Menu Customization and Calorie Estimation Biases in Consumer Choice

Alexander Chernev, Northwestern University, USA

Self-customization may involve either sequential or simultaneous evaluation of the offer’s individual components. This research explores the impact of the evaluation mode on consumers’ perceptions of the offer’s overall value in the context of food consumption, where value is reflected in perceived calorie content. Six studies suggest that when evaluating vice/virtue combinations simultaneously, consumers tend to underestimate overall calorie content such that the customized meal can be perceived as having fewer calories than the unhealthy item alone. When items are presented sequentially, however, calorie estimates depend on the particular sequence, such that a virtue followed by a vice leads to overestimation of overall calorie content.

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SESSION OVERVIEW
Marketing is increasingly seen as an interactive process in which sellers and buyers rely on each other to co-create value (Alba et al. 1997). One of the most prominent strategies reflecting this development is offer customization, the process by which individual components of an offer are selected and modified to provide consumers with offers that match their individually stated preferences (e.g., Ansari and Mela 2003; Pine, Peppers and Rogers 1995). The assumptions underlying customization are that if consumers’ preferences can only be revealed, customized offers will provide them with superior fit and satisfaction, reduce information overload, and ultimately increase perceived value, purchase likelihood, and loyalty (Simonson 2005).

However, despite the importance of customization, we still know relatively little about the conditions under which these fundamental assumptions actually hold. The present session seeks to address this topic and provide new insights into the factors that determine consumers’ choices under different customization modes, their evaluation and likelihood of acceptance of the customized offer, and their ensuing satisfaction.

One of the central variables in every implementation of customization is the procedure by which preferences are elicited. This is especially true in the case of self-customization, the process by which consumers customize offerings to their own preferences. The paper by Ana Valenzuela, Ravi Dhar, and Florian Zettelmeyer examines whether and how the self-customization procedure (by-attribute versus by-alternative) influences the subjective experience of making the decision and, consequently, the construction of preferences. This research suggests that because customization by-attribute is associated with a smaller choice conflict, it tends to increase the willingness to purchase the customized option as well as the satisfaction consumers derive from it.

Another important question relates to the consequences of customization in different contexts. Providing consumers with individually customized offers is an effective strategy in general, but are there conditions under which customization can actually undermine, rather than enhance, the attractiveness of offers? The paper by Aner Sela, Itamar Simonson, and Ran Kivetz suggests that explicit customization by the marketer can undermine the perceived value of seeming “opportunities”, such as offers presented as special bargains. This is because customized offers tend to be perceived as reflecting the marketer’s self-interested intentions, thereby reaping any above-normal gain from the transaction. Thus, although customization is a positive signal by itself, indicating a better fit to the consumer’s preferences, this research suggests that its effect on value perceptions may depend on other characteristics of the transaction.

Finally, self-customization typically involves either sequential or simultaneous evaluation of the offer’s individual components. The paper by Alexander Chernev examines the impact of the evaluation mode on consumers’ perceptions of the customized offer’s overall value. The investigation is conducted in the important context of selecting food items from a menu to form a customized meal. Specifically, when evaluating vice and virtue combinations simultaneously, consumers tend to underestimate overall calorie content such that the combined meal can be perceived as having fewer calories than the unhealthy item alone. When a virtue item is evaluated before a vice item, however, consumers tend to overestimate the overall calorie content of the customized meal.

This session highlights the importance of understanding how specific procedures (e.g., presentation order and evaluation mode) and contexts (e.g., bargain offers) can affect consumers’ perceptions and acceptance of customized offers. The session would be of interest to researchers and marketers interested in consumer judgment and decision making and choice theory.

REFERENCES

EXTENDED ABSTRACTS
“Contingent Consumer Response to Self-Customization Procedures: Implications for Decision Satisfaction and Choice”
Ana Valenzuela, Baruch College, USA
Ravi Dhar, Yale University, USA
Florian Zettelmeyer, University of California–Berkeley, USA

The opportunity to self-customize products and services tailored to individual preferences is viewed as an important way to enhance customer relationships and reduce competitive threats. An implicit assumption for the superior value of self-customization is the notion that consumers have inherent preferences (Simonson 2008) and are able to construct the customized offer that best fits their preferences compared to a non-customized offer. This paper focuses on comparing two formats designed to help consumers self-customize a product among a large set of feasible options. We demonstrate that the two most common methods for self-customization can result in a different consumer construction processes as well as different options being chosen as most preferred.

Furthermore, consistent with the established notion that consumers have limited insight into their preferences (Simonson 2005), the construction process of self-customization may also determine consumers’ post-hoc evaluations of the customized option. In particular, customers’ assessment of the customized option is likely to be affected by the ease or difficulty experienced in the process of customizing (e.g. Novemsky, Dhar, Schwarz and Simonson 2007). In this paper, we differentiate between two sources of difficulty associated with the constructed choice. One source arises from choice complexity due to the sheer amount of information that requires processing as the number of available options increases (Huffman and Kahn 1998). A second source is based on an explicit consideration of between-attribute tradeoffs (Dhar 1997), that is, the extent to which the customization format makes trade-offs between competing characteristics (or quality attributes) more or
less explicit. Regardless of the source of difficulty (i.e., whether it is based on processing large amount of information or based on making fewer effortful competing tradeoffs), we show that the subjective feeling of difficulty during self-customization may affect choice processes and outcomes.

Specifically, the studies in this paper highlight the effect of the two most often used self-customization procedures on consumer choice processes and preferred outcomes: i) the by-alternative customization method, which allows consumers to customize by identifying their most preferred option from a set of fully specified products; ii) the by-attribute customization method, which lets consumers decide one-by-one the desired level of each product attribute. Studies 1a and 1b show that consumers tend to choose intermediate options significantly more often when they customize a product by-attribute than when they customize by-alternative. This implies that when consumers have to make price-quality tradeoffs for each attribute in isolation, they base their choices on the ordinal position of options in the choice set. As a consequence, they perform a series of two-dimensional “compromises” between price and the particular (quality) attribute being customized. On the other hand, respondents in the by-alternative customization procedure have to perform multiple-way tradeoffs between different attributes, which makes it much harder for them to identify these “2-dimensional compromises” and, therefore, the compromise option itself.

Two additional studies support that self-customization procedures influence the construction of preferences and the subjective experience of making the decision. In particular, Study 2 shows that by-attribute customization reduces choice difficulty, enhances satisfaction and increases the probability that the customized option will actually be purchased. However, the decrease in experience difficulty in by-attribute customization is not solely due to the reduced choice complexity and information overload but is also driven by the fact that tradeoffs among competing characteristics are less explicit. By-attribute self-customization reduces emotional trade-off difficulty because of framing choice as a decision between each individual (quality) attribute level and price. In contrast, by-alternative self-customization makes consumers explicitly give up one specific (quality) attribute for another. Accordingly, if consumers were to encounter a by-attribute self-customization task which made competing (quality) attribute tradeoffs explicit, they should experience the same negative effects found in Study 2 for by-alternative self-customization. In line with this, Study 3 shows that when tradeoffs among attributes are made salient, decision conflict, satisfaction, and willingness to purchase are at a similar level to that associated with by-alternative customization.

Our findings contribute to the literature in several different ways. Customization allows consumers to exert control over shopping decisions. Our findings empirically show that differences in the experience of decision difficulty in the two self-customization modes affect consumers’ decision satisfaction and their willingness to purchase the customized option. Results also support that the decrease in experienced difficulty in by-attribute customization is not solely due to the reduced choice complexity and information load but rather to less explicit tradeoffs among competing characteristics.

References


“Negative Effects of Explicit Customization on Perceptions of Opportunity”

Aner Sela, Stanford Univeristy, USA
Itamar Simonson, Stanford University, USA
Ran Kivetz, Columbia University, USA

Marketing researchers and practitioners alike have long emphasized the benefits of customizing offers to match consumers’ individual needs and preferences (e.g., Ansari and Mela 2003; Pine et al. 1995). Customization can reduce information overload, provide consumers with superior fit and satisfaction, and increase loyalty and purchase likelihood. Moreover, because consumers often do not have well-defined preferences, a “customized” label, by itself, can increase the perceived fit of the offer, thereby increasing its attractiveness (Simonson 2005).

However, are there conditions under which customization can undermine, rather than enhance, the attractiveness of offers? The present research suggests that under certain conditions, marketing offers that are presented as tailored to the consumer’s individual circumstances or preferences may be perceived as less attractive than self-discovered opportunities that consumers perceive as valuable to them by coincidence.

Specifically, it is proposed that consumers seek opportunities to “beat the market” by taking advantage of offers they believe happen to be more valuable to them, due to favorable personal circumstances, than what was intended by the marketer. Thus, the allure of such perceived opportunities is based on the implicit assumption that the consumer’s distinctive circumstances indeed have not been taken into account by the marketer when the parameters of the offer (e.g., price) were designed. It is suggested that consumers tend to place a large weight on whether the fact that the offer has above-normal value for them is “transparent” to the marketer. Consequently, opportunities that are self-discovered and appear to the consumer as “unforeseen” by the marketer tend to be perceived as more attractive. In contrast, when consumers believe that the circumstances that make a certain option particularly advantageous for them have been “factored-in” by the marketer, they may perceive the deal as “fairly priced” for them rather than as representing above-normal value. Over-relying on such a cue can lead consumers to prefer a dominated, non-tailored option over a superior option which has been specifically tailored for them.

Four studies, involving both real and hypothetical choices, support these propositions. Study 1 suggests that explicitly customizing a bargain offer, based on the stated preferences of the consumer, can undermine the attractiveness of the offer among people who believe they value the product more than the average person. Participants were offered to buy a subscription for The Economist magazine at 30% off the regular price. Half of them were told that the offer they received was selected randomly. The other half were told that the offer had been customized for them, based on their previously stated preferences. The results suggest that people who had indicated they were more interested in economic magazines than the average person were more likely to take advantage of the...
offer when they believed it matched their preferences by coincidence (23%) than when it was said to be tailored for them based on the questionnaire (3%). Importantly, the effect of customization on choice was not affected by the chronic tendency to experience psychological reactance, casting doubt on the possibility that reactance was driving the effect.

Study 2 suggests that consumers who believe they value a particular option more than the average person may find a bargain offer more attractive when it is framed as designed to attract average consumers than when it is framed as designed for people “like them”. Half of the participants were offered a subscription for The Economist at 25% off the regular price, framed as “intended to get the average person excited about The Economist”. The other half were offered a subscription at 30% off the regular price, framed as “intended for the classic reader of The Economist: a special offer for people who would naturally find it interesting”. Participants who had indicated that they were more interested in economic magazines than the average person were subsequently more likely to take advantage of the offer when it was framed as intended for average (27%) rather than for “classic” readers (4%).

Study 3 extends these findings to a situation where the offer is tailored to consumers’ distinctive circumstances rather than their preferences. Participants received an offer to join a frequent flyer program. Half of them were required to accumulate 14,000 miles to receive a free ticket. The other half were required to accumulate 15,000 miles but were told that the 700 miles just traveled on their incoming flight would qualify toward their reward. Participants who received a 700 miles head-start were willing to pay more in order to join the program ($9.5) than those who did not ($3.6). However, the effect disappeared when the offer was said to be tailored for the particular flight people came with ($5.3 vs. $7, respectively). The effect of offer customization was mediated by the extent to which consumers believed it would be easier for them to accumulate the required mileage than would normally be the case.

Study 4 examines the role of accessible concepts and norms related to competition and self-interestedness in these effects. Participants were primed with either business-related or neutral stimuli (Kay et al. 2004). They then considered a bargain offer which either seemed particularly valuable to them by coincidence or was targeted at them by a marketer who was informed about their circumstances. Participants found the offer less attractive when it had been tailored for them (M=4.2) than when it matched their preferences by coincidence (M=5.2). However, this effect was significantly stronger among participants primed with business-related stimuli (M=3.3 vs. M=5.3). This result is consistent with the notion that the effect of customization on choice is driven by consumers’ lay theories about marketers’ self-interested behaviors (Friestad and Wright 1994; Wright 2002).

Taken together, the studies suggest that consumers tend to associate offers with above-normal value more when they perceive them as self-discovered and “unforeseen” by the marketer, rather than as tailored especially for the consumer’s individual circumstances. These findings have theoretical implications for understanding consumers’ perceptions of marketing offers, as well as important practical implications for designing customized offers and targeted promotions.

References


“Menu Customization and Calorie Estimation Biases in Consumer Choice”

Alexander Chernev, Northwestern University, USA

Customization of offers typically involves deciding on which components to combine, as well as deciding on the sequence in which these items are presented to consumers. This research explores the impact of these decisions on consumer value judgments in the context of food consumption, where value is reflected in consumers’ evaluations of the calorie content of the available items. For example, assembling a full meal from an a la carte menu might involve evaluating the caloric content of individual dishes in different categories. In particular, this research examines consumer evaluations of combinations of items classified as vices and virtues. From a conceptual standpoint, the issue of how consumers estimate the caloric content of vice/virtue combinations raises the more general question of how individuals derive numeric estimates of categorically opposite items. The goal of this research, therefore, is to investigate the decision processes leading to the formation of caloric estimates of vice/virtue combinations in a customized bundle and identify potential biases that are likely to occur in deriving such estimates.

Conventional wisdom suggests that deriving calorie estimates of combinations of food items should be fairly trivial, such that the caloric content of a meal comprising several items should be equal to the sum of the calorie estimates of the individual items. This research argues, however, that this is not always the case and that people display systematic biases in evaluating the caloric content of combinations of items. Specifically, when evaluating vice/virtue combinations, consumers tend to underestimated their calorie content, such that the combined meal can be perceived not only as having fewer calories than the sum of its individual components, but also as having fewer calories than the unhealthy item alone. This leads to the paradoxical finding that adding a virtue to a vice can lower the perceived calorie content of the combined meal.

This research further documents that the underestimation effect in evaluating vice/virtue combinations is contingent on the mode in which information is presented, and that it occurs only in scenarios in which options are presented simultaneously. When items are presented sequentially, however, the nature of the estimation bias is a function of the sequence in which options are presented, such that a virtue followed by a vice leads to an overestimation (rather than an underestimation) of their combined calorie content.
These underestimation/overestimation biases are attributed to the qualitative nature of people’s information processing, stemming from categorizing food items into virtues and vices. It is argued that when evaluating combinations of vices and virtues, people use an averaging heuristic, which leads them to believe that the combination of a vice and a virtue has fewer calories than the vice alone. In contrast, when options are presented in a sequential manner, consumers tend to anchor on the virtue and overestimate the calorie content of the vice—a contrast effect resulting from the semantically opposite nature of virtues and vices. These decision biases are examined in a series of six empirical studies, which investigate their underlying mechanisms and identify boundary conditions.

The first set of three experiments examines the underestimation bias in simultaneous evaluations of vice/virtue combinations. In particular, Experiment 1 documents the existence of the bias and shows that adding a virtue to a vice can lead to an underestimation bias, whereby the vice/virtue combination is perceived to have fewer calories than the vice alone. Experiment 2 further investigates the underestimation bias by documenting that it is likely to be a function of the extremity of the virtue added to the vice and is more pronounced in the presence of more extreme virtues. Building on these findings, Experiment 3 examines the availability of alternative means for inferring calorie content, showing that the underestimation bias can be attenuated and even reversed when option size is made salient and individuals use it to infer options’ calorie content.

The second set of experiments examines the overestimation bias in sequential evaluations of vice/virtue combinations. Experiment 4 documents the presence of contrast effects in sequential evaluations, showing that consumers tend to overestimate the calorie content of a vice preceded by a virtue. Experiment 5 further tests the theory by illustrating that contrast effects are a function of the type of categorization and that they are more pronounced when the vice/virtue categorization is made more salient and attenuated when an alternative (price-based) categorization is made salient. Finally, Experiment 6 lends support to the categorization theory by providing evidence that the observed contrast in numeric estimates is a function of individuals’ awareness of the magnitude of the differences between the available options, such that it is attenuated in cases when the sequential evaluation is preceded by an initial overall evaluation of the options in the choice set.