -4.47; SE = 1.11; CI= -6.85 to -2.55) conditions. Thus, H6 is supported.

**Discussion**

The results from Experiment 3 support H5 that the amount of money spent beyond a SC face value is (is not) greater when consumers redeems SCs featuring a low-implausible (plausible) face value and far (vs. near) distance between purchasing and redeeming a SC. Furthermore, H6 is supported whereby neglected mental budget depletion mediates the
interaction of face value plausibility and temporal distance between purchasing and redeeming a SC on the amount of money spent beyond a SC face value. Overall, these results support the contention about the important role of temporal distance between purchasing and redeeming a SC in increasing neglected mental budget depletion effect when consumers redeem SCs featuring a low-implausible face value.

**General discussions**

**Conclusion**

While there is a growing phenomenon whereby consumers lose spending self-control and thus, spend additional money beyond a SC face value, less is known about why consumers behave thusly. From a traditional economic approach, this behavior results in a sub-optimal SC spending decision when redeeming a SC in terms of achieving large savings (e.g., 50% or more). This research explores this issue based on malleability (i.e., flexibility) in mental accounting and motivated reasoning for tempting expenditures. It is proposed that this behavior occurs because consumers use face value plausibility as a justification to loosely use a SC face value as a spending self-control when redeeming a SC. Specifically, it is contended that the lower the face value plausibility, the greater the neglected mental budget depletion, the larger the amount of money spent beyond a SC face value.

Across three experiments involving different types of sit-down dining restaurants such as Italian (Experiment 1), sports bar (Experiment 2), and Mexican (Experiment 3) and different dinner situation such as with a significant other (Experiment 1), alone (Experiment 2), and with a sister (Experiment 3), the results showed that the amount of money spent beyond a SC face value was greater when consumers redeemed SCs featuring a low-implausible (vs. plausible) face
Furthermore, the amount of money spent beyond a SC face value was greater when consumers redeemed SCs featuring a low-implausible face value and semantic cues are concrete (vs. abstract). Finally, the amount of money spent beyond a SC face value was (was not) greater when consumers redeemed SCs featuring a low-implausible (plausible) face value and the temporal distance between purchasing and redeeming a SC was far (vs. near). Overall, these findings confirm the contentions regarding the important roles of face value plausibility and neglected mental budget depletion effects as well as the boundary conditions of such effect; whereby concrete semantic cues and a far distance between purchasing and redeeming a SC increase the amount of money spent beyond a SC face value when redeeming SCs featuring a low-plausible face value. These experiments also provide process evidence for the neglected mental depletion effect.

**Theoretical contributions**

These empirical findings highlight the important yet under examined roles of face value plausibility and neglected mental budget depletion effect in consumers’ spending decision when redeeming a SC at a service retailer. This research advances marketing literature in three important ways. *First*, this research complements prior research in mental budgeting (Cheema and Soman 2006; Heath and Soll 1996) by showing how malleable mental accounting decreases the effectiveness of mental budgeting as a spending self-control mechanism when redeeming a SC at a service retailer. This research is unique because the objective of spending self-control when redeeming in a SC context is to achieve large savings; whereas the objective of spending self-control in typical spending contexts is due to consumer welfare (i.e., monetary resource limitation). It is contended that this uniqueness of SC enables SC consumers to easily find the
loopholes to loosely use a mental budget initially assigned to a particular SC (i.e., face value) as a spending self-control when redeeming a SC. The results across three experiments consistently support these contentions by showing that the amount of money spent beyond a SC face value is influenced by neglected mental budget depletion.

Second, this research extends the literature in semantic cue concreteness in advertised reference price (ARP). The results from Experiment 2 reveal that abstract (vs. concrete) semantic cues discourage the use of a mental budget as a spending self-control when redeeming SCs featuring a low-implausible face value. However, concrete (vs. abstract) semantic cues do not encourage the use of a mental budget as a spending self-control when redeeming SCs featuring a plausible face value. These findings are important because they contradict the premise that abstract semantic cues represent high-level of ambiguity; while concrete semantic cues represent a low-level of ambiguity (Lichtenstein, Burton, and Karson 1991), which implies that the ambiguity of semantic cues negatively influence the effectiveness of using a mental budget as a spending self-control mechanism.

Finally, the results from Experiment 3 add to the prediction of payment depreciation (Gourville and Soman 1998; Prelec and Loewenstein 1998) by showing that the longer the temporal separation between purchasing and redeeming a SC, the greater the neglected mental budget depletion, and the larger the amount of money spent beyond a SC face value. However, the prediction of payment depreciation holds only when consumers redeem SCs featuring a low-implausible face value but not the ones featuring a plausible face value. These show the boundary conditions of the prediction of payment depreciation.


**Practical implications**

Besides theoretical contributions, this research also has useful practical implications for consumers as well as service retailers who plan to offer or re-offer SC campaigns. From a consumer’s standpoint, the results of this research suggest that it is likely that consumers will not be able to achieve large savings (e.g., 50% off) when redeeming SCs featuring a low-implausible face value. However, they can still save money if they focus on using the SC face value as a spending self-control rather than focusing on making a spending-decision based on the average expense they expect to pay (i.e., neglecting the fact that their mental budget is already depleted since they prepaid for a SC).

From a service retailer’s standpoint, due to the typical revenue sharing scheme of 50%/50% split between a service retailer (e.g., Italian sit-down restaurant) and a SC provider (e.g., Groupon). It is important for service retailers to understand consumers’ spending-decision when redeeming either SCs featuring a low-implausible face value or the ones featuring a plausible face value. For example, the results from Experiment 1 suggest that if local Italian sit-down restaurants decide to offer SCs featuring a low-implausible face value of “$15 for $30 worth of food and drinks”, they will receive immediate revenues of $7.50 at the time a consumer purchases their SC and a potential additional revenue of $29.80 at the time a consumer redeems a SC. Thus, the total net revenues excluding tip will be $37.30 ($7.50 + $29.80). On the other hand, if the restaurants decide to offer SCs featuring a plausible face value of “$30 for $60 worth of food and drinks”, they will receive immediate revenues of $15 at the time a consumer purchases their SC and potential additional revenue of $6.91 at the time a consumer redeems the SC. Thus, the total net revenues excluding tip will be $21.91 ($15 + $6.91). This suggests that
the restaurants will get $15.39 ($37.30 - $21.91) more total net revenues excluding tip if they decide to offer SCs featuring a low-implausible face value rather than the ones featuring a plausible face value. These insights are important because service retailers have to make a decision as to whether they want to get more immediate revenues once the SCs are sold or get more total net revenue when consumers redeem the SCs. If service retailers choose the first objective, they should offer SCs featuring a plausible face value. In contrast, if they choose the latter one, they should offer SCs featuring a low-implausible face value. Furthermore, the results from Experiments 2 suggest that in order to maximize the total net revenue, excluding tip, generated from offering SCs featuring a low-implausible face value, service retailers should consider featuring such SCs with concrete semantics.

Finally, the results from Experiment 3 provide service retailers with better understanding about consumers’ spending-decisions when redeeming a SC featuring a low-implausible face value. This research suggests that this spending-decision depends on whether consumers have purchased a SC far in advance or they have recently purchased a SC. It is likely that the amount of money spent beyond a SC face value is greater for those consumers who have purchased a SC much prior to the time they redeem it than that of those who just recently purchased a SC.

**Limitations and future research**

The limitations of this research suggest several opportunities for future research. *First,* this research focuses on only contextual factors (face value plausibility, semantic cue concreteness, and temporal distance between purchasing and redeeming a SC) influencing neglected mental budget depletion and the amount of money consumers spent beyond a SC face value that occurs prior to SC redemption. However, previous research suggests that a large
portion of spending-decision occurs at a consumption stage (e.g., in-store) (Stilley, Inman, and Wakefield 2010). Hence, it is imperative for future research to focus on in-store factors such as the attractiveness of each menu item. For example, it is likely that consumers might order the food and drink items that are attractive and focus less on their SC mental budget. Also, the enjoyment and satisfaction occurring during the dinner might influence consumers to stay at a service restaurant longer, which in turn, potentially influences them to order more food and drinks items.

Second, this paper employs scenario-based experiments. Also, this research did not measure participants’ actual spending when redeeming a SC. Although, this research used only participants who had heard about SC and related sit-down dining restaurant experiences, it does not ensure that these participants have adequate knowledge and redemption experiences. Future research should incorporate this issue by employing non-experimental research with the data collected from real SC consumers who have SC redemption experience at sit-down restaurants. Also, it is worthwhile to conduct in-depth interviews and/or focus groups with SC consumers regarding how they make their spending-decisions when redeeming SCs.

Third, Experiment 1 and Experiment 3 asked participants to choose food and drink items they want to order for their significant other and for their sister respectively. However, one might argue that it might be difficult for participants to think what they want to order to other people. It is beneficial for future research to incorporate this issue.

Fourth, this research does not provide the evidence that supports the role of semantic cue concreteness in influencing the amount of money spent beyond a SC face value when consumers redeem SCs featuring a plausible face value. This situation might depend on the types of items
included in the concrete semantic cues (e.g., appetizer/dessert or alcoholic drinks). For example, in general, consumers typically order alcoholic drinks when having a dinner at Italian and fine-dining sit-down restaurants. So, it is likely that even though the SC face value is plausible and the concrete items do not include alcoholic drinks, the likelihood of consumers to also order alcoholic drinks is higher, which will result in a certain amount of money spent beyond the SC face value. Another example would be the nature of the food items. For example, a Spanish sit-down restaurant is offering a SC “$18 for $36 worth of paella for two people and two glasses of sangria”. Even though this SCs face value is plausible and concrete semantic cues include alcoholic drinks, it is likely that consumers will spend additional money beyond the SC face value. This is because Paella takes a long time to prepare (30-45 minutes). It is likely that consumers will order certain small plates (e.g., Tapas) while they are waiting for the Paella to be ready. It is imperative for future research to investigate this issue.

Fifth, even though not hypothesized, this research shows an interesting finding that a SC face value itself positively influences the amount of total bill (before tip). That is, the total bill (before tip) is greater for a SC featuring a plausible face value (vs. low-implausible) face value. It is argued that this might occur because of consumers’ feeling of pre-commitment (i.e., consumers do not want to spend less than a SC face value in order to achieve 50% discount). Thus, it is worthwhile for future research to investigate the role of pre-commitment in consumers’ spending-decision when redeeming a SC.

Sixth, long redemption period is a unique feature of SCs. Although Experiment 3 revealed an interesting finding that the temporal separation between purchasing and redeeming a SC played an important role in spending decision when redeeming SCs featuring a low-implausible, this did not directly measure consumers’ perception of cost salience. It is imperative
for future research to directly measure consumers’ perception of cost salience and test how it influences a consumers’ spending-decision when redeeming a SC. Also, it might be worthwhile to measure consumers’ perceived risk associated with the expiration date. It is likely that a consumer would perceive greater risk when the redemption timing is closer to the expiration date.

*Seventh*, in many situations, service retailers are offering not only SCs but also other price promotions simultaneously (e.g., 50% off for selected food and drinks items on Wednesday). Due to the rule that consumers cannot combine the SC deal with other current restaurant deals, it is likely that consumers might choose not to redeem a SC and keep it for a later visit. The other behavior that might occur is that they might still redeem a SC but avoid ordering the 50% off selected items even though such items are the ones that they want to order most. This might be due to the perceived deal waste. This issue is worthwhile for future research because this behavior is contrasted with optimal economic decision-making that consumers should order what they want to order most.

*Finally*, this research focuses only hedonic consumption (e.g., having a dinner with significant other, having a dinner alone, and having a dinner with sister), it might be worthwhile for future research to focus on a utilitarian consumption (e.g., having a quick lunch). It seems that utilitarian nature might attenuate a neglected mental budget depletion effect as well as create the possibility that consumers would be less influenced by in-store related factors.

**References**


## APPENDICES

### Appendix A: Additional stimuli

**Stimuli A1. Menu for essay 2 experiment 1**

### APPETIZER

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Bruschetta</td>
<td>6.95</td>
</tr>
<tr>
<td>A2 Calamari</td>
<td>9.95</td>
</tr>
<tr>
<td>A3 Shrimp Scampi</td>
<td>10.95</td>
</tr>
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</table>

**SOUP & SALAD**

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 Minestrone</td>
<td>4.95</td>
</tr>
<tr>
<td>S2 Side Salad</td>
<td>4.95</td>
</tr>
<tr>
<td>S3 Shrimp Spinach Salad</td>
<td>14.95</td>
</tr>
</tbody>
</table>

**WOODSTONE OVEN PIZZA**

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 Three Toppings</td>
<td>11.95</td>
</tr>
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</table>

**MAIN DISH**

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1 Veal Marsala</td>
<td>18.95</td>
<td>Served with a cup of soup and a side salad</td>
</tr>
<tr>
<td>M2 Chicken Parmesan</td>
<td>17.95</td>
<td>Chicken coated with Italian bread crumbs, sautéed and topped with mozzarella cheese</td>
</tr>
<tr>
<td>M3 Chicken Picatta</td>
<td>16.95</td>
<td>Lemon butter piccata sauce, capers, artichokes, mushrooms, dried tomatoes, goat cheese</td>
</tr>
<tr>
<td>M4 Filet Florentina</td>
<td>28.95</td>
<td>USDA Choice center-cut tenderloin</td>
</tr>
<tr>
<td>M5 Grilled Salmon</td>
<td>18.95</td>
<td>Wood grilled North Atlantic Salmon, dill glaze, toasted pistachios</td>
</tr>
<tr>
<td>M6 Pork Chop</td>
<td>18.95</td>
<td>Wood grilled pork chop, aromatic spices</td>
</tr>
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**PASTA**

<table>
<thead>
<tr>
<th>Item</th>
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</thead>
<tbody>
<tr>
<td>P1 Lasagna</td>
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<tr>
<td>P2 Spaghetti</td>
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</tr>
<tr>
<td>P3 Chicken Alfredo</td>
<td>14.95</td>
</tr>
<tr>
<td>P4 Lobster Ravioli</td>
<td>16.95</td>
</tr>
<tr>
<td>P5 Eggplant Rollatini</td>
<td>13.95</td>
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**BEVERAGE**

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>B1 Coke, Diet Coke, Sprite</td>
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<tr>
<td>B2 Regular/Decaf Coffee</td>
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<tr>
<td>B3 Espresso/Cappuccino</td>
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<tr>
<td>E1 Import Bottles</td>
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**WINE**

### Bottle/ Glass Pitcher*

<table>
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<tr>
<th>Sangria</th>
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<tbody>
<tr>
<td>Italian House Wine</td>
<td>6.50</td>
<td>26*</td>
</tr>
<tr>
<td>W2 Pinot Grigio, Bisanzio, Italy</td>
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</tr>
<tr>
<td>W3 Montepulciano d’Abruzzo, Bisanzio, Italy</td>
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**Red Wine**

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Light-Bodied and Fruity</td>
<td></td>
</tr>
<tr>
<td>W10 Sangiovesse-Merlot Blend, Santa Cristina, Tuscany</td>
<td>8.00</td>
</tr>
<tr>
<td>W11 Pinot Noir, Estancia Pinnacle, California</td>
<td>11.50</td>
</tr>
<tr>
<td>Private, Beringer, Napa Valley</td>
<td>11.50</td>
</tr>
<tr>
<td>Medium-Bodied, Soft and Savory</td>
<td></td>
</tr>
<tr>
<td>W13 Cabernet Sauvignon, Copper Ridge, California</td>
<td>6.50</td>
</tr>
<tr>
<td>W14 Merlot, Blackstone, California</td>
<td>10.00</td>
</tr>
<tr>
<td>W15 Syrah, Trapani, Argentina</td>
<td>8.50</td>
</tr>
<tr>
<td>Full-Bodied and Robust</td>
<td></td>
</tr>
<tr>
<td>W16 Chianti Classico Riserva, Banfi, Italy</td>
<td>11.00</td>
</tr>
<tr>
<td>W18 Cabernet Sauvignon, J. Lohr</td>
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**Light-Bodied, Slightly Sweet and Crisp**

<table>
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<tbody>
<tr>
<td>W4 Moscato, Zolin Regions, Italy</td>
<td>7.00</td>
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<tr>
<td>W5 Riesling, Saint M., Germany</td>
<td>8.50</td>
</tr>
<tr>
<td>W6 Pinot Grigio, Estancia, California</td>
<td>9.50</td>
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**Medium-Bodied, Soft and Smooth**

<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>W7 Chardonnay, Copper Ridge, California</td>
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</tr>
<tr>
<td>W8 Chardonnay, Kendall-Jackson, California</td>
<td>10.50</td>
</tr>
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</table>

**Full-Bodied and Flavored**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>W9 Chardonnay, Clos du Bois Russian River Reserve, California</td>
<td>11.00</td>
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---

138
Stimuli A2. Menu for essay 2 experiment 2

![Bucket List Menu](image)

### Wings & Things

**Wings & Things**

- **Jumbo Wings**
  - F1: Six for $7
  - F2: Ten for $10
  - F3: Eighteen for $15

- **Sauces**
  - Mild, Hot, Ridiculously Hot, Garlic Butter, Teriyaki, Carolina BBQ, Korean BBQ, Honey BBQ

- **Breaded Boneless Wings**
  - F4: Six for $7
  - F5: Ten for $10
  - F6: Eighteen for $15

- **Rubs**
  - Mesquite, Cajun, Jerk, Lemon Pepper, Southwestern Chipotle, Old Bay, Sweet Heat, Garlic Parmesan

- **Sweet Stuff**
  - G1: Home from School
    - An assortment of deep-fried snack cakes, & cookies 6
  - G2: Fried Oreos Sundae
    - Vanilla bean ice cream with deep-fried Oreos, chocolate & caramel sauces 5
  - G3: Funnel Fries
    - Just like it says, funnel cake fries with salted caramel & powdered sugar 5
  - G4: Chocolate Lava
    - Warm & gooey center lava cake, caramel & chocolate sauces with a scoop of vanilla bean ice cream 7
  - G5: Duets of Cupcakes
    - Vanilla bean & dark chocolate cupcakes with crushed Oreos & fresh strawberries 6
### Social Plates

**C1. Hummus & Hand Crushed Guacamole**
- Fresh vegetables & crispy flour tortilla triangles

**C2. Pretzel Bites**
- Served with honey mustard & garlic ranch

**C3. Corn Puppies**
- Mini corn dog served with chipotle ketchup & honey mustard

**C4. Prince Edward Island Mussels**
- In garlic butter & wine sauce with grilled Cuban bread points

**C5. Beer Battered Cheese Trio**
- An assortment of Mozzarella, Pepper Jack & Cheddar cheeses with marinara & ranch dipping sauces

**C6. Beer Battered Onion Ring Basket**
- Hand battered onions with a cup of roasted garlic ranch & chipotle ketchup

**C7. Steamed Edamame**
- Tossed with sea salt

**C8. Sweet Potato Waffle Fries**
- Lightly dusted in cinnamon & sugar with a side of vanilla scented honey caramel sauce

**C9. Veggie-Dilla**
- Sautéed mushrooms, peppers, onions & cheese in a spinach tortilla

**Add Chicken 4 or Add Shrimp 5**

### Salads or Wraps

**D1. Tropical Summer Salad**
- Mixed greens, fresh seasonal fruit & spicy bacon, avocado & cilantro with a tomato vinaigrette

**D2. Florida Caesar Salad**
- Chopped romaine, croutons, parmesan & traditional Caesar dressing

**D3. Chef Salad**
- Tomatoes, cucumbers, red onions, hard boiled egg, ham & Provolone cheese on a bed of mixed greens

**D4. Cobb Salad**
- Mixed greens, tomatoes, cucumbers, red onions, bacon, avocado, hard boiled eggs, scallions & blue cheese crumbles with your choice of dressing

**D5. The Sidekick Salad**
- Iceberg lettuce, apple, blue cheese dressing & bacon

### Make it a Wrap

Choice of spinach or tomato. Served with fries or fresh fruit.

**D6. Tampa Cheese Steak**
- Shaved rib eye steak with caramelized onions, Provolone cheese, & a mango-mustard sauce on a hoagie roll

**D7. Pulled Pork Cuban**
- Ham, salami, Swiss cheese, mustard sauce & pickles on a Cuban bread

**D8. BBQ Pork**
- Our signature pulled pork with sweet & smoky BBQ sauce on a toasted Hawaiian roll

**D9. The Bay of Pigs**
- Pulled pork, glazed ham & bacon with Provolone cheese on a grilled hoagie roll

**D10. The Scooter**
- Crispy bacon, lettuce, & tomato on beer battered sourdough bread

### Sandwiched

**E1. Bacon & Chicken Sandwich**
- Grilled chicken breast, bacon & cheddar with garlic aioli on grilled beer battered sourdough

**E2. Crispy Chicken "Gordon" Bleu**
- Fried chicken breast stuffed with ham, Swiss & Mozzarella. Served with mustard sauce on a Hawaiian roll

**E3. The Big Jerk**
- Jerk chicken, provolone, avocado & tomato with coleslaw dressing on a Hawaiian roll

**E4. Buffalo Chicken**
- Breaded & fried chicken breast with your choice of sauce, ranch dressing, lettuce & tomato on a hoagie roll

**E5. Beer Battered Cajun Shrimp Po'Boy**
- Lettuce, tomato, & mustard remoulade on fresh Cuban bread

**E6. La Segunda Cuban Bread**
- Served with fries, fresh fruit, or side salad.

**E7. Pulled Pork Cuban**
- Ham, salami, Swiss cheese, mustard sauce & pickles on a Cuban bread

**E8. BBQ Pork**
- Our signature pulled pork with sweet & smoky BBQ sauce on a toasted Hawaiian roll

**E9. The Bay of Pigs**
- Pulled pork, glazed ham & bacon with Provolone cheese on a grilled hoagie roll

**E10. The Scooter**
- Crispy bacon, lettuce, & tomato on beer battered sourdough bread

### Gourmet Burgers

**E11. The C-4**
- An explosion of American, Swiss, Provolone & Pepper Jack cheeses with lettuce & tomato

**E12. The Grilled Onion, Mushroom, & Swiss**
- Topped with a spread of garlic ranch dressing

**E13. The "Scooter"**
- Grilled pineapple, shaved ham & Swiss

**E14. El Cubano**
- Pulled pork & Swiss with mustard sauce & pickle chips on a Cuban bread

**E15. The Barn House**
- Topped with beer battered O-rings, bacon & American cheese with tangy BBQ sauce

**E16. Been Told Twice**
- Blackened burger patty topped with blue cheese crumbles & bacon

Seasoned chuck & short rib burger cooked to your ideal temperature. Served with fries, fruit or side salad.
<table>
<thead>
<tr>
<th>Wine</th>
<th>Classification</th>
<th>Glass</th>
<th>Bottle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domino</td>
<td>Cabernet, Chardonnay, Merlot</td>
<td>$6.50</td>
<td></td>
</tr>
<tr>
<td>Chateau Ste Michelle</td>
<td>Washington</td>
<td>$8.00</td>
<td>$20.00</td>
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<tr>
<td>Stelina Di Notte</td>
<td>Italy</td>
<td>$7.00</td>
<td>$26.00</td>
</tr>
<tr>
<td>Terra D'Oro California</td>
<td>Pinot Grigio</td>
<td>$9.50</td>
<td>$34.00</td>
</tr>
<tr>
<td>Chateau Ste Michelle</td>
<td>Washington</td>
<td>$8.50</td>
<td>$32.00</td>
</tr>
<tr>
<td>Dreaming Tree Every Day White</td>
<td>White Blend</td>
<td>$9.00</td>
<td>$32.00</td>
</tr>
<tr>
<td>Noble Vines 667</td>
<td>California</td>
<td>$8.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>14 Hands</td>
<td>Washington</td>
<td>$9.00</td>
<td>$32.00</td>
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<tr>
<td>Testigna</td>
<td>Argentina</td>
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<td>$32.00</td>
</tr>
<tr>
<td>Josh</td>
<td>California</td>
<td>$8.50</td>
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</tr>
<tr>
<td>Stark Raving Red Blend</td>
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<tr>
<td>Dreaming Tree Crush</td>
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<td>$32.00</td>
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<tr>
<td>Villa Poxzi</td>
<td>Italy</td>
<td>$7.00</td>
<td>$26.00</td>
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**Sake-Tails & More**

$6.00 Each

<table>
<thead>
<tr>
<th>B14 Mimosa</th>
<th>$1.00 Each &amp; Glass</th>
<th>$6.00</th>
<th>Delicious!</th>
</tr>
</thead>
<tbody>
<tr>
<td>B15 Sangria</td>
<td>$1.50 Each &amp; Glass</td>
<td>$7.00</td>
<td></td>
</tr>
<tr>
<td>B16 Sake Bleu</td>
<td>$2.00 Each &amp; Glass</td>
<td>$8.50</td>
<td></td>
</tr>
<tr>
<td>B17 Sake-Rita</td>
<td>$2.50 Each &amp; Glass</td>
<td>$10.00</td>
<td></td>
</tr>
<tr>
<td>B18 Glimlet</td>
<td>$3.00 Each &amp; Glass</td>
<td>$12.00</td>
<td></td>
</tr>
</tbody>
</table>

B25 | Lemonade, Coffee & Tea | $2.25 |
Stimuli A3. Menu for essay 2 experiment 3
FAJITAS & GRILL

B6 MIXED GRILL Beef & chicken fajitas with shrimp sauteed in chipotle butter. 14.99
B7 CHICKEN & MUSHROOM FAJITAS Crispy bacon, mushrooms and melted jack cheese on another fajita chicken strip. 13.99
B8 TOP SHELF Fajitas Beef, chicken, shrimp & baby back ribs on a sizzling skillet. 15.99
B9 FAJITAS On a sizzling skillet. Chicken 13.99 Beef or Combination 13.99
B10 CHICKEN MONTEREY DINNER Grilled chicken breast with onions, mushrooms, green peppers & melted jack cheese. With rice & sauteed vegetables. 14.49

ENCHILADAS

B11 ENCHILADA DINNER Spicy beef with, chile, cheese & onion on top with sour cream sauce. With rice & beans. Three 9.99
B12 CHILE Rellenos Enchiladas Chile rellenos rolled in corn tortilla, topped with cheddar sauce & sour cream drizzle. Choice of beef, chicken or mix. With rice & beans. 9.99
B13 TOP SHELF Fajita Enchiladas Two cheese & onion enchiladas on a bed of beans & rice with sour cream sauce on top. With rice & beans. 11.99
B14 AVOCADO ENCHILADAS Fresh avocado, mushrooms & jack cheese rolled in corn tortillas, topped with sour cream & cheese. With rice & beans. 11.99
B15 CHICKEN MUSHROOM ENCHILADAS Crispy bacon, jack cheese & chicken & mushrooms in a corn tortilla. With rice & beans. 11.99
B16 CINCO ENCHILADAS Five mini-enchiladas! Avocado, cheese, beans, chicken & beef mini-enchiladas all on one plate. With rice & beans. 8.99

BURRITOS & CHIMIS

B17 GRANDE CHICKEN BURRITO Fajita chicken, black beans, rice, & cheese rolled in a flour tortilla. Topped with sour cream sauce & cheese. With rice & beans. 10.99
B18 CINCO BURRITOS Five mini-burritos. Chicken, beans, cheese & rice. With rice & beans. 8.99
B19 TEX-MEX BURRITO Spicy beef, black beans, & cheese rolled in flour tortilla. With rice & beans. 9.99
B20 BURRITO CON QUESO Flour tortilla with spicy beef & topped with cheese. With rice & beans. 9.99
B21 CHICKEN FAJITA CHIMICHANGA Crispy flour tortilla filled with chicken, jack cheese, & sour cream sauce. Top with cheese & a side of salsa. 10.99

COMBOS & MORE

B22 STACKED COMBO A beef-stacked enchilada topped with beans & cheese. With rice & beans. 10.99
B23 EL CABALLERO Spicy beef burrito with chicken & cheese. With rice & beans. 10.99
B24 CARNITAS COMBO Chicken, beef, cheese, & beans on a corn tortilla. With rice & beans. 10.99
B25 THE JUAREZ Cheese & beef enchilada with chicken & cheese. With rice & beans. 10.99
B26 CHIMI COMBO Fajita chicken, jack cheese, sour cream sauce & pico de gallo in a corn tortilla. With rice & beans. 10.99
B27 RODEO COMBO Two beef burritos, one topped with cheese & the other with sour cream. With rice & beans. 11.99

DESSERTS

C1 MAMA'S FAVORITE MEXICAN APPLE PIE With melted baked brown sugar & cinnamon sauce. 5.99
C2 BUBBLING HONEY Mexican bee bread topped with cinnamon sugar. 5.99
C3 BROWIE SKILLET SUNDAYS Triple chocolate brownie with a scoop of vanilla & topped with Mexican brandy butter sauce & vanilla ice cream. 5.49
C4 FRIED ICE CREAM Vanilla ice cream inside a cinnamon sugar doughnut coated with hot fudge, whipped cream & a cherry. 5.99
**RITA FAVORITAS**

**D1** **GRANDE 'RITA**
Our House Margarita is made with Giro Silver by Sauza Tequila, triple sec and margarita mix served frozen or on the rocks. 7.75

**D2** **ULTIMATE MARGARITA**
1800 Reposado Tequila, Cointreau Orange Liqueur and our very own margarita mix. Delicious frozen or on the rocks! 8.25

**D3** **BAJA BLUE SWIRL**
There's nothing funny about this delicious blend of DeKuyper Island Blue Pucker & our frozen House Rasp. Also available in pomegranate & raspberry. 7.25

**D4** **SANGRIA 'RITA**
Cabo Wabo Blanco Tequila, X-Rated Fusion Liqueur, Copperhead Cabernet Sauvignon, cranberry juice & our margarita mix. 7.50

**SPECIALTY**

**D5** **MEXICAN MARTINI**
A delicious cocktail of Sauza 100% Blue Agave Tequila, Cointreau Orange Liqueur & margarita mix, served straight up! 8.50

**D6** **MOJITO**
Go loco for coco with Malibu Coconut Rum, fresh lime & our mojito mix. 6.50

**D7** **TANGO TEA**
A knock-your-socks off blend of Stoli Vodka, Bacardi Superior Rum, Sauza Gold Tequila, Cointreau Orange Liqueur & Coca-Cola. 7.00

**D8** **SKINNY 'RITA**
Slim Sippin’ Corazon Blanco Tequila with Cointreau Orange Liqueur & our house-made margarita mix. 6.50

**D9** **DURANGO DAIRY**
A sweet frozen cocktail of Cruzan Aged Light Rum & strawberry purée, topped with a float of Myers’s Dark Rum. Also available in mango. 6.50

**BEER**

**D10** **DOMESTIC**
4.00
- Budweiser
- Bud Light
- Coors Light
- Michelob Ultra
- Miller Lite

**D11** **IMPORT**
5.00
- Corona Extra
- Corona Light
- Dos Equis Ambar
- Dos Equis Lager
- Modelo Especial
- Negra Modelo
- Pacifico Clara
- Tecate

**WINE**

**WHITE**

- Copperhead Chardonnay $6.75/7.00
- Copperhead White Zinfandel $4.75/7.00

**RED**

- Copperhead Merlot $5.00/8.00
- Copperhead Cabernet Sauvignon $5.00/8.00

**Lemonade, Coffee & Tea** 2.25
Appendix B: Extra tables

Table B1. ANCOVA results for essay 1 experiment 2

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<tr>
<th>Source</th>
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<th>F</th>
<th>Sig.</th>
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Table B2. ANCOVA results for essay 1 experiment 3

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### Table B3. ANCOVA results essay 1 experiment 4A

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### Table B4. ANCOVA results for essay 1 experiment 4B

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Table B5. ANOVA results for essay 2 experiment 1

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Table B6. ANCOVA Results for essay 2 experiment 2

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Table B7: ANCOVA results for essay 2 experiment 3

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Appendix C: Approval from Institutional Review Board

2/14/2013

Chintiorn Nakhata
Marketing
10420 N McKinley Dr., Apt 8106
Tampa, FL 33612

RE: Exempt Certification
IRB#: Pro00011733
Title: Consumer’s Psychological and Behavioral Responses toward Social Coupons

Study Approval Period: 2/14/2013 to 2/14/2018

Dear Ms. Nakhata:

On 2/14/2013, the Institutional Review Board (IRB) determined that your research meets USF requirements and Federal Exemption criteria as outlined in the federal regulations at 45CFR46.101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation.

As the principal investigator for this study, it is your responsibility to ensure that this research is conducted as outlined in your application and consistent with the ethical principles outlined in the Belmont Report and with USF IRB policies and procedures. Please note that changes to this protocol may disqualify it from exempt status. Please note that you are responsible for notifying the IRB prior to implementing any changes to the currently approved protocol.

The Institutional Review Board will maintain your exemption application for a period of five years from the date of this letter or for three years after a Final Progress Report is received, whichever is longer. If you wish to continue this protocol beyond five years, you will need to submit a new application at least 60 days prior to the end of your exemption approval period. Should you complete this study prior to the end of the five-year period, you must submit a request to close the study.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5658.

Sincerely,

Kristen Salomon, Ph.D., Vice Chair
USF Institutional Review Board
ABOUT THE AUTHOR

Chinintorn Nakhata’s research interests are social coupons, behavioral pricing, eWOM, social media engagement, multichannel retailing, services marketing, and supply chain management. Her work has been published in *Journal of Product and Brand Management* and *Logistics Research*. She has presented her research at Winter/Summer AMA, AMS, SMA, INFORMS Marketing Science Society, Pricing & Retailing, Marketing EDGE, MMA, SPSP, and DSI. Prior to attending Ph.D. program at the University of South Florida, she was working as a Full-Time Instructor at Department of Entrepreneurship, School of Business Administration, Bangkok University. Her professional working experiences include Senior Investor Relations Officer and Public Relations Officer at Property Perfect PLC. Her training experiences include Marketing Trainee at Unilever Thai Holding and Sahapattanapiboon PLC (Saha Group). She holds D.B.A. in Management from University of South Australia, M.B.A. from Sasin Graduate Institute of Business Administration, and B.B.A. in Marketing from Chulalongkorn University.